This catalog is a guide for information only and is not a contract. This catalog becomes effective fall semester 2017 and extends through the summer session 2018.

The general university telephone number is (316) 978-3456. For admission information, call toll-free (800) 362-2594. The university’s World Wide Web address is: http://wichita.edu

The university reserves the right to change any of the rules and regulations of the university at any time, including those relating to admission, instruction and graduation. The right to withdraw curricula and specific courses, alter course content, change the calendar, and impose or increase fees similarly is reserved. All such changes are effective at such times as the proper authorities determine and may apply not only to prospective students but also to those who are already enrolled in the university.

Produced by the Office of the Registrar, 4/17.
About This Catalog

Catalog Highlights
This catalog is a useful tool for students, advisors and university employees needing quick access to the resources, people, policies and procedures that make Wichita State a great place to learn, work, live and play.

For students, it’s a brief summary of some of the topics this catalog can help with throughout their college career.

General Information
Use this catalog to get to know WSU, including its leaders, vision and mission. It contains a brief history of WSU, and an overview of the university.

Getting Admitted
This catalog has all of the information needed to get the ball rolling on becoming an official Shocker and connecting with the right major.

Admission applications are available online (https://wichita.edu/apply). Students can also visit the Office of Undergraduate Admissions in the Marcus Welcome Center.

Once admitted, if already decided on a major, a student will be assigned an advisor within that major’s academic college to help develop an overall plan of study and assist in putting together a class schedule.

Not sure what to study or do after college? The Liberal Arts and Sciences (LAS) Advising Center will help students explore academic and career options. Also, check out all of WSU’s degrees and programs in the back of this catalog.

Getting Started as a Shocker
After meeting with an advisor, students are ready to sign up for classes through online registration. This catalog includes registration policies and an academic calendar with important dates.

WSU’s orientation programs introduce new students to academic and campus life—and equip them with resources for success during college and beyond.

Want to get better grades, make hundreds of new friends and have more fun? Campus living puts all of WSU right at a student’s doorstep. Check out the Housing and Residence life section for more information on how to reserve a spot.

Interested in funding a WSU education through financial aid and scholarships? Find all of that information here, plus a comprehensive fee schedule to help take the guesswork out of figuring costs.

Academics at WSU
Because of its commitment to provide the very best education possible, WSU offers countless opportunities for students to bolster their knowledge and build bright futures—both in and out of the classroom.

As Shockers, students will be able to tap into education in ways they won’t find anywhere else—from experience-based learning for every major and study abroad opportunities across the globe to being able to work and research with faculty and industry experts on WSU’s Innovation Campus.

WSU’s academic support system includes math, language and writing labs. Need a tutor? Students have access to supplemental instruction and tutoring at little to no cost. There are 24-hour study rooms, computer labs and the media and research resources of University Libraries where students can check out books, DVDs, laptops, digital cameras and more.

WSU also has learning options to fit just about any schedule. Students can attend classes day or night at WSU’s main campus, satellite locations and online.

The WSU Advantage
WSU uniquely combines a traditional college atmosphere with the unparalleled resources, experiences and real-world learning opportunities only found in Kansas’ largest city.

Through WSU’s Cooperative Education and Internships program, Shockers in every major can build a resume, earn a paycheck, make professional connections—and get a foot in the door of their dream job—all while still in school.

WSU makes learning convenient and accessible to the entire community through its multiple locations. In addition to its main campus at 21st and Hillside, WSU offers a wide range of general education classes at WSU West, located near 37th Street and Maize Road (3801 N. Walker Ave.) and WSU South, located just off of K-15 in Derby at the Town Center shopping center.

WSU is also home to the state’s most diverse college campus, which is reflected in the programs and services it offers—from counseling and testing to top-notch child care and offices for veterans’ support, disability services and international education, just to name a few.

Campus Life
WSU packs each semester with hundreds of activities, events and ways to get involved and have fun outside of class. From time-honored traditions and action-packed athletics to clubs, student organizations and Greek life, campus offers something for everyone.

Campus Recreation has all of the indoor and outdoor fitness facilities and programs needed to stay healthy—from a climbing wall and 200-meter indoor track to personal training, intramural sports and annual events like the Pumpkin Run.

The Rhatigan Student Center (RSC) is at the heart of campus and is a great place to meet friends, eat, grab a coffee, buy textbooks, study or relax. Students can also head to the basement for bowling and billiards at Shocker Sports Grill and Lanes.

Rules and Regulations
This catalog describes WSU’s seven colleges, their policies, programs, course offerings and graduation requirements. Find university-wide policies and procedures—from residency requirements to a student code of conduct here, too.

Life After WSU
For students nearing graduation, this catalog can connect them to resources that will help turn a diploma into a dream job. Through WSU’s Career Development Center, students can access practice interviews, career advising, help with building the perfect resume and more.

WSU’s Alumni Association and the WSU Foundation offer opportunities to stay involved and contribute to the university while adding even more fellow Shockers to personal and professional networks.
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# Academic Calendar

## Fall Semester 2017

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<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April–August</td>
<td>Fall semester registration</td>
</tr>
<tr>
<td>August 21</td>
<td>Weekday and evening classes begin</td>
</tr>
<tr>
<td>September 4</td>
<td>Labor Day holiday</td>
</tr>
<tr>
<td>October 11</td>
<td>Midterm point</td>
</tr>
<tr>
<td>October 14–17</td>
<td>Fall recess (begins at 2 p.m.)</td>
</tr>
<tr>
<td>October 31</td>
<td>Final date for withdrawal with nonpenalty grades</td>
</tr>
<tr>
<td>November 13</td>
<td>Web registration for spring semester begins (tentative)</td>
</tr>
<tr>
<td>November 22–26</td>
<td>Thanksgiving recess</td>
</tr>
<tr>
<td>December 7</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 8</td>
<td>Study day</td>
</tr>
<tr>
<td>December 9–14</td>
<td>Final examinations</td>
</tr>
<tr>
<td>December 14</td>
<td>Fall semester ends</td>
</tr>
<tr>
<td>TBA</td>
<td>Commencement</td>
</tr>
</tbody>
</table>

## Spring Semester 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>November–January</td>
<td>Spring semester registration</td>
</tr>
<tr>
<td>January 15</td>
<td>Martin Luther King, Jr. Day holiday</td>
</tr>
<tr>
<td>January 16</td>
<td>Classes begin</td>
</tr>
<tr>
<td>March 7</td>
<td>Midterm point</td>
</tr>
<tr>
<td>March 19–25</td>
<td>Spring recess</td>
</tr>
<tr>
<td>March 30</td>
<td>Final date for withdrawal with nonpenalty grades</td>
</tr>
<tr>
<td>April 2</td>
<td>Web registration for fall semester begins (tentative)</td>
</tr>
<tr>
<td>May 3</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>May 4</td>
<td>Study day</td>
</tr>
<tr>
<td>May 5–10</td>
<td>Final examinations</td>
</tr>
<tr>
<td>May 10</td>
<td>Spring semester ends</td>
</tr>
<tr>
<td>TBA</td>
<td>Commencement</td>
</tr>
</tbody>
</table>

## Summer Session 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April–June</td>
<td>Summer session registration</td>
</tr>
<tr>
<td>May 21–June 1</td>
<td>Pre-session and workshops (nine days)</td>
</tr>
<tr>
<td>May 28</td>
<td>Memorial Day holiday</td>
</tr>
<tr>
<td>June 4</td>
<td>Classes begin, first four-week term and eight-week term</td>
</tr>
<tr>
<td>June 29</td>
<td>Last day of first four-week term</td>
</tr>
<tr>
<td>July 2</td>
<td>Classes begin, second four-week term</td>
</tr>
<tr>
<td>July 4</td>
<td>Independence Day holiday</td>
</tr>
<tr>
<td>July 27</td>
<td>Summer session ends</td>
</tr>
</tbody>
</table>

*These dates are subject to change.*
General Information

Wichita State University Profile

WSU’s location in the largest city in Kansas enhances the traditional classroom experience by providing students greater opportunities in resources, contacts with business and government leaders, employment and internships. WSU is also a local resource for businesses, industry, nonprofits and local government.

Both traditional and nontraditional students enjoy a wide selection of day, evening and summer courses in more than 200 areas of study at the main, west and south locations. Of approximately 14,500 students 77 percent are from Kansas, representing 102 counties in the state, and the remainder are from almost every state in the U.S. and 105 other countries. The average age of entering freshmen at Wichita State is 19; the average age of all undergraduate students is 23.

Nearly 72 percent of the students attend full time, while the remainder attend part time and take advantage of gaining work experience at local companies including Airbus, Bombardier Aerospace, Spirit AeroSystems, Textron Aviation (including Beechcraft and Cessna), Via Christi Regional Medical Center, Wesley Medical Center and Koch Industries. Many students also take advantage of WSU’s work-based learning program, which has partnerships with 500 top organizations in the United States.

Wichita State, which is classified by the Carnegie Foundation as a doctoral granting, high research institution, offers undergraduate and graduate degree programs in more than 200 areas of study culminating in 58 bachelor degree programs, an associate degree, 12 doctoral degrees, 44 master’s degrees, a Specialist in Education degree and 37 credit bearing certificates in seven colleges and one institute: Dorothy and Bill Cohen Honors College, W. Frank Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions, Fairmount College of Liberal Arts and Sciences, and the Institute for Interdisciplinary Creativity.

The Higher Learning Commission and 21 program-specific accrediting agencies accredit WSU. A listing of WSU programs and degrees is located in both the graduate and undergraduate catalogs.

Wichita State has 539 full-time faculty and 74 part-time faculty, with 71 percent of the faculty having earned the highest degree in their fields.

Although WSU’s first commitment is to excellence in instruction, it also has strong commitments to excellence in research and public service as integral parts of its educational mission. The National Institute for Aviation Research consistently receives funding from such agencies as the FAA and NASA to continue important research in such areas as composites and aging aircraft. According to the National Science Foundation, WSU is one of the top research universities for aerospace research in the country. WSU’s Regional Community Policing Training Institute is helping train law enforcement and other officials in the region on such relevant topics as counterterrorism.

Businesses, local government, industry and nonprofits benefit from such WSU resources as the Mid-America Manufacturing Technology Center, Small Business Development Center, Center for Management Development, Center for Entrepreneurship, Community Engagement Institute and Hugo Wall School of Public Affairs.

WSU offers numerous recreational and cultural opportunities through the many concerts, recitals, theater, dance and other productions performed in its fine arts facilities. The Ulrich Museum of Art specializes in contemporary art. More than 77 pieces of sculpture by internationally known artists adorn the campus as part of the Martin H. Bush Outdoor Sculpture Collection, which has been recognized as one of the top 10 campus art collections by Public Art Review. In 2004, WSU became only the second U.S. university to acquire a sculpture by renowned artist Andy Goldsworthy. The university’s premier cultural collection of Asmat art, one of the largest such collections in the United States, is on display in its Lowell D. Holmes Museum of Anthropology.

As an NCAA Division I institution, WSU fields teams in tennis, cross country, basketball, track, golf, crew, bowling, baseball, volleyball and softball.

More than 160 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Approximately 20 national sororities and fraternities are active on campus.

The 330-acre traditional campus is modern and accessible and at the same time retains the flavor of the university’s heritage, combining distinctive Georgian-style architecture with more modern buildings of stone and brick that are accentuated by attractive landscaping. During the past 25 years, Wichita State has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, sciences, physical education, music, dance, and liberal arts and sciences.

The adjoining Innovation Campus was announced in 2014 and construction will be completed by early 2017 on a new Experiential Engineering Building and on a separate building to house an Airbus engineering center with more than 300 full time employees. Additional buildings committed for Innovation Campus include a Law Enforcement Training Center, student apartments, hotel and coffee shop. Additional buildings are planned, including a new home for the Barton School of Business.

To find out more about WSU, go online to http://wichita.edu.

Mission

The mission of Wichita State University is to be an essential educational, cultural and economic driver for Kansas and the greater public good.

Vision

Wichita State University is internationally recognized as the model for applied learning and research.

2017–2018 University and Academic Officers

John W. Bardo, president
Tony Vizzini, provost and senior vice president
Werner Golling, vice president for administration and finance
John Tomblin, vice president for research and technology transfer
Lou Heldman, vice president for strategic communications
Teri Hall, vice president for student affairs
David Moses, general counsel
Andrew Schlapp, executive director of operations, government relations
Marche Fleming-Randle, assistant to the president for diversity
Richard Muma, senior associate vice president for enrollment management
Darron Boatright, director of athletics
Dennis Livesay, dean of the Graduate School
Kimberly Engber, dean of the Dorothy and Bill Cohen Honors College
Anand Desai, dean of the W. Frank Barton School of Business
Shirley Lefever, dean of the College of Education
WSU History

Wichita State University began as Fairmount College, a Congregational institution, in 1895. In 1926, by a vote of the citizens of Wichita, the college became the Municipal University of Wichita, the first municipal university west of the Mississippi River. After 38 years as a municipal university, WSU again changed its status July 1, 1964, when it entered the state system of higher education. The citizens of Wichita had voted to move the university into the state system and when the measure passed the Kansas Legislature, Wichita endowed WSU with a 1.5 mill levy, a tax that was later adopted by Sedgwick County. The WSU Board of Trustees administers these funds and other local assets of the university.

During its history, the university has had 13 presidents:

Nathan J. Morrison, 1895–1907;
Henry E. Thayer, 1907–1914;
Walter H. Rollins, 1914–1921;
John Duncan Finlayson, 1922–1927;
Harold W. Fought, 1927–1933;
William M. Jardine, 1934–1949;
Harry F. Corbin, 1949–1963;
Emory Lindquist, 1963–1968;
Clark D. Ahlberg, 1968–1983;
Eugene M. Hughes, 1993–1998;
Donald L. Beggs, 1999–2012; and
John W. Bardo, 2012–present.

University and Specialty Accreditation

Wichita State University has held regional accreditation since 1927 from the Higher Learning Commission. The university will undergo its next comprehensive evaluation during the 2026-2027 academic year. Additionally, several WSU programs hold specialty accreditation. The accreditation status of those programs can be found online (http://wichita.edu/assessment) or in information published by the accredited programs. In some cases regional and specialty accreditation status is required by some programs for its graduates to sit for certification examinations and/or to obtain a license and/or a registration. Regional accreditation by The Higher Learning Commission does not constitute specialty accreditation for individual programs.

Academic Programs at Wichita State University Are Accredited by or Hold Membership in the Following Associations

- ABET, http://www.abet.org
- Accreditation Review Commission on Physician Assistant
- American Association of State Colleges and Universities
- American Chemical Society
- American Dental Educators’ Association
- American Psychological Association
- Association of Public and Land-Grant Universities
- Association to Advance Collegiate Schools of Business — Business and Accounting
- Commission on Accreditation in Physical Therapy Education
- Commission on Accreditation of Athletic Training Education
- Commission on Collegiate Nursing Education
- Commission on Dental Accreditation of the American Dental Association
- Commission on Sport Management Accreditation
- Council for the Accreditation of Educator Preparation
- Council on Academic Accreditation in Audiology and Speech-Language Pathology: American Speech-Language Hearing Association
- Council on Social Work Education
- Human Factors and Ergonomics Society
- Kansas State Board of Nursing
- Kansas State Department of Education
- National Accrediting Agency for Clinical Laboratory Sciences
- National Association of Schools of Art & Design
- National Association of School Psychologists
- National Association of Schools of Dance
- National Association of Schools of Music
- Network of Schools of Public Policy, Affairs & Administration
- The Higher Learning Commission

The Higher Learning Commission
230 South LaSalle Street, Suite 7–500
Chicago, Illinois 60604;
1 (800) 621-7440
HLC website (http://ncahlc.org)
Admission to Wichita State
Undergraduate Admission

WSU admits students at the undergraduate level as freshmen and transfer students. Depending on their academic goals, students may choose to be degree-bound or nondegree-bound.

Admission to a specific professional program can be achieved only after admission to the university. Students must meet the requirements of the professional program. Admission to some professional programs is very competitive.

The admission procedures, outlined below, are for degree-bound domestic students. Information for nondegree-bound students is under the Admissions Categories tab. Information for international students is found at the international admissions requirements webpage (http://wichita.edu/InternationalAdmissionRequirements).

Admission Procedures - Undergraduate; Domestic

To apply for admission, students should submit a WSU application in paper or electronic format. The application and full instructions are available from the Office of Admissions website (http://wichita.edu/admissions).

High school students or college transfers with 1-23 hours of college credit

- Submit a completed and signed application;
- Have an official high school transcript (minimum of six semesters) and college transcript(s), if applicable, sent to the WSU Office of Admissions from the issuing institution;
- Have ACT, SAT or GED scores sent directly from the testing agency to the WSU Office of Admissions; and
- Submit a nonrefundable $40 application fee.

College transfers with 24 or more hours of college credit

- Submit a completed and signed application;
- Have official college transcript(s) sent to the WSU Office of Admissions from all the issuing institutions. Official high school transcripts are required only if seeking federal financial assistance; and
- Submit a nonrefundable $40 application fee.

WSU’s transcript and test policy are online at the admissions transcript webpage (http://admissions.wichita.edu/transcripts).

Paper submissions should be sent to:
Office of Undergraduate Admissions
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0124

1 High school guest students have additional paperwork to submit. See Guest Students - High School section for more information.

Residency Requirements
See Residency Defined (p. 52).

Admission Categories

Students may be admitted as degree-bound or nondegree-bound students.

Degree-Bound

Degree-bound students who have declared an academic interest will be admitted to the college of their choice. They must meet the necessary requirements for admission to the university as well as the requirements of the colleges and departments of their choice. Students who are still deciding on an academic major, or who are admitted to WSU by exception to the regular degree-bound admission requirements, will be admitted to Fairmount College of Liberal Arts and Sciences for academic advising and career counseling.

Nondegree-Bound

Nondegree-bound undergraduate is a category of admission for students who wish to pursue their education with no immediate degree plans. Students in this category are not eligible for financial aid. Nondegree students can be admitted as either open admission or guest students.

Open Admission

An open admission student is one who:

- Has graduated from high school, or has a GED; or
- Has not graduated from high school or completed a GED, and is at least 21 years of age; or
- Is on active military duty; or
- Holds a bachelor’s or higher degree.

Students not meeting the requirements above may be considered for nondegree admission at the discretion of the Office of Admissions.

Students admitted as open admission students will be considered nondegree for their first 30 credit hours. Beyond the 30 credit hour limit, students must apply for degree-bound admission and meet the requirements for the intended program. To transition to degree-bound, students must submit an application for admission, the $40 application fee, and all transcripts when applying for degree-bound admission.

Guest Students - College

Students attending another college or university who wish to attend Wichita State temporarily, should submit a nondegree college guest application and $40 application fee to the Office of Admissions.

Please note: while transcripts from previous colleges are not required for guest admission, transcripts may be required to verify completion of prerequisite courses.

Guest admission is limited to 30 credit hours. Beyond the 30 credit hour limit, students must apply for degree-bound admission and meet the requirements for the intended program. To transition to degree-bound, students must submit an application for admission, the $40 application fee, and all transcripts when applying for degree-bound admission.

Guest Students - High School

Students who attend Wichita State before graduation from high school are considered to be high school guest students.

1. The deadline to enroll as a high school guest student is approximately one week prior to the first day of classes each semester.
2. High school guests may not take more than 6 credit hours each semester without permission by the Office of Admissions or by an advisor in the Liberal Arts and Sciences Advising Center.
3. Admission to WSU does not constitute permission by academic departments to take courses. All prerequisites for a course must be met before the student enrolls.
4. Admission as a guest student does not guarantee admission as a degree-bound student after high school graduation.
5. High school guest students are admitted as nondegree seeking students and are not eligible for federal aid.

To be admitted as a high school guest for the first time, students must:
1. Complete their sophomore year of high school. Younger students are considered on an individual basis;
2. Submit a High School Guest Application form, including a nonrefundable $40 application fee; and
3. Submit an official high school transcript. The high school transcript must show at least a 3.000 cumulative GPA. Admission for students with a lower GPA can be requested from admissions by the high school counselor. Cases in which students do not meet the 3.000 GPA requirement will be considered on an individual basis.

To renew admission as a high school guest:
1. High school guest admission must be renewed each semester;
2. Submit a new WSU High School Guest Application form;
3. Submit an updated high school transcript;
4. The high school transcript must show at least a 3.000 cumulative GPA; and
5. WSU transcript must show a 2.000 cumulative GPA.

Academic advising is available to all high school guests by contacting the Liberal Arts and Sciences Advising Center in room 115 Grace Wilkie Hall. Call (316) 978-3700 to schedule an appointment or visit the LAS Advising Center website (http://wichita.edu/lasadvising).

The WSU High School Guest Application form can be completed online (http://wichita.edu/apply) by selecting the Undergraduate Nondegree application, high school guest option or a paper version can be found on the high school guest program webpage (http://wichita.edu/hsguest).

Admission Requirements - Undergraduate; Domestic Freshmen

Kansas residents attending accredited high schools must:
• Complete the precollege curriculum1 with at least a 2.000 grade point average (GPA) on a 4.000 scale; and
• Achieve one of the following:
  • A minimum ACT composite of 21 or a minimum combined SAT-I of 1060 (math and evidence-based reading and writing scores); or
  • Rank in the top one-third of their high school’s graduating class;
  • Achieve a 2.000 GPA or higher on any college credit taken in high school.

Note: These standards apply to those under the age of 21.

Nonresidents2 attending accredited high schools must:
• Complete the precollege curriculum1 with at least a 2.500 grade point average (GPA) on a 4.000 scale; and
• Achieve one of the following:
  • A minimum ACT composite of 21 or a minimum combined SAT-I of 1060 (math and evidence-based reading and writing scores); or
  • Rank in the top one-third of their high school’s graduating class;
  • Achieve a 2.000 GPA or higher on any college credit taken in high school.

Note: These standards apply to those under the age of 21.

Kansas residents attending nonaccredited high schools (including those with international high school work), or home-schooled students must:
• Complete coursework equivalent to the precollege curriculum1 with at least a 2.000 grade point average (GPA) on a 4.000 scale;
• Have at least a 21 on the ACT (SAT-I of 1060); and
• Achieve a 2.000 GPA or higher on any college credit taken.

Nonresidents2 from nonaccredited high schools (including those with international high school work), or home-schooled students must:
• Complete coursework equivalent to the precollege curriculum1 with at least a 2.500 grade point average (GPA) on a 4.000 scale;
• Have at least a 21 on the ACT (SAT-I of 1060); and
• Achieve a 2.000 GPA or higher on any college credit taken.

GED students must have a minimum score of 150 on each sub-test and an overall score of 680 to be admitted. If GED was taken before 2014, please call the Office of Admissions for score requirements.

Transfer students
• With 24 or more transfer hours, must have a minimum cumulative GPA of 2.000 (on a 4.000 scale) on all previous college work.
• With 23 or fewer transfer hours, must have a minimum cumulative GPA of 2.000, and meet the freshman qualified admissions requirements.

Some academic colleges at Wichita State require an additional transfer GPA requirement for admission. For more information contact the WSU Office of Admissions.

Admission remains open to Kansas residents over the age of 21 who have graduated from high school or have completed a GED with the minimum required scores.

Transfer students are encouraged to bring copies of their academic transcript and meet with an academic advisor prior to enrolling. The advisor can provide information about degree requirements and the eligibility of the student’s prior coursework towards their degree of choice. Contact an academic advisor through the dean’s office. See academic advising (p. 13).

Students transferring from a two-year college must complete at least 60 credit hours of four-year college work including 45 credit hours of upper-division work in order to qualify for graduation. In no case will work done in a two-year college be credited as junior- or senior-level work at WSU. See course numbering system (p. 32) and requirements for graduation (p. 37).

1 The Kansas Regents’ Qualified Admissions Precollege Curriculum requirements can be found online at the WSU admission requirements webpage (http://wichita.edu/requirements).
2 See residency requirements (p. 52).

To view admission requirements, visit the WSU admission requirements webpage (http://wichita.edu/requirements).
International Student Admission

Wichita State University demonstrates its commitment to international education through the Office of International Education. The office assists international students with cultural acclimation, immigration counseling, English language instruction, and admission to the university.

The university welcomes students of every national, racial, religious, ethnic and cultural background. Admission decisions are based solely on the academic qualifications of applicants.

English Proficiency Requirements

All international undergraduate students at Wichita State University are required to demonstrate proficiency in English before beginning full-time academic study. Students, however, are not required to submit proof of English proficiency, such as TOEFL results, with their application for admission. The university will consider all undergraduate applicants for admission without proof of English proficiency.

English proficiency may be demonstrated in the following ways:

1. Obtain a TOEFL score1 of 530 or higher on the paper-based test;
2. Obtain a TOEFL score1 of 72 or higher on the Internet-based test;
3. Obtain an IELTS score of 6.0 or higher;
4. Obtain an SAT-I verbal score of 410 or higher;
5. Obtain an ACT English section score of 20 or higher;
6. Obtain a score of 80 or higher on the WSU English Proficiency Examination;
7. Successfully complete the highest level of the WSU Intensive English Language Center;
8. Have 30 or more transferable semester credit hours from another U.S. college or university; or
9. Successfully complete Level 112 at ELS Language Center.

1 All TOEFL scores must be sent directly from the TOEFL office in Princeton, New Jersey.

Application Information

In order to apply, all international undergraduate students must submit the following:

1. A completed International Undergraduate Application form;
2. U.S. $75, $150 or $250 nonrefundable application fee depending on the student’s desired level;
3. Official copies — in English — of all transcripts from all secondary schools, colleges or universities attended; and
4. Certification of financial support.

Nondegree Status

Some students wish to study for one or more semesters without earning a degree. Nondegree applicants must submit all of the required application materials and will receive the same consideration as degree candidates.

Other Requirements - Health Insurance

All international students are required to have medical insurance that meets university requirements, including support for repatriation and medical evacuation. Students are automatically charged for the Wichita State University insurance plan when they register for classes. They may apply for an insurance waiver if they provide proof of adequate insurance before they register for classes.

All new students are required to be tested for tuberculosis after arriving in Wichita and before registering for classes.

For more information about international student admission, write:

Office of International Education
Wichita State University
Wichita, Kansas 67260-0122 USA
Telephone: (316) 978-3232
Fax: (316) 978-3777
Email: international@wichita.edu
Website (http://wichita.edu/international)

Graduate Students

For more information, graduate students should consult the Graduate Catalog; the Graduate School website (http://wichita.edu/gradschool); or email: gradinqu@wichita.edu.

Admission Exceptions

The university has an exceptions committee to review petitions from people seeking admission to the university as domestic undergraduates who otherwise do not qualify. There is a separate appeals process for international undergraduate admission through the international education office.

Former Students in Inactive Status

Students who have completed coursework at Wichita State University, but have not enrolled in the past 24 months, are placed in inactive status.

Students are also inactivated due to graduation with a bachelor’s degree. To enroll again, inactive students must complete an online reactivation form available at the registrar’s reactivation webpage (http://wichita.edu/reactivation). This should be done at least one month before any planned enrollment.

Former students who have enrolled only as nondegree students must apply for admission to enroll as degree-bound students.

Admission to Accelerated Programs; Graduate School

The dual/accelerated bachelor’s to master’s degree programs offer outstanding students opportunities to advance their careers in significant ways by pursuing the bachelor’s and master’s degrees in a parallel and coordinated program. In addition, it may be possible for students to complete the requirements for both degrees (in the same field) in an accelerated time frame. The goal of this program is to provide students with a high level of academic advising culminating in the preparation of the graduate program of study while students are still in their sophomore or junior years. Graduate education involves a close working relationship between students and graduate faculty mentors, and the dual/accelerated degree programs develop this relationship early in students’ careers. Dual/accelerated degree programs are available in:

- BA to MA in economics
- BS (in industrial or manufacturing engineering) to MS in industrial engineering
- BS to MS in mechanical engineering
- BSN to MSN in nursing
- BS to MS in mathematics
• BA to MA in English

Each dual/accelerated program has specific admission requirements. Students should consult with the department’s graduate coordinator if they are interested in this type of program.

Students who are receiving Federal Financial Aid should consult with a financial aid advisor to determine if taking graduate level coursework while an undergraduate student will impact their financial aid award.

**Graduate Student Admission**

Specific requirements for either degree or nondegree admission for all graduate programs are listed in the Wichita State University Graduate Catalog.

For further information about graduate admission requirements, graduate programs, or to obtain graduate application materials, contact:

Graduate School  
Wichita State University  
1845 Fairmount  
Wichita, Kansas 67260-0004 USA  
Telephone: (316) 978-3095  
Website (http://wichita.edu/gradschool)  
Email (wsugradschool@wichita.edu)

**Transfer Credit**

Official transcripts of all work done at other postsecondary institutions must be submitted to WSU, usually during the admission process. For transcripts to be official, they must be mailed from the college or university directly to WSU. Faxed transcripts will not be used to evaluate transfer credit.

**Acceptance**

Courses will be accepted as transfer credit if they were not remedial and were taken at colleges and universities that are accredited by a regional accrediting body, such as the Higher Learning Commission. International colleges and universities must be officially recognized by the Ministry of Education in their countries for students to receive transfer credit. Transfer courses are applied toward graduation requirements in accordance with the policies of the WSU college and program. Some programs do not accept transfer courses with a grade of D. Vocational or technical courses only transfer as free electives, and often do not count toward completion of a specific program at WSU. An official evaluation of how courses transfer is made after the student is admitted.

**Transfer Credit from Nonaccredited Institutions**

WSU does not accept and post transfer credit for students who have completed postsecondary coursework at institutions that are not accredited by one of the major regional accrediting bodies.

**Military Credit**

WSU will award credit for military course completions from the Army, Marine Corps, Navy or Coast Guard based on ACE credit recommendations on the Joint Services Transcript. Credit for coursework from the Air Force will be awarded from the Community College of the Air Force Transcript.

**Records**

Accepted transfer courses are recorded on the student’s academic record at Wichita State but do not appear in detail on the WSU transcript. Where necessary, transfer course titles are changed to agree with WSU course titles.
Getting Started at Wichita State

For the vast majority of students at WSU, the goal of attending college is to earn a degree. As a student takes the first steps on their educational journey, it pays to keep that long-term goal in mind. WSU offers a set of programs, courses, resources, and activities designed to help students reach their goals, and maximize their success and satisfaction as they pursue their degree. The three main components are First-Year orientation and transition programs, advising and First-Year Seminar courses. Each of these is a valuable tool for navigating the transition to Wichita State University and should be considered an integral part of the student experience. Students who take full advantage of these programs and opportunities are more likely to be successful, and are more likely to finish their degrees in a timely manner.

Orientation and Registration

Orientation

Whether starting a college career at WSU fresh out of high school, transferring from another institution, or returning to school after a long absence, WSU offers orientation experiences tailored to student needs. Orientation provides opportunities to get to know faculty members and fellow students, resources, and offices on campus, academic expectations, keys to college success, the history and traditions of WSU and much more. Parents and guests are invited to parallel programs during freshman and transfer student orientations, so they can learn more about how to help their students succeed in college.

Orientation is required for all students new to WSU regardless of previously earned credit. Each semester, the Office of First-Year Programs notifies new students of the various ways they can complete their orientation requirement.

For the latest information visit the orientation website (http://wichita.edu/orientation), or phone (316) 978-5420.

Registration

Specific information regarding registration can be found at the Office of the Registrar’s website (http://wichita.edu/registrar). Students register through web registration in the myWSU portal.

Prior to registering for classes, all students should contact their academic advisor to assure they are taking the appropriate classes. Early registration for one semester normally begins around midway through the preceding semester. **Registration for a course or courses represents a financial commitment that the student is obligated to pay.**

Newly admitted, currently enrolled and former students not academically dismissed, are eligible for online registration. Some academic restrictions have been built into the system. Some restrictions cannot be overridden. College or program specific restrictions may be considered for removal by contacting the appropriate college or department and requesting an electronic override.

Registration and classes begin and end at varying times so it is important to consult the semester calendar for details. For more information, check the schedule of courses webpage (http://wichita.edu/schedule).

Once a student has enrolled, registration may be changed online for a certain period of time that varies according to the start date and length of the course. After the online period has passed, students must process in-person drop and/or add forms with the appropriate approvals. Changes of sections also require such action. A grade of F could be recorded for failure to attend the classes shown on the original enrollment records.

Late enrollments or adds normally will not be approved after the 20th class day. Drops of classes with a grade of W (withdrawal) are subject to a time limit established by the registrar.

Cutoff deadlines for dropping with a refund also vary according to the start date and length of the course.

Students who find it necessary to completely withdraw from the university must drop each class.

**Academic Advising**

Advising at WSU is an ongoing educational partnership between the student and professional/faculty advisors and advising staff. Academic advising promotes student success with the goal of helping students graduate in a timely manner. Academic advising is much more than just schedule building; it is a personalized way to explore options, get information and make good decisions. New, incoming, traditional freshmen students go through the first-year advising process at OneStop. All other new students are required to see a college academic advisor prior to enrollment. Certain colleges and departments have additional advising requirements as well.

Academic advisors form partnerships with students in the following ways:

- Assist students to set goals—both short term and longer term—that help them in determining and achieving their degree objectives.
- Academic advisors provide, and can also show students how to access accurate information about the graduation requirements of degree programs, and can work with students to plan the strategic progression of coursework that will allow graduation in the most timely manner consistent with the student’s life circumstances. Advisors can provide career information regarding the degree fields of interest, and will also refer students to appropriate professional or in-person format.
- Academic advisors are well informed about official university policies and procedures for enrollment, dropping or adding courses, changing colleges, changing majors, and other such policies and procedures important to a student’s ability to progress. Advisors are also able to instruct students in the execution of those procedures. Advisors can show students how to access reliable and accurate sources for university policies and procedures in both print and electronic formats.
- Students are given access to various means of initiating contact with an academic advisor, including email, phone, and personal contact. Academic advisors are available to meet with the student within a reasonable time frame after the student’s request, and appointment time(s) will be allotted to carry out the activities needed.
- Academic advisors have comprehensive knowledge of campus resources, including electronic resources, which are important to student success at the university, and can show students how to access that information. Advisors assist students in referral and access to such services as counseling, career and employment services, assisted instruction, success courses, math and writing labs, and other help available for the student’s academic skill development.

**Where to Go for Academic Advising**

- Incoming, traditional freshmen students meet with a first-year advisor at OneStop for the first two semesters of enrollment.
• Degree-bound students who have chosen a major within a specific college should meet with an advisor in that college.
• Degree-bound students who are still deciding on a major should meet with an advisor in the LAS Advising Center.
• Nondegree-bound students who are enrolled in classes for purposes other than completing a degree should meet with an advisor in the LAS Advising Center.
• Graduate students should contact the Graduate School or their graduate program for advising assistance.

Academic advising is available through the individual offices listed below:

**One Stop**
OneStop
112 Jardine Hall
(316) 978-3909
Website (http://wichita.edu/firstyearadvising)

**Honors**
Dorothy and Bill Cohen Honors College
Shocker Hall, Room A1180
(316) 978-3375
Website (http://wichita.edu/honors)

**Business**
W. Frank Barton School of Business
008 Clinton Hall
(316) 978-3203
Website (http://wichita.edu/businessadvising)

**Education**
College of Education
107 Corbin Education Center
(316) 978-3300
Website (http://wichita.edu/education)

**Engineering**
College of Engineering
300 Wallace Hall
(316) 978-3420
Website (http://wichita.edu/engineering)

**Fine Arts**
College of Fine Arts
120 Weidemann Hall
(316) 978-3389
Website (http://wichita.edu/cfaadvising)

**Health Professions**
College of Health Professions
402 Ahlberg Hall
(316) 978-3304
Website (http://wichita.edu/chpadvising)

**Liberal Arts and Sciences**
LAS Advising Center
115 Grace Wilkie Hall
(316) 978-3700
Website (http://wichita.edu/lasadvising)

**Graduate School**
Graduate School
107 Jardine Hall
(316) 978-3095
Website (http://wichita.edu/gradschool)

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**Student Success**

Students define success differently. The Office of Student Success helps students maximize their academic potential and reach their personal goals through a range of programs and services, regardless of personal background. Its goal is to help students develop skills and plans to graduate in a timely manner while engaging with its community of learners.

The work of student success is focused in five areas: first-year transition programming, academic success programs, student money management, military and veteran student support and online student support.

Its goals include helping students:

- transition successfully to WSU,
- improve academic performance and achieve academic excellence,
- set and achieve personal goals,
- build confidence and resilience in the face of challenge,
- develop financial literacy skills, and
- participate in campus programs that improve student satisfaction.

Information about specific programs such as Orientation, Supplemental Instruction, tutoring, as well as a number of study skills resources and documents can be found online (http://wichita.edu/success).

The Office of Student Success will continue to partner with faculty to offer general education courses called First-Year Seminar. These 3-credit-hour courses are unique classes designed specifically for new, traditional freshmen and taught by faculty. The seminars cover a broad range of topics from current events to cultural competency to the arts and include elements that engage students in learning communities and teach successful student and life skills. More information including a list of seminars offered can be found at the first-year seminar webpage (http://wichita.edu/fyseminar).

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**Housing and Residence Life**

On-campus housing is available for more than 1,400 students in Fairmount Towers, Shocker Hall, and The Flats at WSU. Housing options include living-learning communities, honors academic areas, suite-style residence hall rooms, and a variety of room and/or apartment configurations.

Because research nationwide has repeatedly shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus; and because Wichita State University is committed to students and student success, WSU requires all incoming freshmen to live on campus in designated university housing. Freshmen must live their first two semesters in the residence halls (either Shocker Hall or Fairmount Towers) unless they are exempted from this housing policy. All other students may choose their own accommodations including residing within The Flats at WSU; however, university housing is highly recommended.

**Exceptions to the freshmen residency requirement are made for freshmen who are:**

1. At least 21 years of age, or will turn 21 during the academic year;
2. Married, or will be prior to the first day of classes;
3. Living in official Greek housing;
4. Taking less than 12 credit hours per semester;
5. Transfer in 24 or more completed credit hours;

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6. Living with a parent/legal guardian, grandparent, aunt, or uncle in the greater Sedgwick County area (see Housing and Residence Life website for approved counties/cities).

All freshmen who would like to be exempted from the residency requirement — including those who fall into one of the above categories (with the exception of number 6) — are required to complete and submit a Housing Exemption Form. Exemptions may require documentation and will be reviewed by the department of Housing and Residence Life. A written reply will be sent to those who request an exemption.

Admission to Wichita State University does not mean an automatic room reservation. Each student admitted will receive information concerning housing from the department of Housing and Residence Life. Students must complete a housing application, including a $75.00 application fee, as well as sign a housing contract that includes a $200.00 prepayment in order to receive a timeslot to select a room through the room self-selection process (students interested in The Flats at WSU will have a separate application and leasing process, including separate application fee and deposit amounts, and will need to complete a background/credit check). Students are encouraged to apply early, as space is limited.

For more information about living on campus, room and meal plan options, application/contract/lease questions, please contact the department of Housing and Residence Life by phone at (316) 978-3693, by email at Housing.WSU@wichita.edu, or visit the Housing and Residence Life website (http://wichita.edu/housing). Wichita State University reserves the right to make policy adjustments where the situation demands, change the residence of any student, or deny or cancel the residence accommodations of any student in cases were such action is deemed necessary.

**Student Identification**

Each student is identified in the university’s computer system by a unique set of eight numbers and letters, called myWSU ID. This ID is assigned and communicated to students at the time of application. A social security number is also required for everyone who has federal financial aid or is employed by the university, as they must also be identified in the system by their social security number.

All WSU students are required to have a WSU photo identification card called the Shocker Card. The card does not expire and is used to determine a student’s current enrollment status. The initial card is free. Lost, stolen or discarded cards may be replaced for a fee.

The Shocker Card contains a unique 16 digit ISO number encoded on it and is the only means by which students can use the following services: Ablah Library, Heskett Center, athletic ticket office, student government, student health services, WSU police department.
Financial Information
The cost of an education at Wichita State is paid from appropriations made by the state of Kansas, donations made to the WSU Foundation, and the tuition and fees of students. This section of the catalog provides information related to costs, payments and financial aid at WSU.

The requirements for Kansas residency for tuition purposes are defined on the Residency Defined (p. 52) page of this catalog.

Financial Assistance
Wichita State offers financial assistance through scholarships, federal and state supported programs, and employment. Students interested in any type of financial assistance should contact the Office of Financial Aid, 203 Jardine Hall, or visit the Office of Financial Aid website (http://wichita.edu/financialaid) to review the types of opportunities for which they might qualify.

Scholarships
Wichita State has been fortunate to receive donations from past graduates, faculty, friends and administrators of the university who wish to assist future graduates in financing their years at Wichita State. Scholarships are funded through the proceeds of the gifts from these individuals and play a vital role in the university’s attempt to meet the needs of students requiring financial assistance.

Endowed scholarships are funded from earnings on donor endowment funds. The principal of these funds is never expended, therefore scholarship funding is available in perpetuity.

Current scholarship dollars are contributed annually by donors. Funds to support these scholarships come from annual gifts.

Institutional scholarships also come from other sources including academic colleges, departments, organizations and county mill levy funds.

For information on requirements and deadlines for WSU scholarships, visit WSU’s scholarships webpage (http://wichita.edu/scholarships).

Federal Grants and Loans
Students may receive assistance through several federal programs: Supplemental Educational Opportunity Grants, Pell Grants, TEACH Grants, subsidized and unsubsidized Stafford Loans, and parental loans for dependent undergraduate students.

State Scholarships and Grants
The following scholarships are available through the Kansas Board of Regents: Kansas Career Technical Workforce Grant, Kansas Ethnic Minority Scholarship, Kansas Military Service Scholarship, Kansas National Guard Educational Assistance, Kansas Nursing Service Scholarship, Kansas State Scholarship, or the Kansas Teacher Service Scholarship. Students can learn details about the programs and application process at the Kansas Board of Regents website (http://kansasregents.org/students) under Student Financial Aid.

A Kansas Comprehensive Grant is awarded to full-time undergraduate students with exceptional financial need. Priority for the limited funding is given to residents of Kansas who meet the state of Kansas priority date for filing the Free Application for Federal Student Aid (FAFSA).

Employment
Students enrolled in at least 6 credit hours may be eligible for part-time employment at the university. Federal work-study employment is based on demonstrated financial need. Students may find employment as academic assistants, clerical assistants, technical assistants, custodial

or food service assistants, or library assistants. For information about student employment visit the Career Development Center's website (http://wichita.edu/career).

Withdrawal and Financial Aid
A student’s eligibility for financial aid is based on enrollment. The Higher Education Act outlines rules which govern the return of Title IV federal financial aid funds disbursed to a student who does not complete all the days in a payment period or a period of enrollment they were scheduled to complete.

These rules assume that a student earns his or her aid based on the time the student remains enrolled; unearned aid, other than federal work-study, must be returned. Unearned aid is the amount of financial aid received that exceeds the amount the student has earned.

During the first 60 percent of the enrollment period, a student earns aid in direct proportion to the length of time he or she remains enrolled.

Financial Aid Repayments
A reduction in hours may require repayment of financial aid received. Students should discuss possible reductions in class hours with the WSU Office of Financial Aid prior to finalizing a drop in hours. Students will be advised about how the drop may impact their financial aid.

Tuition and Fees
The tuition and fees listed are subject to change by the Kansas Board of Regents.

Basic Fees
Basic fees for resident and nonresident students are listed here. For tuition and fees for Shocker City Partnership, Shocker Select and Midwest Student Exchange students, visit the tuition and fees webpage (http://wichita.edu/tuition).

Note: Tuition and fees are for the fall and spring semesters and the summer session. Tuition and fees for 2017-2018 had not been established at the time of publication, but an increase is anticipated. Published fees reflect the 2016–2017 rates.

<table>
<thead>
<tr>
<th></th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$212.84 per credit hour</td>
<td>$504.16 per credit hour</td>
</tr>
<tr>
<td>Graduate Tuition</td>
<td>$287.39 per credit hour</td>
<td>$705.81 per credit hour</td>
</tr>
<tr>
<td>Student Fee—graduate and undergraduate¹</td>
<td>$32.11 per credit hour</td>
<td>$32.11 per credit hour</td>
</tr>
<tr>
<td>Intercollegiate Athletic Fee—all students</td>
<td>$10.52 per credit hour</td>
<td>$10.52 per credit hour</td>
</tr>
<tr>
<td>Campus Infrastructure &amp; Support Fee—all students²</td>
<td>$6.00 per credit hour</td>
<td>$6.00 per credit hour</td>
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<tr>
<td>Technology Fee—all students³</td>
<td>$1.00 per credit hour</td>
<td>$1.00 per credit hour</td>
</tr>
<tr>
<td>Transportation Fee—all students³</td>
<td>$0.75 per credit hour</td>
<td>$0.75 per credit hour</td>
</tr>
<tr>
<td>Online Tuition⁴</td>
<td>$212.84 per credit hour</td>
<td>$504.16 per credit hour</td>
</tr>
</tbody>
</table>

¹Includes Academic, Academic Service, and Service Scholarships.
²Includes Academic, Academic Service, and Service Scholarships.
³Includes Academic, Academic Service, and Service Scholarships.
⁴Includes Academic, Academic Service, and Service Scholarships.

Online Fee $94.50 per online credit hour

1 The student fee is required of every student enrolled on the Wichita State University main campus, WSU Main Street, WSU Old Town, WSU South and WSU West. Student fees support the student union, Heskett Center, student health services, Student Government Association, student publications, concerts, drama, opera productions and similar items.

2 The Campus Infrastructure and Support Fee (formerly Facilities Use Fee) supports registration costs and the OneStop service center which provides 24/7 support for students in the areas of admissions, financial aid, registration, advising and student accounts. All students, both on campus and online, have access to such services virtually or at the physical OneStop service center.

3 The Technology Fee is assessed to all students for technology upgrades and replacement.

4 The Transportation Fee is assessed to all students to help offset the cost of the campus shuttle bus service.

5 The tuition for fully online programs is set at the resident rate for both undergraduate and graduate students.

6 The online fee includes $10.93 toward student fees and $3.57 toward intercollegiate athletic fees.

Workshops, Off-Campus, Online, Auditing Course Fees

For-Credit and Noncredit Courses for Nondegree-Seeking Students

Concurrent High School Enrollment Tuition, $100/course

Badges (undergraduate and graduate), based on costs/badge

Market-Based Tuition Course, based on market/credit hour

Workshops

For-Credit Workshops, based on resident tuition and fees/credit hour

Overhead Fee, $10.50/credit hour

Noncredit Workshops, based on costs/workshop

Parking Fee (for the first five days) if on-campus, $2/day

CATIA Workshops (regardless of location)

The laboratory fees for CATIA workshops are as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 Credit-Hour Workshops</td>
<td>$800/workshop</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td></td>
</tr>
<tr>
<td>1.75 Credit-Hour Workshops</td>
<td>$400/workshop</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td></td>
</tr>
<tr>
<td>Media Course/Telecourse Fee</td>
<td>$20/credit hour</td>
</tr>
</tbody>
</table>

Auditing Course Fees

Tuition and fees per credit hour for courses and workshops audited are the same as for courses taken for credit.

Departmental or College Fees

Special departmental fees are charged as summarized below.

General College and Department

Study Abroad Program/Faculty-Led Fee

Global Emergency Coverage for Study Abroad Programs

Students are required to reimburse the university for the cost of:

1. Excess breakage and wastage of materials; and
2. Materials used in excess of those required for completion of coursework.

W. Frank Barton School of Business

Program Fee $35/credit hour for all credits taken by students within the Barton School of Business

Semester Study Abroad (BADM 479, ENTR 690W) $100/person

Executive Master of Business Administration (EMBA) $38,000/program includes tuition, textbooks, materials and other administrative fees

Master of Business Administration (MBA) Global Strategic Mgmt. (MGMT 885G)

1 Includes a $500 nonrefundable deposit.

College of Education Counseling, Leadership, Educational and School Psychology (CLES)

Assessment in Counseling $25/credit hour (CESP 822)

Curriculum and Instruction

Curriculum & Instruction Courses $25/credit hour (CI 311, CI 315, CI 411A, CI 411B, CI 412E, CI 412J, CI 412M, CI 412S CI 413E, CI 413J, CI 413M, CI 413S, CI 426, CI 447, CI 461E, CI 461J, CI 461M, CI 461S, CI 471E, CI 471J, CI 471M, CI 471S, CI 614I, CI 617P, CI 647A, CI 647B, CI 743, CI 744, CI 747L, CI 748, CI 749A, CI 749F, CI 749G, CI 814A, CI 815A, CI 816A, CI 817A, CI 818A, CI 819A, CI 820A, CI 821, CI 847A, CI 847IT, CI 847K, CI 847P)

Graduate transcript analysis fee $30/analysis (first analysis is free)

Scoring of Kansas Performance Teaching Portfolio Exam (KPTP) $60/person

Student Teaching Courtesy Placement Fee $500/person

Out of Area Placement Fee $500/person

Human Performance Studies

Adventure Sports (HPS 203) $10/course

Bowling (HPS 102C) $65/course

CPR & First Aid Certification (HPS 117) (required by American Red Cross) $10/course

Horsemanship (HPS 102M) $150/course
<table>
<thead>
<tr>
<th>Departmental or College Fees</th>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ice Skating (HPS 102O)</td>
<td>$80/course</td>
<td></td>
</tr>
<tr>
<td>Pool/Billiards (HPS 101V)</td>
<td>$35/course</td>
<td></td>
</tr>
<tr>
<td>Scuba Diving (HPS 107E)</td>
<td>$60/course</td>
<td></td>
</tr>
<tr>
<td>Swimming (HPS 107A)</td>
<td>$20/course</td>
<td></td>
</tr>
<tr>
<td>Taping and Bandaging (HPS 130)</td>
<td>$100/course</td>
<td></td>
</tr>
<tr>
<td>Lab Fees (HPS 113, HPS 117, HPS 328, HPS 440, HPS 460, HPS 490)</td>
<td>$25/credit hour</td>
<td></td>
</tr>
<tr>
<td>MEdLab Fees (HPS 114, HPS 350, HPS 351, HPS 450, HPS 451, HPS 541, HPS 715, HPS 732, HPS 740, HPS 762, HPS 780, HPS 781, HPS 790, HPS 795, HPS 797, HPS 800, HPS 815, HPS 830, HPS 860, HPS 890, HPS 895)</td>
<td>$25/credit hour</td>
<td></td>
</tr>
<tr>
<td>Field Experiences, Practica and Internships (HPS 121, HPS 220, HPS 221, HPS 312, HPS 320, HPS 321, HPS 325, HPS 420, HPS 421, HPS 470, HPS 471, HPS 472, HPS 495, HPS 857)</td>
<td>$25/credit hour</td>
<td></td>
</tr>
</tbody>
</table>

**Sport Management (SMGT)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Management Courses (SMGT 210, SMGT 447A, SMGT 447B, SMGT 847)</td>
<td>$25/credit hour</td>
</tr>
</tbody>
</table>

**College of Engineering**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Fee</td>
<td>$50/credit hour for all credits taken by students in the College of Engineering</td>
</tr>
<tr>
<td>Engineering Study Abroad Fee</td>
<td>actual cost</td>
</tr>
<tr>
<td>Myers Briggs Personality Test (ENGR 501)</td>
<td>$45/person</td>
</tr>
</tbody>
</table>

**College of Fine Arts**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course fee</td>
<td>$24/credit hour for all courses in the College of Fine Arts</td>
</tr>
<tr>
<td>Practice Room Usage Fee</td>
<td>$50/year ($25 is a refundable key deposit)</td>
</tr>
<tr>
<td>Locker Rental Fee</td>
<td>$15/year</td>
</tr>
<tr>
<td>Lost Item Charges for Replaceable Music Items</td>
<td>$100/item</td>
</tr>
<tr>
<td>Kodally Program Certification Fee</td>
<td>$500/year (both credit and noncredit classes)</td>
</tr>
<tr>
<td>Canta in Italia Program Fee</td>
<td>actual cost</td>
</tr>
<tr>
<td>Student Group Travel</td>
<td>actual cost</td>
</tr>
<tr>
<td>Scoring of Kansas Performance Teaching Portfolio Exam (KPTP) (associated with MUSE 405 Student Teaching Seminar course)</td>
<td>$60/person</td>
</tr>
</tbody>
</table>

**College of Health Professions**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course fee</td>
<td>$15/credit hour for all courses in the College of Health Professions</td>
</tr>
</tbody>
</table>

**Advanced Education in General Dentistry**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee</td>
<td>$150/person</td>
</tr>
<tr>
<td>Program Fee</td>
<td>$1,500/person (covers student liability insurance, scrubs, lab coats, supplies &amp; continuing education)</td>
</tr>
</tbody>
</table>

**Communication Sciences and Disorders**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD Program Fee</td>
<td>$50/credit hour for all credits taken by students within Communication Sciences and Disorders</td>
</tr>
<tr>
<td>MA—Communication Sciences and Disorders Enrollment Fee</td>
<td>$150/person (one time, fall semester)</td>
</tr>
<tr>
<td>MA—Communication Sciences and Disorders Clinic Fee</td>
<td>$50/person each semester</td>
</tr>
<tr>
<td>Doctor of Audiology Enrollment Fee</td>
<td>$150/person (one time, fall semester)</td>
</tr>
<tr>
<td>Doctor of Audiology Clinic Fee</td>
<td>$75/person each semester</td>
</tr>
</tbody>
</table>

**Dental Hygiene**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>DH Program Fee (DH 311)</td>
<td>$375/person/semester (except online completion program students)</td>
</tr>
<tr>
<td>DH Acceptance Fee</td>
<td>$100/person</td>
</tr>
<tr>
<td>DH Application Fee</td>
<td>$15/person</td>
</tr>
<tr>
<td>DH—Board Review Course Fee</td>
<td>$125/person</td>
</tr>
<tr>
<td>Student Equip./Supplies Fee</td>
<td>$2,100/person (Based on actual amount, amount listed is an estimate; student insurance and key costs are part of the equipment/supplies fee.)</td>
</tr>
</tbody>
</table>

**Medical Laboratory Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS Program Fee</td>
<td>$100/person/semester</td>
</tr>
<tr>
<td>MLS Acceptance Fee</td>
<td>$100/person</td>
</tr>
</tbody>
</table>

**School of Nursing**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Program Fee</td>
<td>$50/credit hour for all credits taken by students in the School of Nursing (except online RN to BSN students)</td>
</tr>
<tr>
<td>Nursing Acceptance Fee</td>
<td>$100/person</td>
</tr>
<tr>
<td>Nursing Testing Fee (ATI – CARP)</td>
<td>$680/person nonrefundable (one time upon admission)</td>
</tr>
<tr>
<td>Liability Insurance, Prelicensure</td>
<td>$26/per year, fall semester</td>
</tr>
<tr>
<td>Nursing Acceptance Fee</td>
<td>$100/person</td>
</tr>
<tr>
<td>RN to MSN Portfolio Review</td>
<td>$40/person</td>
</tr>
</tbody>
</table>

**RN to BSN Nursing Students Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Testing Fee (ATI only)</td>
<td>$445/person nonrefundable (one time upon admission)</td>
</tr>
<tr>
<td>Posting of 25 hours retroactive credit for Associate Degree to BSN</td>
<td>$50/person</td>
</tr>
<tr>
<td>RN to MSN Portfolio Review</td>
<td>$40/person</td>
</tr>
</tbody>
</table>

**Accelerated Baccalaureate Nursing Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated Acceptance Fee</td>
<td>$600/person</td>
</tr>
</tbody>
</table>
Resident Student Program Fee  $30,000/person (13-month program)
Nonresident Student Program Fee  $30,000/person (13-month program)
Nursing Testing Fee (ATI–CARP)  $680/person nonrefundable (one time upon admission)
Liability Insurance, Prelicensure  $26/year, fall semester

Physician Assistant
PA Program Fee  $775/person/semester
PA Acceptance Fee  $500/person
PA Application Fee  $75/person
PA Testing Fee (PA 700 and PA 803)  $200/course (Tests: OSCE, PACKRAT, CPR, EOR)

Physical Therapy
PT Program Fee  $575 per person/semester
PT Acceptance Fee  $100/person

Public Health Science
Public Health Science Acceptance Fee  $50/person for all programs (HS, HMC/AGE/GCPH/AIT), one time upon admission

Fairmount College of Liberal Arts and Sciences
Anthropology
Field Trip  actual cost/semester

Biology
Lab Course Numbers: BIOL 107, BIOL 210, BIOL 211, BIOL 220, BIOL 223, BIOL 330, BIOL 418, BIOL 419, BIOL 420, BIOL 502, BIOL 503, BIOL 523, BIOL 527, BIOL 528, BIOL 532, BIOL 535, BIOL 540, BIOL 561, BIOL 575, BIOL 578, BIOL 595, BIOL 610G, BIOL 640F, BIOL 760
Lab Course Numbers: CHEM 103, CHEM 211, CHEM 212, CHEM 531, CHEM 532
Chemistry
Lab Course Numbers: CHEM 103, CHEM 211, CHEM 212, CHEM 531, CHEM 532

Elliott School of Communication
COMM 305, COMM 306  $25/credit hour

English
English Composition Placement Exam  $10
Exit Exam for Validation of International Transfer  $4

Geology
Field Trip  actual cost/semester

International Semester Study Abroad (LASI 479)  $100/person
Lab Course Numbers: GEOL 102, GEOL 111, GEOL 312, GEOL 320, GEOL 324, GEOL 526, GEOL 540, GEOL 544, GEOL 552, GEOL 570, GEOL 650, GEOL 724

Mathematics
College Algebra Placement Exam  $10

Modern and Classical Languages and Literatures (MCLL)
CRE for Foreign Language  $15/credit hour
Retroactive Credit Fee  $75/credit hour
Translation Certification  $30
Puebla Summer Program  actual cost
Spanish Placement Exam  $10

Physics
Lab Courses: PHYS 196, PHYS 210, PHYS 213L, PHYS 214L, PHYS 315, PHYS 316

Psychology
Mastery Workbook Fee (PSY 111 except honor courses, PSY 311)  $10/course nonrefundable

Social Work
Course Numbers: SCWK 402, SCWK 404, SCWK 720, SCWK 721, SCWK 822, SCWK 823

Administrative and Special Fees
Certain other fees are assessed as indicated below.
Undergraduate Admission Application Fee—Initial Enrollment  $40/person
Orientation:
Domestic Undergraduate Students  $50/person
Guests  $20/person
Admissions:
Junior Day  $15/person
Senior Day  $15/person
Open House  $15/person
WSU Visit Day  $15/person
Major Exploration Day  $15/person
Admissions Program Guest Fees  $5/person/program (includes guests for Junior Day, Senior Day and Open House)
Future Shocker Camp  $15/person
Student Ambassador Society Leadership Conference  $15/person
Shocker Honors Scholar Banquet (for more than one guest)  $10/person/program
Graduate School:
Administrative and Special Fees

Graduate Admission Application or Reapplication Fee $50/person
Graduate Express Mailing Fee $60/person
Graduate Fee to Process Application for Degree/Hooding Ceremony $15/application
Graduate School Thesis or Dissertation Fee $40/person

International:
Intensive English & International Student Basic Service Application Fee $75/person
Intensive English & International Student Standard Service Application Fee $150/person
Intensive English & International Student Premium Service Application Fee $250/person
Intensive English Conversation Class (Relative) $25/person
Intensive English Conversation Class (Nonrelative) $35/person
Intensive English Learning Center (IELC) Enrichment Class $35/person
Certification Letters for Intensive English Students $10/letter
International Pronunciation Class $35/person
Intensive English Library Book Fine $20/book
Intensive English Textbook Fine $40/book
International Enrollment Deposit $7,000/person
International Student Enrollment Fee $200/person (one time upon admission)
International Graduate Student Application/Reapplication Fee $65/person
International Student Orientation Fee (Undergraduate and Graduate) $50/person
International EPE Testing Fee $75/person
International TSE Testing Fee $75/person
International TSE Reschedule Testing Fee $10/person
International Glacier Tax Prep. $2/person (Federal Income Tax for International Students)
International Express Mail Fee $60/person
International Domestic Express Mail Fee $20/person
National Student Exchange Program Application Fee $200/person

Copies of Public Documents:
1. Public Records in Print:
   a. Access to public records in print $20/hour
   b. Copying $0.10/page
2. Public Records in Computer Files:
   a. Access to public record(s) stored on computer files that can be accomplished using retrieval software already available and without software modifications $50/hour
   b. Access to public record(s) stored on computer files that requires custom programming time to retrieve and process $75/hour

International:
Diploma Replacement Fee $30/copy
Diploma Cover Replacement Fee $5/copy
Transcript/Certification Fee $10/copy
Transcript—Fax $5/transcript
International FEDEX $40/FEDEX
Next Day Delivery, USA $15/mailing
Priority Mail, USA $7/mailing
Notarized Certified True Copies $10/copy
Foreign Transcripts $2/page
Testing and Credit by Examination Fee:
   LAS Credit for Life Experience Fee $15/credit hour
   Credit by Examination and Retroactive Credit Fees $15/credit hour
   Make-up Examination Fee $8/test

1 The deposit will be used to pay for the student's tuition, fees, on-campus housing, and medical insurance after the student has enrolled. If the student fails to enroll, the enrollment deposit is not refundable unless the student cancels his or her admission and returns his or her unused Form I-20 to the Office of International Education.
2 There is no charge for requesting less than 30 minutes of staff time to obtain

Library Fees

Library Fine Schedule

4 Week Materials $0.25/day ($10 maximum per item)
Periodicals $0.50/day ($10 maximum per item)
Reserve Fine (1, 3, 7-day check-outs) $0.50/day ($10 maximum per item)
Reserve Fine (Library use only) $0.60/hour ($10 maximum per item)
Equipment Fine (laptops and iPads) $10/hour ($120 maximum)
Recall Fine $1/day ($40 maximum per item)
Textbook Fine $0.10/minute ($100 maximum per item)
Peripheral Item Fine $5 (assessed to the patron if items such as study room keys, headphones, chargers, calculators and projectors are not returned by the time the library closes)

1 There is a five day grace period for four-week materials. On the sixth day, $1.50 is applied to the account.
If total fines remain under $3 during a semester, the fines will be dropped at the end of that semester. If fines exceed $25 during a semester, the library patron is eligible for a one-time only reduction in fines back to the $25 level.

**Damaged Items**

Damage charges vary depending upon the cost needed to repair the item. Patrons are responsible for repair costs associated with items damaged while charged to their accounts. A minimum of $3 will be charged for each damaged item. The cost of repairs will not exceed the replacement cost plus processing cost of the item.

**Lost Item Charges**

<table>
<thead>
<tr>
<th>Lost Item Processing Fee</th>
<th>$15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost Item Charges Replacement Cost plus a $15.00 processing fee&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Min. Lost Charge for Irreplaceable Item</td>
<td>$265&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>1</sup> Replacement cost is determined through researching the title, author, edition, ISBN#, subject area or equipment costs from sources such as the following: Amazon (http://amazon.com), Alibris (http://alibris.com), or Abe Books (http://abebooks.com). Patrons are allowed to submit their own replacement copies for approval. If approved, they will then only be responsible for the processing fee.

<sup>2</sup> $250.00 replacement fee plus a $15.00 processing fee.

**Miscellaneous Charges**

**Printing and Photocopying**

<table>
<thead>
<tr>
<th>Black and White Copies</th>
<th>$0.10/copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Copies</td>
<td>$0.25/copy</td>
</tr>
<tr>
<td>Microform Printing</td>
<td>$0.10/copy</td>
</tr>
</tbody>
</table>

**Scan on Demand Fee Schedule**

| 1–20 pages | $5 |
| 21–49 pages | $8 |
| 50+ pages  | $11 |

**Digital Images (Special Collections)**

<table>
<thead>
<tr>
<th>Stock Images</th>
<th>$10/image, $15 one-time setup fee applies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newly Scanned Image</td>
<td>$25/image</td>
</tr>
</tbody>
</table>

**Counseling and Testing Center**

**Counseling**

<table>
<thead>
<tr>
<th>First Appointment</th>
<th>no charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointments after 1st Appointment (Students and Faculty/Staff)</td>
<td>$10/hour</td>
</tr>
<tr>
<td>Counseling No Show/Late Cancel Fee</td>
<td>$5/per occurrence</td>
</tr>
<tr>
<td>Psychological Testing No Show/Late Cancel Fee</td>
<td>$15/per occurrence</td>
</tr>
</tbody>
</table>

**Testing**

<table>
<thead>
<tr>
<th>ACT Prep Workshop</th>
<th>$32/workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Math Prep Workshop</td>
<td>$25/workshop</td>
</tr>
<tr>
<td>GRE Prep Workshop</td>
<td>no charge</td>
</tr>
<tr>
<td>Make-up Exams</td>
<td>$10/test</td>
</tr>
<tr>
<td>Distance Exam—Community</td>
<td>$28/test</td>
</tr>
<tr>
<td>Distance Exam—WSU Student</td>
<td>$10/test</td>
</tr>
<tr>
<td>Institutional ACT—group admin.</td>
<td>$65/test</td>
</tr>
<tr>
<td>Institutional ACT—individual admin.</td>
<td>$125/test</td>
</tr>
<tr>
<td>Institutional TOEFL</td>
<td>$60/test</td>
</tr>
<tr>
<td>English Placement Test (does not include proctor fee)</td>
<td>$10/test</td>
</tr>
<tr>
<td>Math Placement Test (does not include proctor fee)</td>
<td>$4/test</td>
</tr>
<tr>
<td>Miller Analogies Test</td>
<td>$100/test</td>
</tr>
<tr>
<td>Distance Proctoring Fees – ProctorU&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>(0–30 min)</td>
<td>$8.75/test</td>
</tr>
<tr>
<td>(31–60 min)</td>
<td>$17.50/test</td>
</tr>
<tr>
<td>(61–120 min)</td>
<td>$25.00/test</td>
</tr>
<tr>
<td>(121–180 min)</td>
<td>$33.75/test</td>
</tr>
<tr>
<td>(181+min)</td>
<td>$42.50/test</td>
</tr>
</tbody>
</table>

<sup>1</sup> Additional charges apply for ProctorU session scheduled less than 72 hours in advance. Prices are subject to change. Distance proctoring fees are assessed directly to the student only upon use and are not part of the regular student fees. All proctoring fees at non-WSU sites (such as a testing center at a remote location, or ProctorU) are paid directly to distance proctoring site and are not paid to WSU. Contact the Counseling and Testing Center for more information.

**Career Services**

<table>
<thead>
<tr>
<th>Current WSU Students</th>
<th>no charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSU Alumni</td>
<td>no charge</td>
</tr>
<tr>
<td>WSU Faculty/Staff</td>
<td>no charge</td>
</tr>
<tr>
<td>Family Member of WSU Faculty/Staff</td>
<td>no charge</td>
</tr>
<tr>
<td>Community</td>
<td>$40/hour</td>
</tr>
</tbody>
</table>

**Career Testing – Students and Nonstudents**

| Strong Interest Inventory | $15 |
| VISTA Card Sort | no charge |
Tuition and fees, including any departmental or college fees, are required to be paid in full for any course in which a student is still enrolled after the deadline for dropping that course with a 100 percent refund. No tuition is charged to students enrolled in instructional programs for which the entire cost, including faculty, is financed by governmental or private agencies. Students enrolled in such programs on campus must pay all required student fees.

**Department Cost-Recovery Fees**
All departmental charges for specific goods and services (i.e., photocopy, optional instructional materials, placement office user fees, building use fees, summer orientation sessions, academic transcripts, registration fees, etc.) not explicitly identified herein will be priced at an amount that approximates actual costs.

**Student Health Services Fees**
Certain fees for laboratory tests, inoculations, prescriptions, X-rays, physical examinations, and other procedures are charged to users of Student Health Services. These fees reflect direct charges to the university and every attempt is made to keep them below market cost. A list of specific charges is available at the Student Health Center.

**Housing and Residence Life Fees**
Housing rates at Wichita State University vary with the choice of facility and meal plan.

For more information about living on campus, room and meal plan options, application/contract questions, please contact Housing and Residence Life at (316) 978-3693, email (housing.wsu@wichita.edu) or go to the Housing and Residence Life website (http://www.wichita.edu/housing).

**Student Parking Permits**
Students desiring to park on campus can go to the WSU Marketplace website (http://wichita.edu/parkingpermit) and purchase a hang tag/decal permit.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time Students Car/SUV/ Truck/Motorcycle</td>
<td>$150/year</td>
</tr>
<tr>
<td>Full-Time Students Car/SUV/ Truck/Motorcycle</td>
<td>$75/semester</td>
</tr>
</tbody>
</table>

No cost to Fairmount Towers students to park in Fairmount Towers lot only.

**Payment**
Tuition and fees, including any departmental or college fees, are required to be paid in full for any course in which a student is still enrolled after the deadline for dropping that course with a 100 percent refund.

An **installment payment plan** is available at the time of enrollment to assist students in making tuition payments. Any student who does not have financial aid from other sources sufficient to pay tuition and fees is eligible if the student has paid all previous obligations to the university. The installment plan requires a $130 nonrefundable down payment which includes a $30 setup fee making the installment plan interest-free. Installment plans must be repaid in two or three equal installments according to the deadlines for a given semester.

**Assessment and Collection**
The director of financial operations and business technology is responsible for the assessment and collection of fees. All semester fees, including laboratory fees, are due and payable in full at registration.

**Late Fees**
All accounts with a balance greater than $150 from tuition, enrollment related fees, or housing charges assessed in the current term will incur a $100 late fee on the first business day after the published payment due date. The payment due date for tuition and enrollment related fees will coincide with the financial aid office consensus date, the registrar’s office late enrollment date, and the financial operations office 100 percent refund date. The payment due date for housing charges is stated in the housing contract.

All delinquent accounts with a balance due greater than $150 from tuition, enrollment related fees, or housing charges will incur a late payment fee of $100 ninety (90) calendar days into the current term.

**Unpaid Fees**
Students who leave Wichita State University without meeting their financial obligations to the university may have their records impounded by the registrar and their accounts may be sent to a collection agency. Their transcripts or diplomas will not be issued unless their accounts are cleared, and they may not enroll for a new term unless all fees are paid.

Students who are eligible to graduate but still have unpaid tuition balances will not receive their diplomas until those fees are paid.

**Board of Appeals – Residency Status**
Two faculty members, a representative of the vice president for student affairs, a representative of the director of financial operations, and a representative of the general counsel’s office constitute the board of appeals for students who believe their residency status has been incorrectly assessed. The decision of this committee is final. Forms to initiate this process are available in the registrar’s office, 102 Jardine Hall. The form can also be downloaded online (http://wichita.edu/residency). A link to the form is located in the Appeals section of the page. Also see the Residency Defined section in this catalog.

**Drop/Add Fee Policy**
Students who drop credits and do not add credits will be charged the proportional percentage based on the week they drop the credits.

Students who drop and add credits in the same term will not be required to pay additional tuition/fees if the following conditions are met:

1. The drop and add occur in one transaction; and
2. There are an equal number of credit hours added as are being dropped, and the credit hours have an equivalent charge.

A course that has been added in accordance with parts 1 and 2, and is subsequently dropped, will retain the same refund percentage as the original course dropped. Students who drop the added course that met the above conditions will have an adjustment made to their account.
Refunds of tuition and fees will be granted for withdrawals in accordance with the dates and regulations identified on the registrar’s and the student accounts receiveable’s websites. Requests for refunds which occur after the close of the regular refund period must be submitted on the Refund Waiver form and presented to the Office of Financial Operations and Business Technology, 201 Jardine Hall.

Refund Policy
Complete and Partial Withdrawal
Complete withdrawal from the university is accomplished when a student officially drops all classes in which they are enrolled.

Students are eligible for refunds as published online in the fee calendar each semester. In short-term classes, students will have the first class period to determine if the class is suited for them. Students who register late or fail to attend the first class period in short-term classes will not be eligible for 100 percent refunds according to the policy.

The first class day refers to the first day of the part-of-term as defined by the department and registrar’s office; thereafter, the day refers to the business day. The length of the part-of-term determines the refund, not the start and end date of the course. When a course’s part-of-term length falls between two of the above categories, then the shorter one is used. (Example: If course A part-of-term begins Monday and the actual course meets on Thursday, the refund business day begins with Monday, not Thursday.

If a short-term class begins on Friday night, Saturday, or Sunday, students will have until the end of the first business day to drop the course. In order to receive a 100 percent refund for the class, the student must provide documentation that he or she did not attend more than four hours of the class.

No one other than the Office of Financial Operations and Business Technology in 201 Jardine Hall, or the Tuition Refund Board of Appeals is authorized to determine the amount of tuition refund a student will receive.

Students who, because of extenuating circumstances, seek a higher refund than is available by policy, must petition the Tuition Refund Board of Appeals. Petition forms are available at the Office of Financial Operations and Business Technology, 201 Jardine Hall. The petition must be filed with the appropriate documentation. A petition for tuition refund beyond the policy must be filed at the Office of Financial Operations and Business Technology within the semester the course was taken.

Students who may have received approval from the university exceptions committee for a late withdrawal from a previous semester are not eligible by policy for a tuition refund. These are separate issues and decisions.

Military Refund Policy
Students serving in the National Guard or Reserves who are called to active duty during an academic term are entitled to receive a full refund of tuition and fees. Students who are drafted and must report for active duty during an academic term are entitled to receive a full refund of tuition and fees. All refunds are subject to presentation of official documentation. Students who are classified as civilians, but choose to assist in nondiscretionary U.S. military related efforts, are not covered by this exception and will be subject to the university’s nonmilitary refund policy. Room and board charges will be prorated to the extent that services have been provided.

Tuition and Fee Waivers
Student Fee Waivers
Student fees shall be waived for all Wichita State University benefits-eligible employees who are not carrying full-time class loads (undergraduate 12 credit hours; graduate 9 credit hours); adjunct faculty members and lecturers. These university employees must have an appointment for the semester in which the student fee is applicable.

Student fees shall be waived for currently enrolled students who are working in their cooperative education job or who are performing a required clinical rotation or internship off the WSU campus (defined as the City of Wichita, its contiguous industrial sites and the WSU South and West locations) for the entire semester.

Student employees and graduate assistants are not eligible for student fee waivers.

Tuition Waiver for Kansas Teacher of the Year
Kansas Teacher of the Year recipients are allowed to enroll tuition free in up to 9 credit hours annually provided the individual is actively pursuing a teaching career in Kansas.

To be eligible, a person must be:

1. A past or present recipient of the Kansas Teacher of the Year award under the program administered by the Kansas Department of Education, and
2. Employed as a teacher in an educational institution accredited by the Kansas Department of Education.

A list of persons eligible for this tuition waiver is on file in the Board of Education Office.

Senior Citizen Fee Waiver
In accordance with Kansas Board of Regents policy, students who are at least 60 years of age may audit (no-credit) regular lecture or certain group activity courses — when there is space available and for which they meet the prerequisites — without payment of tuition and student fees, campus infrastructure and support fees, and technology and transportation fees. However, senior auditors must pay any applicable workshop fees and lab/special course fees.

Prerequisites include admission to the graduate school for graduate courses, and program admission for courses in which program admission is required of all students.

Senior citizens must present a Medicare card or driver’s license to validate age. A special senior citizen registration is held after the first day of classes — see the Schedule of Courses, semester calendar at the registrar’s website (http://wichita.edu/registrar).

Senior citizens desiring college credit or the assurance of space in specific courses may enroll and pay full fees during regular registration.

Senior citizens who have not enrolled at WSU before must complete an application for admission and pay the application fee before
registering at the undergraduate or graduate admissions office, $40 for undergraduate or $50 for graduate.

Senior citizens who want to participate in certain group activity courses, have three options:

1. Purchase a membership in the Center for Physical Activity and Aging (CPAA), $50 for membership purchased at the HPS department, and $75 for parking per student. Enrollment through the registrar’s office is not necessary.

2. Those who want more complete access to the Heskett Center, and Ablah Library privileges, may join CPAA and enroll through the registrar’s office with audit status in a 0 credit hour section. Costs include a $50 membership fee, $21 + tax Heskett Center fee, paid at the Heskett Center, and any applicable workshop fees and lab/special course fees.

3. Senior citizens may enroll in one class for full credit at a total cost of the current tuition and student fees, campus infrastructure and support fees, and technology and transportation fees.

Members of the CPAA are eligible each semester for functional assessment testing of their ability to perform daily living activities and an annual bone density evaluation. Membership also provides education concerning the concepts of active aging to the older adult population through newsletters, workshops, lectures and exercise demonstrations.
Academics

Degree Evaluation

WSU uses online degree evaluation, a web-based advising tool used by students and advisors, to track progress toward graduation. The degree evaluation sorts a student’s courses into different categories based on their chosen major(s)/minor(s) and indicates which degree requirements have been met and which remain to be completed before graduation.

Students who are undecided and students who are considering changing their majors can run a What-if Analysis to see how their courses would be applied toward possible degrees. While the degree evaluation does not replace advisors, it allows students and advisors more time to discuss their total development, including career and life planning. Advising includes helping students meet their full potential, technically, professionally and personally.

Degree evaluation tips:

• Degree evaluations are not considered official university documents and do not replace the official university transcript;
• Verification of degree requirements must go through a faculty or academic advisor;
• Students should contact their advisor if they have any questions regarding their degree evaluation.

Certificate, Residency and Badge Programs

Programs are available at the undergraduate, graduate and residency levels. Each program consists of a group of related courses that addresses a special topic. Completion of these courses indicates achievement in a specialized area. Programs vary in terms of length, and some courses in the program may have prerequisites. While these programs do not end with an academic degree, many of the courses are found within degree programs. Programs are reviewed by the faculty on a three-year rotation. Many of these programs exist for limited time periods depending on their demand. Programs are further described in the various departmental sections and in the list below.

A cumulative grade point average of at least 2.000 for all courses comprising the certificate program, and no grade below C is allowed to earn a certificate. Interested students should consult the catalog and the certificate coordinator for detailed information on requirements and guidelines.

Certificate programs are not eligible for Title IV (federal financial aid) funding unless the certificate is a requirement of the degree program. The exceptions are approved programs of at least one academic year in duration that lead to a certificate and prepare students for gainful employment in a recognized occupation. Approved programs will be designated with disclosure information on the program web page in the applicable academic college.

Undergraduate Certificates Offered

Institute for Interdisciplinary Creativity:
• Leadership
College of Fine Arts:
• Directing
• Stage Management
Fairmount College of Liberal Arts & Sciences:
• Asian Studies
• Community Psychology
• Film Studies
• Global Competency
• Great Plains Studies
• Human Factors Psychology
• Medieval & Renaissance Studies
• Social Work and Addiction
• Spanish for the Professions
• Strategic Communication
• Tilford Diversity Studies

Graduate Certificates Offered

Barton School of Business:
• Entrepreneurship & Innovation
• Enterprise Systems & Supply Chain Management
College of Education:
• Building-Level Leadership/Principal
• Child/Play Therapy
• Educational Technology
• Engineering Education
• Functional Aging
• Higher Education Leadership
• Interdisciplinary STEM Education
• Literacy
College of Engineering:
• Advanced Composite Materials
• Engineering Education
• Enterprise Systems & Supply Chain Management
• Foundations of Six Sigma and Quality Improvement
• Information Assurance and Cybersecurity
• Lean Systems
• System Engineering and Management
College of Health Professions:
• Public Health
• Family Nurse Practitioner
• Adult/Gerontology Acute Care Nurse Practitioner
• Adult/Gerontology Clinical Nurse Specialist
• Psychiatric Mental Health Nurse Practitioner
College of Fine Arts:
• Professional Studies in Music Performance
Fairmount College of Liberal Arts & Sciences:
• City and County Management
• Economic Development
• Great Plains Studies
• Museum Studies
• Nonprofit Management
• Public Finance
Post Graduate Residency Program:
College of Health Professions:
• Advanced Education General Dentistry

Badge Program

Wichita State University’s badge program is designed with the working professional in mind so coursework is developed around professional
development content and structured in smaller units. In most cases, information is organized into 0.5 credit hour classes (one 0.5 credit hour class equates to one badge) which also makes the workload manageable for someone who works a full-time job. While some badges may be offered in a classroom setting, many are also offered online. Enrollment in badge courses is restricted to nondegree seeking students. In some cases, badges may be applied towards requirements for a degree should the student enter a WSU degree program.

Badges are credit courses that comply with the definition and assignment of credit hour policy and appear on a transcript indicating that academic work has been successfully completed. Students receive a grade of either $B_g$ (badge earned) or $NB_g$ (no badge earned) when the class ends.

For more information visit the Office for Workforce, Professional & Community Education website (http://wichita.edu/WPCE) and click on the Badge Program link.

**Cooperative Education and Internships**

**Cooperative Education**

Cooperative education is an academic program for undergraduate and graduate students who wish to combine classroom studies with academically related paid employment. Cooperative education provides students work-based learning opportunities both locally and nationally.

By using off-campus resources and expertise, cooperative education provides opportunities for students in business, government, industry and social agencies. Programs are designed to enable students to work directly with professionals in their field while expanding upon knowledge learned in the classroom.

Students hired in cooperative education positions must enroll in specially designated co-op courses and work with a faculty advisor from within the appropriate department. Each placement is assessed by the faculty advisor for its potential to provide learning experiences relevant to the student’s professional and educational goals.

Cooperative education offers both alternating and parallel placements. Students who select the alternating option must complete a semester of full-time enrollment in coursework before entering a second alternating position. Alternating placements carry the status of full-time students.

Students selecting the parallel option are required to carry a minimum of 6 credit hours of coursework in addition to their co-op courses. Students may enroll in parallel co-op positions during consecutive semesters.

Requirements for co-op participation vary within the different colleges and departments. Requirements for admission to the co-op program generally include completion of 24 credit hours, with 9 of these hours completed in the student’s major, and satisfactory academic standing.

Interested students should come to the Career Development Center, Brennan Hall III, or call (316) 978-3688, or register for a workshop online at the workshop webpage (http://wichita.edu/coopworkshop). Students complete a Co-op & Internship workshop, prepare an appropriate resume and meet with the career development specialist for their college.

**Exchange and Study Abroad Programs**

**National Student Exchange**

The National Student Exchange (NSE) is an exciting opportunity to attend one of nearly 200 colleges and universities across the country while paying regular WSU tuition. Costs of room, board and books are paid at the host campus. Students continue to have financial aid information sent to WSU. Most financial aid and scholarships will still be applicable; student aid must first be applied to WSU tuition, and the balance can be taken to pay costs at the host campus.

The program is open to undergraduate, domestic students who are:

1. Enrolled in at least 9 credit hours at WSU at the time of application to NSE as well as in the semester prior to exchange; and
2. Have a 2.500 cumulative grade point average at the time of application and at completion of the semester prior to exchange.

Students should apply for the program during the fall before the year they want to exchange.

Prior to the exchange, students and their academic advisors complete an advising agreement. Students receive full credit for work satisfactorily completed on exchange.

For more information, call the NSE coordinator at (316) 978-6697 or visit the Dorothy and Bill Cohen Honors College in Shocker Hall, Building A.

**Study Abroad Programs**

Wichita State University provides a range of options for students interested in studying overseas, from its own programs taught by WSU faculty, to consortia with which WSU participates, to exchange programs.
WSU students who wish to study abroad can find a variety of study abroad programs in the Study Abroad office on the second floor of the James Sutherland Garvey International Center.

The university offers exchange programs in about 15 countries. Several WSU departments occasionally offer courses in other countries and publicize them appropriately. The university is a member of the International Student Exchange Program (ISEP). Students may also use the National Student Exchange program described above to participate in overseas study programs sponsored by those American universities.

The department of modern and classical languages and literatures offers organized study abroad programs in Mexico and France, described as follows:

**Exchange Program with the University of Orléans**

Wichita State University has a special exchange program with Wichita’s French sister city, Orléans. Through this exchange program, students pay their tuition and fees at WSU and do academic work in their chosen field at the Université d’Orléans. Orléans also offers a four-week summer program in which students may earn up to 6 hours of credit transferable to WSU. Students pay their fees directly to Orléans when enrolled in the summer program. For more information, contact the department of modern and classical languages and literatures, 305 Jardine Hall.

**Spanish Program in Puebla, Mexico**

The department of modern and classical languages and literatures offers a faculty-led program designed to broaden students’ comprehension of the language, customs, history and culture of Mexico.

Students who complete the six-week course may earn 6 hours of undergraduate or graduate credit. For more information, contact the department of modern and classical languages and literatures, 305 Jardine Hall.

**Midwest Student Exchange Program (MSEP)**

Residents of specified states who enroll in selected majors at WSU are eligible to pay just 150 percent of in-state tuition instead of paying out-of-state tuition rates. This is a tuition discounting program, not a scholarship.

At WSU, undergraduate students participating in the Midwest Student Exchange Program:

1. Must complete the precollege curriculum prescribed by the Kansas Board of Regents, with a minimum grade point average of 2.500 on a 4.000 scale, which includes four units of English and math and three units of social sciences and natural sciences; and
2. Must earn a composite American College Testing program (ACT) score of not less than 21 points or a SAT score of not less than 980 points; and
3. Must enroll as a full-time student in a degree-bound eligible major, and make acceptable progress toward the degree; and
4. Must be a resident of Illinois, Indiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota or Wisconsin.

If a student satisfies these criteria, as verified by an eight-semester high school transcript submitted to WSU, they will be sent an MSEP agreement. Fee bills will reflect MSEP tuition rates only after the agreement is signed and returned. MSEP participation must begin at the time of first admission and enrollment at WSU.

See the MSEP program website (http://wichita.edu/msep) for contact information and the most up-to-date list of eligible majors.

**Field Studies, Workshops and High School Guests**

**Geology Field School**

Wichita State offers a summer field course in geology (GEOL 640). The camp is based in the Bighorn Basin of northern Wyoming and southern Montana. The summer course consists of five weeks in the field, for which students receive 6 hours of credit.

Applicants should have completed coursework in physical and historical geology and at least 12 credit hours of advanced geology, preferably including a field methods mapping course. Inquiries should be directed to the department of geology, 114 Geology Building.

**Workshops**

Workshops devoted to current topics are offered throughout the year. Typical courses include workshops for teachers in the areas of business, education and fine arts; courses in current health issues; an entrepreneurship workshop for people considering creating a small business; and field study in topics such as the floral ecology of the Rocky Mountains, the Osage culture in Oklahoma, or a wilderness experience in a national park. Special fees (p. 17) are charged for workshops.

**High School Students**

High school students who have completed their sophomore year may enroll in WSU classes as guest students and earn college credit for those courses until they graduate from high school (see Guest Students - High School (p. 9)). Other summer opportunities for high school students at Wichita State include sports camps in basketball, baseball and volleyball; and enrichment courses for career exploration.

**Global Learning**

Courses so identified incorporate global learning, which means WSU students have the opportunity to learn collaboratively with students, professors and experts at overseas universities, institutions and businesses via Internet resources such as videoconferencing, threaded discussions, blogs and chat sessions. The focus of such activities is on the development of intercultural communication and collaboration competence. Third Place Learning may be practiced during some of the global learning courses. These courses help prepare students to live in an increasingly interconnected, diverse and interdependent world. For more information about global learning, visit the Global Learning website (http://global-learning.net), or contact Glyn Rimmington by calling (316) 978-6140 or email: glyn.rimmington@wichita.edu.

**Wichita State Online**

Wichita State Online bring WSU’s campus to students everywhere, making it possible to earn a degree from Wichita State University completely online.

Students who are seeking a graduate degree, or who are returning to school to finish their bachelor’s degree can rely on the flexibility and convenience of Wichita State Online degree programs.

**Getting Started as an Online Student**

New online students apply for admission (http://wichita.edu/apply) and select their online-only program option in the Academic Interest section of the application. Returning undergraduate students can reactivate their student record online (http://wichita.edu/reactivation). Students with
questions before they apply or reactivate can call (844) 978-6656 or email (online@wichita.edu) for assistance.

Online Student Academic Advising
Fully online program students work with a dedicated online academic advisor who provides support and guidance from application to graduation. It is recommended that all online program students work closely with their advisor before enrolling in courses to ensure the most effective plan of study.

Online Student Support
Online program students have access to a robust student support system, including a dedicated student success specialist who provides focused support, academic resources, and access to services like tutoring, counseling or more. Learn more at the Online Student Support webpage (http://wichita.edu/onlinestudents).

Online Program Tuition and Fees
Fully online program students pay in-state tuition (regardless of where they live), an online course fee, plus any applicable college fees. Students in fully online programs do not pay the on-campus student fee and are not issued a ShockerID card. Online program students do not receive benefits such as access to the Heskett Center, campus services, campus events and Shocker athletics.

Fully Online Degree Programs
Undergraduate Online Programs
- Associate of Arts (AA)
- Bachelor of Business Administration, general business (BBA)
- Bachelor of Business Administration, management (BBA)
- Bachelor of Science in Dental Hygiene (BSDH)
- Bachelor of Science in Engineering Technology - Management (BSET) (Hybrid)¹
  - Bachelor of Science in Nursing (BSN)

Bachelor’s Degree Completion Online Programs
- Bachelor of Arts Field Major (BA)
  - Aging Studies
  - Criminal Justice
  - Women’s Studies

- Bachelor of General Studies (BGS)
  - Aging Studies
  - Anthropology
  - Criminal Justice
  - English
  - Political Science
  - Psychology (does not lead to licensure)
  - Sociology (does not lead to licensure)
  - Women’s Studies

Graduate Online Programs
- Aging Studies (MA)
- Business Administration (MBA) (Hybrid)¹
- Criminal Justice (MA)
- Doctor of Nursing Practice - postmaster’s (MSN to DNP)
- Learning and Instructional Design (MEd)
- Public Administration (MPA)
- Special Education - Gifted (MEd)

- Special Education - High Incidence (MEd)
- Special Education - Low Incidence (MEd)

Online Badge and Certificate Courses
- Tilford Diversity Studies Certificate
- Public Finance Certificate
- Undergraduate Leadership Certificate
- Care of Populations Health Professions Badge

¹ Hybrid online programs are not 100 percent online and require some on-campus coursework.

Learn More About Wichita State Online
- Student support and information (http://wichita.edu/online)
- Search for online courses (http://wichita.edu/onlinecourses)
- Request information by email (online@wichita.edu)
**Academic Resources**

**Adult Learning and Degree Completion**

**Adult Learning**

Whether finishing a degree, changing course to another option or beginning a new path, the Office of Adult Learning is here to help every step of the way. With services for adult learners, transfer, active duty military, veterans and returning students, and offering classes at a variety of days and times, WSU has the tools to help adults succeed.

In the capacity of serving active duty military and veterans, the director of Adult Learning serves as the point of contact (POC) for inquiries pursuant to the Department of Defense Memorandum of Understanding.

Wichita State recognizes that returning adults face a different set of challenges than traditional students when it comes to completing a degree. WSU is here to ensure that returning adults no longer need to sacrifice their other commitments in order to fulfill their academic goals.

The Office of Adult Learning is located on the main campus in the Grace Wilkie Annex for convenient access for both current and future adult students. Contact the Office of Adult Learning at (316) 978-8325 or on the web (http://wichita.edu/adultlearning).

**WSU Complete—Adult Degree Completion Program**

Started college, but life got in the way? WSU Complete adult degree completion program at Wichita State allows working adults to complete their degrees through a combination of convenient classes and online offerings. The WSU Complete degree programs in criminal justice and Bachelor of General Studies are offered in the evenings. The WSU Complete program allows a person to complete a degree through eight-week courses so they can work and be eligible for full-time student financial aid options.

For more information call (316) 978-8325 or visit the WSU Complete website (http://wichita.edu/wsus_complete).

**Information Technology Services**

The Information Technology Services (ITS) organization provides the informational backbone for campus communications. In addition to the network infrastructure, ITS supports the programs and technology for the administration of the university. Responsibilities include phone services, network connectivity, application support and training, programming support, desktop diagnosis and repair, network administration, security, operations, and technological consulting. More details about these and other services are online (http://wichita.edu/its).

**Open Student Computer Labs**

ITS maintains an open computer lab in Jabara Hall, room 120. This lab is configured with up-to-date personal computer systems and an abundance of software applications. Other services that are available are Macintosh systems, scanning, laser printing and color printing. There are lab assistants and professional staff available to support the use of these applications, systems and other services such as email support, Internet use and class project assistance.

**Campus Network Access**

All residence hall students are provided a direct, high-speed connection to the campus network and the internet. Wireless access to the campus network (and Internet) is also available from all campus buildings.

**Email (@shockers.wichita.edu)**

Every WSU student is automatically assigned an email account with the “@shockers.wichita.edu” suffix. This email account provides students with a convenient way to communicate with other students, faculty, and University offices in their academic pursuits. Students are expected to use this email address for official communication with faculty and University offices. Applications, instructions and other information about email accounts are available at the online WSU email center (http://wichita.edu/email).

**myWSU**

The myWSU portal is a website that allows students to view and update their own WSU information. Examples are: add/drop courses, check academic status, check on status of financial assistance and get academic history (grades). For more information about this service, go to the myWSU website (https://mywsu.wichita.edu) and click on the New to my WSU link.

**Language and Math Labs; Writing Center**

**Language Lab**

The Savaiano-Cress Language Laboratories offer a variety of media services to foreign-language students. Audio, video and computer equipment are available to students and faculty alike, with the goal of enhancing and expanding the learning experience through the use of instructional media. Hours are flexible to accommodate all students’ needs.

**Math Lab**

The Math Lab, 371 Jabara Hall, offers free mathematics tutoring for WSU students enrolled in the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 007</td>
<td>Arithmetic</td>
<td></td>
</tr>
<tr>
<td>MATH 011</td>
<td>Beginning Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 012</td>
<td>Intermediate Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 112</td>
<td>Precalculus Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 123</td>
<td>College Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 144</td>
<td>Business Calculus</td>
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</tbody>
</table>

**Technical Support**

Technology Help Desk is housed in Jabara Hall, room 120. Technology Help Desk provides technical support to all students, faculty and staff of Wichita State University. More details about the help desk and its services are available online at the help desk website (http://wichita.edu/helpdesk). The phone number for the help desk is (316) 978-HELP (4357).

**Help Desk Hours**

<table>
<thead>
<tr>
<th>Days</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday–Friday</td>
<td>8 a.m.–7:00 p.m.</td>
</tr>
<tr>
<td>Weekends</td>
<td>Closed</td>
</tr>
</tbody>
</table>
Students may work independently knowing that help is available when needed. The Math Lab is staffed by graduate and undergraduate students who are studying mathematics and/or mathematics-related disciplines. No appointment is necessary; students are encouraged to visit the lab during its hours of operation. To determine the hours for the current semester, refer to the schedule posted outside the lab or check the math department’s website (http://wichita.edu/mathlab).

**Writing Center**
The WSU Writing Center in 601 Lindquist Hall is free and open to all WSU students. In the Writing Center, all students can meet with a tutor who is either an undergraduate or graduate teaching assistant. While tutors do not proofread or edit, they offer assistance with all aspects of writing, including brainstorming, organization, style and revision, as well as specific writing concerns voiced by the student. A tutoring session lasts about 30 minutes. No appointment is necessary, but appointments may be scheduled by contacting the center at (316) 978-3173.

In addition to tutoring, the center is equipped with five computers with Internet access, Windows and Microsoft Word (printing services are not available). Students may also do online writing exercises to help improve basic grammar skills. Reading comprehension exercises are also available in the center.

The Writing Center is open 11 a.m.–7 p.m. Monday through Thursday and 11 a.m.–4 p.m. on Friday. It opens the second week of classes and closes at the end of the last day of classes each semester. It is not open on study day, during finals or on holidays.

**Media Resources Center**
The Media Resources Center (MRC) serves the instructional, research and service missions of the university for media, video and design. The MRC operates the university’s cable television station, WSUTV Cox Cable 13, and programs two other channels: Channel 95, MTV; and Channel 97: WSUTV Digital Signage.

The MRC provides high quality video production services with a team of videographers, editors, designers, and with an on-site professional television production studio.

The MRC designs, installs, supports and maintains audio-visual equipment in classrooms and meeting spaces across campus, and provides training and access keys to instructional staff.

The MRC also provides instructional design and educational technology support for all university classes and instructional staff, especially online and hybrid classes taking advantage of the university’s licensed learning management system, Blackboard.

Facilities and resources at the MRC include a flexible learning space classroom, a multimedia lab, and recording/web conferencing spaces. A wide array of media equipment is available for use by students and faculty. This includes video recording systems and projection equipment.

**WSUTV Cable Television**
Wichita State University operates WSUTV, which is carried in more than 17 communities in the Wichita area. National programming promotes greater public awareness of research activities in progress around the world.

Additional programming consists of tele-courses offered each semester for academic credit. Local campus programming includes occasional specials of university events.

**KMUW**
KMUW 89.1 is a listener-supported public radio station named Radio Station of the Year by the Kansas Association of Broadcasters, which includes commercial and noncommercial stations. KMUW is licensed to Wichita State University and operates at 100,000 watts with a schedule of local, national and international news, and a unique blend of music and entertainment. In addition to its traditional broadcast service, KMUW maintains a full-service website with local news, online streaming of its signal and archive access to its local music programs. KMUW supports local arts and culture in the community through partnerships, promotion and sponsorships. KMUW also produces seven music programs: Crossroads, Global Village, New Settlers, Straight No Chaser, Strange Currency, Night Train and Soulsations. KMUW is affiliated with NPR, PRI, AP and PRX national networks.

**Student Early Alert System (SEAS)**
WSU cares about student success. For this reason, WSU has implemented an academic early alert system. Under this system, called SEAS, instructors provide feedback to students who appear to be struggling and offer any assistance that may be needed to help get them back on track academically. Students who are contacted by their instructors through SEAS are encouraged to take full advantage of the help offered.

**Supplemental Instruction and Tutoring**

**Supplemental Instruction**
SI is a proven program that helps students better understand course content and therefore improve their grades. Selected traditionally difficult courses are assigned a peer leader who leads weekly, free, drop-in study sessions. SI works. Students who attend SI typically earn higher grades than those who do not. The online schedule of courses identifies which sections have SI attached to them.

**Tutoring**
Many departments on campus offer tutoring services that can help students master course material and earn better grades. The Office of Student Success hosts a tutoring clearinghouse (http://wichita.edu/tutoring), where students can find a list of available academic helping resources. When no such resources already exist, students can use the same website to request a tutor. Students interested in being paid to be tutors can also apply online (http://wichita.edu/tutoring).

**University Libraries**
University Libraries includes the main Ablah Library, the McKinley Chemistry Library, and the Thurlow Lieurance Memorial Music Library, located in the Music and Languages Innovation Center (MALIC). These libraries connect students and faculty to the information, technology, and other resources essential to learning and research at WSU.

Library collections include more than two million books and research journals, federal and state documents, music scores, microforms, and other materials. Digital access is available to a variety of information resources with 260 databases offering journal indexing, company
information, statistics, streaming audio and video, as well as full-text access to over 438,137 e-books and 87,442 e-journals. Ablah Library has been a Federal Documents Depository Library for over 100 years and is an official United States Patent and Trademark Resource Center, the only such depository in Kansas. In addition to its own collections, University Libraries is able to borrow materials from a worldwide network of other libraries.

University Libraries is dedicated to offering students a variety of services, study environments and convenient hours. Facilities include both quiet and collaborative study spaces with SmartTVs and white boards. University Libraries facilities include wireless internet access, print stations, scanners, color printers, microform reader/printers, photocopiers, seating for more than 850 people, and a 24-hour study room. Over 200 computers provide access to library resources, the Internet, and a variety of software. Laptops, tablets, digital cameras and other technologies are available for checkout. The recently developed C-Space provides individuals or student groups the opportunity to collaborate, create and receive assistance in using emerging technologies such as 3D printing, app development, and media production. Library instruction is offered through in-class collaboration with university departments, workshops, and one-on-one reference help. Technical help desk personnel are available to help library users with equipment and network access issues.

University Libraries Special Collections and University Archives includes rare books, historical Kansas maps, photographs, records of the history of the university, and a growing manuscript collection of more than 700,000 documents. Featured collections include papers of the abolitionist William Lloyd Garrison, the Baughman Collection of Early Kansas Maps and local history, the Aitcheson Rare Books Collection, the Gordon Parks Papers, and congressional papers including those of Kansas Congressman Dan Glickman. Over 120 digital collections presented by Special Collections and University Archives feature rare books, historical papers and photographs, as well as university and local history, including the Wichita Photo Archives.

More information about resources and services is located on the University Libraries website (http://libraries.wichita.edu).
Academic Definitions, Grading Policy

Classification of Students

Students are classified according to the following scheme:

- Freshmen: less than 30 credit hours earned;
- Sophomores: 30 to 59 credit hours earned;
- Juniors: 60 to 89 credit hours earned, and;
- Seniors: 90 credit hours or more earned.

Full-time Status

As a general rule, a student taking 12 credit hours during the fall or spring semester is considered a full-time student. For graduate students, 9 graduate credit hours are considered a full load. (Graduate students who hold a 20 hour per week graduate assistantship position are considered full time if they are enrolled in 6 or more credit hours. Graduate students taking all or a majority of courses which carry undergraduate credit must meet the 12-credit-hour requirement to be certified as full-time students.)

During the summer session, 6 credit hours of enrollment are considered full time for both undergraduate and graduate students.

Students receiving federal financial aid may need to enroll in more hours to be considered full time.

Credit Hour Defined

A credit hour is a measure of graduate or undergraduate academic work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for each week of instructional time for approximately 15 weeks for one semester, or an equivalent amount of work over a different amount of time. A class hour at Wichita State University is typically 50 minutes.

Course Numbering System

Courses numbered 99 or below do not count toward any degree program.

Courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit. Graduate students may not take these courses for graduate credit.

Courses numbered 300 to 499 are taught primarily for juniors and seniors. Freshmen and sophomores also may be admitted for upper-division credit if they satisfy the course prerequisites given in the Wichita State University Undergraduate Catalog. Graduate students may not take these courses for graduate credit.

Courses numbered 500 to 699 are aimed primarily at juniors and seniors, but graduate students may also receive graduate credit for these courses.

Courses numbered 700 to 799 are structured primarily for graduate students, but upper-division undergraduate students may be admitted if they meet course prerequisites. All students in these courses are expected to perform at the level of graduate students (Graduate I students — students who ordinarily have not accumulated more than 30 hours in a graduate program). Students receive graduate credit if the student was admitted to the Graduate School prior to enrollment; undergraduate students receive undergraduate credit unless the student was preapproved to earn graduate credit for that specific course under the senior rule policy, or was preapproved for graduate credit for that specific course following the student’s admission to a dual/accelerated bachelor’s to master’s program.

Courses numbered 800 to 999 are designed for graduate students only and no students may be admitted to these courses unless they have been admitted to the Graduate School. (See the section called Graduate Credit for Seniors for special conditions under which seniors may be admitted to graduate courses.)

Audit Credit and Credit/No Credit Courses

Audit Credit

Students are permitted to attend credit courses on a noncredit basis, with appropriate approval, under an auditor classification. To be enrolled as auditors, students must enroll in the same manner and pay the same fees as for credit courses at the university. Auditors may participate fully in the class and expect instructor evaluation of their work. Auditors are expected to attend class regularly. The audited course will appear on the transcript with the grade notation of Au.

Courses taken on an audit basis may be repeated for credit, and if repeated may be used to fulfill degree requirements if the repeated grade is acceptable. Use of the audit basis for a course must be declared at the time of enrollment. Audited courses are not eligible for financial aid.

Credit/No Credit Courses

Courses numbered below 100 do not carry credit toward a Wichita State degree and are graded Credit/No Credit (Cr/NCr). All credit hours in such courses are excluded from credit toward graduation. Such courses are also excluded from the calculation of the grade point average.

In addition, certain credit courses are graded only Cr/NCr. Any department in the university may offer courses on a Cr/NCr basis. This designation is included in the course description of such courses in the Wichita State University Catalogs.

If students withdraw from a Cr/NCr course before the end of the 10th week of the semester (or the fifth week of the eight-week summer session), a grade of W is recorded. If they withdraw from such a course after the 10th week of a semester (fifth week of the eight-week summer session), they receive a grade of NCr, subject to the right of petition to the university’s exceptions committee.

Cr/NCr may also be granted to a freshman for the first semester of work during the transition semester, as discussed in the Transition Semester (p. 39) policy.

Credit by Examination

Undergraduate course credit may be obtained by examination. The credit by exam program at Wichita State University is designed to enable those who have achieved college-level education through independent study, correspondence, television instruction, past experience, advanced high school classes or other traditional or nontraditional means to demonstrate their level of achievement.

No graduate course credit is available by examination. Credit by examination will not be awarded for duplication of credit or to replace course grades. More information on tests available and scores accepted for credit is posted on the Counseling and Testing Center website (http://wichita.edu/counselingtesting). Students should check with their academic advisors before attempting any test. There are several means by which such credit may be earned:
1. Credit may be earned through Advanced Placement (AP) or International Baccalaureate (IB) exams administered through a student’s high school. AP and IB exam credit is awarded for specific courses in many areas at Wichita State. The titles of the specific courses for which credit is granted and the AP or IB scores necessary for such credit are available at the WSU Counseling and Testing Center or on the website listed above.

2. Credit may be earned through the College Board’s College Level Examination Program (CLEP) or DSST exams. Both kinds of exams are administered by the Counseling and Testing Center. General CLEP exams are intended for entering freshmen; a student with divisional credit will not receive additional hours by taking general CLEP exams. Information about the dates and times CLEP and DSST exams are administered is available at the WSU Counseling and Testing Center, (316) 978-3440.

3. High scores on the English and Math sections of the ACT or SAT will earn credit in English and math classes at WSU. Math credit may also be earned with a high score on the GED math section. Scores submitted to WSU will be reviewed, and earned credit posted to the student’s record.

4. Individuals admitted to Wichita State may earn credit by departmental examination. In general, students may earn credit by examination for many undergraduate courses not covered by the tests listed. Students should apply directly to the chairperson of the department offering the course and consult with the Counseling and Testing Center before taking the exam. The chairperson will be responsible for ensuring that students are informed of the scope of the course, the text used, and other information relevant to taking the department exam.

The grade recorded for credit earned by examination is TCrE and it is recorded on a student’s transcript after enrollment in the university. It is recorded as transfer work because it is credit for learning that did not occur through enrollment in a WSU course.

Students may not take a credit by examination test for credit in a course in which they have previously enrolled unless they received a W for the course. They may not retake any such examination.

Students may not request an examination for course credit in a course for which they do not have the stated prerequisite credit.

Fees are assessed to cover the costs of administering examinations and must be paid before the examinations are taken. A schedule of fees for the various examinations is available from the Counseling and Testing Center.

All credit by examination is subject to university policies and will be reviewed by the Office of the Registrar before being placed on the transcript.

Credit awarded by examination is determined by the department offering the course, which has sole jurisdiction.

Credit by examination from all accredited institutions of higher education is evaluated in the same manner as regularly graded coursework from these institutions. The credit awarded is adjusted to the credit by examination policies of Wichita State. Every attempt is made to ensure that credit by examination applies to both a student’s degree program and university requirements for graduation. However, in no case may a transfer student receive more credit than the credit available to students at Wichita State.

Credit for Prior Learning (CPL)

Wichita State University encourages students to seek credit for knowledge they may have acquired in a variety of ways through the Credit for Prior Learning program (CPL). Students who have had college-level education through traditional or nontraditional means, and can demonstrate achievement, may be eligible to earn credit by following WSU’s Credit for Prior Learning process. Departments have varying policies as to any CPL that will be deemed equivalent to their courses. Once the equivalency is determined and posted to the student’s record, it is acceptable in any department/program in which that course meets a degree requirement. CPL credits are posted as transfer work and not counted as hours earned at Wichita State. For more information, visit the Credit for Prior Learning webpage (http://wichita.edu/priorlearning).

Examinations

The examination policy in each course is established by the department and the faculty of record and will be outlined with the course requirements. Re-examinations shall be permitted only with the consent of the faculty when re-examination is deemed to contribute to the academic objectives of the course.

Special examinations, when requested, will be given only with the consent of the dean of the college involved. Students with disabilities should contact the director of disability services for assistance with special examinations.

Students who miss an assigned examination should arrange with their instructor to take a make-up examination. The dean of their college will serve as arbitrator only when deemed necessary.

Students cannot be required to take more than two final examinations per day. Arrangements for rescheduling the examination must be made by the student prior to the scheduled examination.

Grading System

Wichita State grades include A (excellent), B (good), C (satisfactory), D (unsatisfactory), F (failure), W (withdrawal), Cr (credit), NCr (no credit), Bg (badge), NBg (no badge), S (satisfactory), U (unsatisfactory), I (incomplete), IP (in progress), NGS (no grade submitted), CrE (credit by examination), and Au (audit). Passing grades include A, B, C, D, Cr, CrE, Bg and S. The grades F, NCr, NBg and U indicate that the quality of work was such that, to obtain credit, the student must repeat regular coursework. A plus/minus grading system was adopted beginning fall 2009. It applies to grades of A, B, C and D.

Credit Points

For each hour of work the student takes, credit points are assigned, as follows, to permit averaging of grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.000</td>
</tr>
<tr>
<td>A-</td>
<td>3.700</td>
</tr>
<tr>
<td>B+</td>
<td>3.300</td>
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<tr>
<td>B</td>
<td>3.000</td>
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<td>B-</td>
<td>2.700</td>
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<td>C+</td>
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<td>C-</td>
<td>1.700</td>
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<tr>
<td>D+</td>
<td>1.300</td>
</tr>
<tr>
<td>D</td>
<td>1.000</td>
</tr>
</tbody>
</table>
Related details:

- B or better grade required: B- will fulfill this requirement unless otherwise indicated.
- C or better grade required: C- will fulfill this requirement unless otherwise indicated.

Incomplete
An incomplete is a temporary grade assigned when the faculty member grants a student an extension of time to complete the coursework. This extension of time may not exceed one calendar year from the end of the original semester. It is used in exceptional cases where a student is unable to complete coursework due to circumstances beyond his or her control. The student must have successfully completed a majority of the work. Credit is postponed and the course is not included in the student’s grade point average until a permanent letter grade is assigned.

The following conditions govern incompletes:

1. When an incomplete grade is assigned, the faculty member may assign a default grade, other than the I grade. If the coursework is not satisfactorily completed by the extension date, the I will revert to the default grade submitted by the faculty member; if the faculty member does not assign a default grade, the I will revert to an F.
2. Subsequent enrollment in the course will be governed by the university repeat policy.
3. When students receive a grade of incomplete, they are automatically informed of the university policies and procedures governing incompletes, by the registrar’s office.

Credit/No Credit
Used only in the transition semester and for courses defined as Cr/NCr in the catalog.

Credit by Examination
Credit by examination or by credentials in lieu of formal enrollment in college coursework. The symbol TCrE is used for Advanced Placement (AP) or International Baccalaureate (IB) credit, for College Level Examination Program (CLEP) credit, for DSST exams, for course credit awarded on the basis of the ACT or SAT exams, for credit by departmental examination and for credit by credentials (military and similar background). Credit given; no credit points. See Credit by Examination (p. 32).

Other special terms are used in reference to grading, as described below.

Grading Status
Courses may not be changed from one status to another—for example, graded to audit—after the enrollment period (through the drop/add week), except through petition to the university’s exceptions committee.

Grade Point Average (GPA)
The grade point average (also called grade point index) is computed by dividing the total number of credit points by the total number of credit hours completed for which regular letter grades (A, B, C, D and F) are assigned. The grades Au, W, I, IP, Cr, NCr, S, U, Bg and NBg and CrE are always excluded from grade point average computations. Four GPAs, if applicable, appear on a transcript: Semester GPA, Total WSU GPA, Transfer GPA and Overall GPA. GPAs are calculated and applied to three decimal places (truncated), although only two decimal places print on the transcript. A degree grade point average is frozen at the time of graduation.

Z Hours
Any hours where the grade is preceded by a Z are excluded from GPA calculations, from attempted hours and from earned hours. Z hours denote remedial courses, transfer courses that WSU does not accept, or are the result of WSU’s academic forgiveness or repeat policy.

Course Attempted
An attempted course indicates that the student has enrolled officially in the course and that the student may have completed the course or been granted an incomplete. Attempts include courses receiving the grades A, B, C, D, F, I, IP, Cr, NCr, S, U, Bg and NBg but exclude Au, CrE and W.

Course Completed
A completed course is a course in which a letter grade of A, B, C, D, F, Cr, NCr, S, U, Bg or NBg has been assigned.

Course Pending Completion
An IP (in progress) grade is temporarily recorded when a course does not have to be completed by the end of the semester of enrollment. The grade submitted when the course has been completed replaces all IP grades for that course. This applies to courses such as Special Projects, Special Topics, Research and Thesis, as specified by the departments.

Credit Hours Earned
Credit hours earned means that credit is given (A, B, C, D, Cr, S, Bg or CrE). No student may earn hours of credit for any one course more than once, unless the description in the Wichita State University Catalog specifically states that the course is repeatable for credit.

Repeat Policy
The following provisions concern repeats:

1. Any course may be repeated. No course may be attempted more than three times. For this policy, an audit does not count as an attempt.
2. Any grade received at completion of a repeated class at WSU will automatically replace up to two previous grade(s) received for that course in computation of the student’s cumulative grade point average.
3. Grades received in courses taken at another institution may not be used to replace grades in courses taken at WSU. If a student repeats a course at another institution, the WSU grade will be averaged into the GPA. Repeats between transfer institutions are also averaged.
4. The department offering a course can approve an exception to the limit of three attempts. If such an exception is given, only the first two grades for the course will be excluded from the GPA. All other grades received for that course will be averaged into the GPA.
5. Courses repeated prior to fall 2013 are subject to the repeat policy in effect during that catalog year.
6. Students may not use a repeat taken after graduation to amend their GPA or honors as determined at the time of graduation.

Repeated courses are identified on the transcript by an extra letter after the grade as follows:
• I included in GPA;
• E excluded from GPA; and
• A averaged in GPA but not counted in earned hours.

Graduate Credit for Undergraduates (Senior Rule)
Seniors at Wichita State or neighboring bachelor’s-degree-granting institutions may qualify to take work for graduate credit under the senior rule option. Students who wish to earn graduate credit under the senior rule option must apply to the Graduate School for regular graduate admission and also complete a senior rule application form. Both forms, available on the Graduate School’s website, are due in the Graduate School no later than two weeks before the semester in which the student intends to enroll under the senior rule option. Students planning to earn Senior Rule credit for more than one semester must submit a new Senior Rule form each semester. Courses taken at the 500-700 level that are not identified on the Senior Rule form as being intended for graduate credit will be awarded as undergraduate credit. Approval is needed from the student’s major advisor, the chairperson or graduate coordinator in the program in which the work is to be taken, and the dean of the Graduate School. In addition, students from other institutions must be admitted as undergraduates (possibly as guest students) through the WSU undergraduate admissions office. Tuition for graduate courses will be assessed at the graduate rate.

Students should meet with their advisor to create a plan for completing the undergraduate degree while taking additional graduate credit. Courses taken for graduate credit cannot be used to complete undergraduate degree requirements. Students must maintain a 3.00 GPA in all courses approved for Graduate credit under the Senior Rule policy. If a student does not complete their bachelor’s degree, the graduate credit may revert back to undergraduate credit.

Students who are receiving Federal Financial Aid should consult with a financial aid advisor to determine if taking graduate level coursework while an undergraduate student will impact their financial aid award.

Academic Recognition and Honors

Academic Recognition
In all colleges, honors criteria are established for Wichita State students by the university and apply equally to all students, whether or not they are in the Dorothy and Bill Cohen Honors College.

The Dean’s Honor Roll is published each semester and is composed of students enrolled in 12 or more credit hours of graded work who achieve a grade point average of 3.500 or higher for the semester.

Students enrolled in 6–11 hours of graded work per semester who achieve a grade point average of 3.500 or higher for the semester will receive Academic Commendation.

The list of such students will be published each semester. See Academic Distinction (p. 37) for information about degrees conferred with academic distinction.

Academic honors are not awarded to students with a grade of I, IP or NGS on a course within the designated term. Earned honors will be added to the student record when a grade change is submitted by the instructor of record.

Departmental/University Honors
Some departments at WSU offer students the opportunity to receive departmental honors through their major. Departmental honors tracks are currently offered in the following: aerospace engineering, communication sciences and disorders, modern and classical languages and literatures, mathematics, political science and psychology (under development).

To enroll as a candidate for departmental honors, a student must have junior standing and a cumulative grade point average of 3.250 (higher if department requirements so specify).

Departmental honors tracks consist of at least 12 credit hours of upper-division coursework, including a senior thesis, senior project, senior recital, or equivalent capstone experience. Each department or college specifies requirements for satisfactory completion of the honors track, but a minimum grade point average of 3.500 for work in the honors track is required.

Students who complete all requirements for departmental honors receive a diploma designation. Up to 3 honors credits counted toward the student’s major may be counted toward the minor in university honors. For current information about departmental honors requirements, check individual department information in the Undergraduate Catalog.

Dorothy and Bill Cohen Honors College
High-achieving high school students and current WSU students may apply to join the Dorothy and Bill Cohen Honors College and work toward an honors transcript or diploma distinction.

Most honors students start with the Emory Lindquist Honors Scholar program and take general education courses and a research seminar to earn an honors transcript distinction; continuing and transfer students may choose to pursue an upper-level interdisciplinary track such as leadership or law; students earn the University Honors Minor diploma distinction by completing the requirements for Emory Lindquist Honors Scholars and requirements for an interdisciplinary track; or, a student may design a course of study to earn the interdisciplinary Honors Baccalaureate degree.

Additional information about admission and curriculum is available in the Dorothy and Bill Cohen Honors College section (p. 69) of the Undergraduate Catalog or online (http://wichita.edu/honors).

Academic Progress

Midterm Grade Reports
Instructors are asked to provide midterm grades for students in full-semester courses. Submitted reports, reflecting midterm grades, are available electronically to students and their academic advisors the 10th week of the semester. When grades reflect below average work, students should meet with their instructors and/or college advisors to discuss problems.

Final Grade Reports
At the end of each semester, students may access and print their final grades through the myWSU portal option on the university website.
Intra-University Transfers, Probation, Dismissal, Withdrawal

Transfers Within the University

Students may transfer from any undergraduate degree-granting college to another provided they meet, at a minimum, the admission requirements of the second college.

For specific information about probation standards and admission requirements of individual degree-granting colleges, refer to the individual college sections of the catalog.

Academic Probation and Dismissal Standards

Specific regulations governing probation and dismissal standards are established by each college at Wichita State and are given in the introductory statements in the individual college sections of the catalog. Students should consult the appropriate section of the WSU Undergraduate Catalog for these standards.

Probation

Because 2.000 (a grade of C) is the minimum grade point average required for graduation from Wichita State, students are formally placed (or continued) on probation at the conclusion of every semester in which their cumulative or overall WSU grade point average falls below 2.000, except as noted below. If the college in which students are enrolled has a higher graduation requirement, students may be placed on probation whenever their cumulative or overall WSU grade point average falls below the college’s specified level.

Students admitted in good standing will be placed on probation when they have attempted 6 credit hours and their WSU grade point average falls below 2.000. Attempted hours are defined as all hours appearing on the transcript with a grade of A, B, C, D, F, Cr, NCr, I, IP, S, U, Bg or NBg.

Transfer students admitted on probation must complete at least 12 credit hours at Wichita State with a 2.000 average before probation may be removed.

A student on academic probation is limited to a maximum enrollment of 12 credit hours in the fall and spring semesters.

Probation is removed when both the cumulative and WSU grade point averages reach the 2.000 level.

Dismissal

Dismissal standards are set by the various colleges of Wichita State in conformance with the following policy:

Students will not be dismissed if either their WSU grade point average or their last semester’s grade point average equals the minimum graduation level of their college. They will remain on probation as long as their cumulative or WSU grade point average is below the minimum university or college graduation standard and their semester grade point average meets the minimum college or division standard.

Students will be dismissed at the end of a semester on probation if they fail to earn a semester grade point average at or above the minimum required, and have a cumulative or overall WSU grade point average below the minimum required. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Dismissal from a college because of poor academic performance constitutes dismissal from the university. Nonetheless, a dismissed student whose grade point average qualifies him or her for admission to another college at WSU may apply to the exceptions committee of that college.

Withdrawal

Voluntary Withdrawal

Students encountering special problems during a semester may voluntarily withdraw from their classes during the first 10 weeks of a regular semester or the first five weeks of an eight-week summer session and have a W recorded for the course(s). After the official drop deadline (which is posted in the semester calendar each semester), students may withdraw from one or more courses with a W only if they petition the deans of their colleges and if their petitions are approved. Without that approval, a late withdrawal is considered an F. Any late withdrawal results in a W on the academic record/transcript. Course expungement (removal from transcript) is not allowed.

Students are advised to consult with their course instructors and academic advisors before initiating withdrawal procedures. Procedures for withdrawing from a class can be acquired from the student’s college or school office or the registrar’s office in Jardine Hall.

Administrative Withdrawal

Administrative withdrawal from courses may be initiated by the dean’s office of the college or school in which a student is enrolled, the provost’s office, or other appropriate university offices when a student is unable to complete courses because of extenuating circumstances. A grade of W will be officially recorded on the student’s permanent record for a course or courses from which the student is administratively withdrawn.

Transcripts

A transcript is a certified copy of a student’s permanent academic record. It contains confidential information and cannot be furnished/released without the student’s signed, specific request.

Transcripts may be ordered online, in person at the registrar’s office, or by submitting a request form via mail or fax. Request forms and more detailed information are available at the registrar’s transcript webpage (http://wichita.edu/transcripts). A person’s undergraduate and graduate transcripts may be ordered separately. Official transcripts are $10 per copy, paid in advance. Normal service is same business day if received by 2 p.m. Additional fees for ordering a transcript online, faxing a transcript, or for mailing it by other than first-class postal rates also apply. All transcripts sent to or provided to the student are stamped Issued to Student. Some institutions will not accept transcripts that are issued to Student.

Transcript requests received in person or via mail/fax must be accompanied by a readable copy of government-issued photo identification such as WSU ID, driver’s license, or passport. Requests will not be processed without this ID.

Mailed transcript requests should be sent to:

Attention: Transcripts
Office of the Registrar
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0058
**Reminder:** No one, including spouse or parent, can request or pick up another person’s transcript without written authorization and proof of identity from that person.

If a person still owes the university money, or has not returned borrowed university property, transcript services are withheld.

**Graduation Requirements for Graduation**

The university’s minimum graduation requirements for baccalaureate degrees are given below. Students should consult their college section of the WSU Undergraduate Catalog for additional graduation requirements imposed by the department and college of their major. Graduate students should consult the WSU Graduate Catalog.

Students are required to file an online Application for Degree (in the myWSU portal) at least two semesters before their expected date of graduation.

Students must have credit for a minimum of 120 acceptable credit hours toward their degree. Hours of credit earned toward a degree do not include courses with grades of F, W, Au, NCr, NBg, IP or I. In order to graduate in a timely manner (four years), a student should enroll in and complete 30 credit hours over the course of each academic year.

Students must have completed the general education program (p. 55) or the equivalent.

Students must maintain an overall grade point average of 2.000 (transfer work included) and a grade point average of 2.000 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a grade point average of 2.000 in the courses in their major field of study.

Students must meet with advisors in each program department before claiming a minor or major in more than one degree program. The same hours can be used to meet the requirements of more than one major or minor or combination thereof within the following conditions:

1. At least 12 credit hours of unduplicated coursework must be completed in each major.
2. At least 3 credit hours of unduplicated coursework must be completed in each minor.

These hours must be unduplicated across all courses used toward the degree.

This policy does not apply to inter-college double majors as defined in the WSU Undergraduate Catalog. Colleges and/or departments may impose further restrictions on the use of unduplicated hours for their programs, majors and/or minors. Such restrictions can be found in the degree requirements catalog section for each program.

Students shall not be allowed credit toward graduation for D grade work in excess of one-quarter of their total hours.

Students must have a minimum of 45 credit hours in courses numbered 300 or above.

All students, including those transferring from a two-year college, must complete at least 60 hours of four-year college work including 45 hours of upper-division work in order to qualify for graduation from Wichita State.

At least 30 hours of course credit (A, B, C, D, Cr or Bg) must be earned at Wichita State. Also, at least 24 of the last 30 credit hours or 50 of the last 60 credit hours must be completed at Wichita State. Course credit earned at another university as an approved part of a WSU exchange or study abroad program (e.g., NSE, ISEP) is counted as WSU credit with respect to this rule. Exceptions to this regulation may be made by the university’s exceptions committee.

All transcripts of other college work must be sent to WSU before a degree will be posted, even if these courses are not needed to meet WSU degree requirements.

Students may transfer credits earned in correspondence or extension courses with the approval of their dean. However, no more than 30 hours of such credit may apply toward a bachelor’s degree and no more than 6 hours of such credit may be among the last 30 credit hours.

Students who are eligible to graduate but who still have unpaid tuition balances will not graduate until those fees are paid.

**Date of Catalog Requirements**

Students who have not been out of college for more than two consecutive calendar years may graduate under the program requirements in effect at Wichita State when they first entered any college or university. They may not, however, be allowed to graduate under the requirements of a Wichita State Catalog in effect earlier than two years preceding their enrollment at Wichita State. They also may graduate under the requirements of any subsequent Wichita State Catalog. Guest students are considered to have entered Wichita State at the time they become guest students and are subject to the preceding provisions.

If students, including nondegree-bound students and open admission students, have had their college programs interrupted by more than two consecutive years, they will be subject to the program requirements in effect when they re-enter, or, if they elect, the requirements of a later catalog.

The WSU Undergraduate Catalog is in effect from the fall semester of the year it is published through the summer session of that academic year. The catalog is a guide for information only and is not a contract.

**Commencement, Degrees Awarded with Distinction**

**Commencement**

WSU holds commencement ceremonies each year, in December and in May. All baccalaureate and master’s degree candidates for the spring semester are eligible to participate in the May ceremony and all baccalaureate and master’s degree candidates for the fall semester are eligible to participate in the December ceremony. Baccalaureate and master’s degree candidates for the summer semester are eligible to participate in either the preceding May or following December ceremony.

More information may be found at the WSU commencement website (http://wichita.edu/commencement).

Diplomas are available for distribution approximately seven weeks following the close of a given semester. Degree recipients may obtain their diplomas from the registrar’s office. Diplomas will be mailed from that office upon a written, signed, request that includes the name and student identification number of the degree recipient, the complete address where the diploma is to be mailed, the appropriate mailing fee ($6 inside USA; $40 outside USA), and a readable copy of the degree recipient’s driver’s license or other government issued photo ID.
academic distinction

degrees are conferred with distinction upon students who have shown excellence in scholarship during their academic career, as evidenced by both their overall cumulative gpa and their wichita state gpa. the minimum standard for graduating summa cum laude is a cumulative and wichita state grade point average of 3.900. the minimum standard for graduating magna cum laude is a cumulative and wichita state grade point average of 3.550. the minimum standard for graduating cum laude is a cumulative and wichita state grade point average of 3.250. these grade point averages are frozen at the time of graduation.

double or second major

double major

students must meet with advisors in each program department before claiming a minor or major in more than one degree program. the same hours can be used to meet the requirements of more than one major or minor or combination thereof within the following conditions:

1. at least 12 credit hours of unduplicated coursework must be completed in each major.
2. at least 3 credit hours of unduplicated coursework must be completed in each minor.

this policy does not apply to inter-college double majors as defined in the wsu undergraduate catalog. colleges and/or departments may impose further restrictions on the use of unduplicated hours for their programs, majors and/or minors. such restrictions can be found in the degree requirements catalog section for each program.

inter-college double major

an inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (barton school of business, college of education, college of engineering, college of fine arts, college of health professions) along with a major in fairmount college of liberal arts and sciences. the following criteria and policies apply:

1. the student’s professional college will be their primary college and las will be their secondary college.
2. the established degree requirements for each major must be completed; but for the inter-college double major, individual courses can be used to satisfy the major requirements of both majors.
3. students must complete all graduation requirements (general education, core courses and college required courses) within their primary college, but are not required to complete all the graduation requirements of their secondary college.
4. the diploma will be awarded by the student’s primary college. the academic department within the student’s secondary college must verify that the student has satisfied the requirements of their major.
5. the student’s academic transcript will indicate both majors.

second bachelor's degree from wichita state

students with a bachelor’s degree from another institution may receive a second bachelor’s degree from wichita state university upon completion of a minimum of 30 credit hours in residence, provided that none of the 30 wsu credit hours is counted in the first degree and provided that all wichita state, college and departmental graduation requirements are met.

students who have received one bachelor’s degree from wichita state university may receive a second upon completion of a minimum of an additional 30 credit hours in residence and upon satisfying the requirements of the department and college from which the second degree is sought. these hours are in addition to those required for the first degree.

student must comply with the policies regarding duplicate use of coursework outlined in the section on double majors.

exceptions

exceptions committee

the university admissions and exceptions committee reviews petitions from students seeking exceptions to specific academic rules and regulations for which exceptions can be made, including readmission after academic dismissal. this does not include grading matters handled by the court of student academic appeals.

exceptions petitions are considered first by the student’s college committee, then by a university committee. exceptions denied at the college level are automatically submitted for consideration at the university level. decisions made by the university committee are final. university-level decisions can be appealed by repetitioning, but will be considered only if the student presents relevant documented information that was not included in the original petition. the university committee decision concerning appeals is final. the court of student academic appeals cannot be used to appeal exceptions committee decisions.

students are advised to begin the petitioning process by consulting with an academic advisor in their college of enrollment and/or the onestop. there is a separate exceptions process for international undergraduate admission through the international education office.

grade changes, appeals

change of grades

changes of grade due to errors in grading or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. a grade change also may be initiated by the chairperson of the department that offered the course if, and only if, the instructor is not in residence.

an instructor who wishes to request a change in a grade assigned more than one year earlier may petition his or her college’s committee on exceptions. if this committee approves a change in grade, the instructor, department chairperson and dean concerned must be informed by the committee before its recommendation is transmitted to the registrar’s office and the grade change entered on the student’s transcript.

this change of grade policy does not affect the right of the student to appeal to the court of student academic appeals. however, the court will ordinarily not hear cases involving grades assigned more than one semester prior to the time of appeal.

in cases where failing grades have been recorded because a student was unable to withdraw officially, the student may petition the exceptions committee of his or her college for a late withdrawal from all courses in the semester in question. the student must provide verifiable evidence of the causes for failing to withdraw properly. the petition will also be submitted to the university admissions and exceptions committee. if the petition is granted, the grades are changed to w through the usual withdrawal procedure. the policy applies to all courses in a semester and can be invoked only for wichita state university courses.
This change of grade policy may not be applied after graduation to courses attempted prior to graduation.

Court of Student Academic Appeals
The faculty at Wichita State has established a procedure to resolve disputes arising out of the classroom through the Court of Student Academic Appeals. The court hears appeals from students who believe they have been treated unfairly in grading. The court is designed to help resolve differences that cannot be settled within the framework of the student-faculty relationship and offers an important safeguard for students.

The student must file an appeal within one semester after the grade is assigned (excluding summer). The court may waive the time limit if documented and verifiable exceptional circumstances cause a delay in submitting the appeal.

Any student may use the appeals procedure. Forms are available in the Office of the Provost and Vice President for Academic Affairs, Room 109 Morrison Hall. The general procedure is explained to students when they pick up the form.

Appeals for charges of plagiarism must be filed with the class instructor’s dean. For more information see section 2.17 of the WSU Policies and Procedures Manual.

Exemptions for Superior Achievement
Students who have completed a minimum of 12 credit hours at Wichita State and have a cumulative grade point average of at least 3.250 and a grade point average of at least 3.000 the previous semester may be granted several privileges:

1. They may be exempt from regulations governing the maximum number of hours allowed students during a semester;
2. They also may be exempt from college regulations, if any, governing the maximum number of hours students may take during a semester in one department. However, students shall not enroll in more than 21 credit hours without the permission of their college deans; and
3. They may have permission to have course prerequisites waived with the consent of the instructors of the courses and the heads of the departments in which the courses are taken.

Transition Semester, Academic Forgiveness
Transition Semester
To accommodate students in their adjustment to college standards, they may be eligible for a special transition semester. The transition semester is a student’s first regular semester at Wichita State regardless of the number of hours attempted (summer session excluded). Students who have enrolled at another institution of higher learning in a regular term (summer session excluded) before enrolling at Wichita State are not entitled to a transition semester at WSU.

The processing of a transition semester results in grades of A, B and C being changed to Credit (Cr), and grades of D and F being changed to No Credit (NCr). These designations have no impact on the student’s grade point average. College-level courses (numbered 100 and above) with a grade of Cr count toward graduation.

Students must meet the following requirements to be granted a transition semester:

1. The grade point average for their first regular semester must be below 2.000;
2. Their next semester of enrollment must be at WSU and they must complete at least 6 graded hours with a 2.000 or higher grade point average. Graded hours do not include courses taken for Audit (Au), Credit (Cr), Satisfactory (S) or Badge (Bg); and
3. After grades have been issued for that next semester, students must complete a form in their college/advising center office requesting a transition semester. This request must be made before completion of any further college courses.

Students who fail to meet these requirements will not be awarded a transition semester and will be subject to the appropriate probation or dismissal standards.

Academic Forgiveness
Students who have accumulated a grade point average of less than 2.000 may petition the dean of his or her college and the college exceptions committee to be admitted to a degree program with no college credit and no grade point average.

To qualify, petitioners must be at least 25 years old, must have been out of a degree program of college studies for at least four years, and must demonstrate ability to progress in college work.

If the petition is approved, all prior college courses and grades are recorded on the transcript, followed by the notation admitted without credits or grades by committee action.

The policy may be applied to Wichita State University enrollment as well as to work at other colleges. When implemented, the policy waives all previous credits and grades except in the case of credits and grades earned in the special nondegree-bound status under the open admission policy.

Student Responsibility
Students at Wichita State University have the following responsibilities:

1. To consult their advisors on all matters pertaining to their academic careers, including changes in their programs;
2. To observe all regulations of their colleges and select courses according to the requirements of that college;
3. To attend all meetings of each class in which they are enrolled (instructors will announce at the beginning of the semester if they consider attendance in computing final grades);
4. To fulfill all requirements for graduation;
5. To be personally responsible for fulfilling all requirements and observing all regulations at Wichita State;
6. To answer promptly all written notices from advisors, faculty, deans and other university officers;
7. To file an application for degree in the appropriate college office by the published deadline for the semester in which graduation is intended; and
8. To enroll in only those courses for which the stated prerequisite(s) have been satisfactorily completed. Failure to comply with this procedure may result in administrative withdrawal.

Students also should comply with the principles in the following statement:

Wichita State University reaffirms the principle of intellectual freedom in scholarly activity for university students, and it recognizes the full citizenship rights of students in inquiry,
discussion and such actions as they may choose to take on public issues.

The rights and freedoms of students involve concomitant responsibilities. Incumbent on all students, as on all citizens, is the responsibility to observe the university’s rules of orderly procedures and the laws of the larger community of which the university is a part. In the matter of actions on public issues, to speak one’s opinion, to petition, to distribute literature, to assemble peacefully and hold meetings, to use the persuasion of ideas, and other actions within the bounds of orderly and lawful procedures are sanctioned by the university. But infringement on the rights of others, acts or threats of violence to persons, destruction of property, disruption, or other interference with the normal functioning of the university and its personnel and other disorderly and unlawful acts will not be countenanced.

Within its sphere of responsibility the university will afford students proper procedural safeguards to resolve matters in dispute. Those who willfully violate university standards must expect to face disciplinary action on the part of the institution, which may include reprimand, administrative withdrawal, probation or suspension, consistent with campus provisions for due process.

**Student Code of Conduct**

The Student Code of Conduct outlines university behavior expectations for students, student groups, and student organizations in keeping with institutional values and to meet the university’s legal obligations. These expectations cover topics such as academic integrity, drug use, hazing, alcohol, weapons, physical violence and harassment. The conduct procedures outline the actions needed to file a complaint and the course followed in the student conduct process.

The Student Code of Conduct is located online at the student conduct webpage (http://wichita.edu/studentconduct). Individuals wanting to file an incident report about a student can submit a report online at the same site.

**Sexual Misconduct, Relationship Violence and Stalking Policies**

Wichita State University is committed to the elimination of sexual misconduct, relationship violence and stalking within the university community. These incidents may interfere with or limit an individual’s ability to work productively, maintain a safe living environment, or to benefit from or fully participate in the university’s educational programs. Additionally, these incidents may cause serious physical and/or psychological harm.

Wichita State University maintains a comprehensive program to prevent these behaviors, provides resources to assist and support those who are involved in such incidents, and will respond promptly and equitably to reports of sexual misconduct, relationship violence and stalking. The university has a responsibility to eliminate the behavior, prevent its recurrence, and address its effects on any individual and/or the community. Retaliatory actions against any individual involved in reporting or participating in the investigation of a complaint will not be tolerated.

Information regarding the university’s policies can be found in sections 8.16/Sexual Misconduct, Relationship Violence and Stalking Policy for Students, and 3.06/Sexual Misconduct, Relationship Violence and Stalking Policy for Employees and Visitors in the WSU Policies & Procedures Manual.
Facilities and Support University Facilities

Wichita State’s main campus is located on a 330-acre site bounded by Hillside, Oliver, 17th and 21st streets in northeast Wichita. The campus is modern and accessible and at the same time retains the flavor of the university’s heritage, combining distinctive Georgian-style architecture with more modern buildings of stone and brick that are accentuated by attractive landscaping. During the past 25 years, Wichita State has more than doubled its instructional space, adding major buildings for art, engineering, health sciences, sciences, physical education, music, dance, and liberal arts and sciences.

Eugene M. Hughes Metropolitan Complex
The Eugene M. Hughes Metropolitan Complex, located at 29th Street North and Oliver, is considered part of the main campus. Named for WSU’s 11th president, Eugene Hughes, the 27-acre site has many amenities, including an initial building containing the 1,750-seat Roger Lowe Auditorium, the 145-seat Frederick Sudermann Commons, and the Richard Welsbacher Experimental Theater, a black-box theater. This facility also has a gymnasium, an 80-seat meeting room, classrooms, offices for Adult Education, Continuing Education which offers noncredit courses to the community, and the Evelyn Hendren Cassat Speech-Language-Hearing Clinic offering special services in these respective fields. The complex also has playfields for intramural sports and the Advanced Education in General Dentistry building, providing advanced education to dental school graduates as well as needed oral health care to the general public.

Fine Arts Facilities

Wiedemann Hall houses the first pipe organ built in North America by the world-renowned firm of Marcuszen and Son, Denmark. The 400-seat music venue, dedicated in 1986, is the ideal acoustical setting for the organ. The building is named for music-lover and philanthropist Gladys H.G. Wiedemann.

Duerksen Fine Arts Center, opened in 1956, hosts university, community and professional music and dance performances. Named for alumnus and long-time dean of the college, Walter Duerksen, the fine arts center houses the School of Music, including the 500-seat Miller Concert Hall, classrooms and practice studios.

Wilner Auditorium, built in 1938 with federal funds provided through the Public Works Administration, is named to honor speech and theater professor George Wilner. Although other stages are now available, the 550-seat Wilner Auditorium still serves as the main stage for theater activities.

Grace Memorial Chapel
Harvey D. Grace Memorial Chapel, located in the heart of the campus near Morrison Hall and the Rhatigan Student Center, was built in 1963 and dedicated to serve all creeds and races. The chapel is available to students for group or individual worship and meditation, and is a frequent location for weddings.

National Institute for Aviation Research
The National Institute for Aviation Research (NIAR) at Wichita State University is the largest academic aviation research and development institution in the United States with more than 320,000 square feet of laboratory space. Established in 1985, NIAR offers research, development, testing, certification and training services in the areas of aerodynamics, advanced coatings, aging aircraft, composites and advanced materials, CAD/CAM, computational mechanics, crash dynamics, full-scale structural test, environmental test, wind tunnel testing, mechanical test, nondestructive test, virtual reality, reverse engineering and robotics.

NIAR is home to the National Center for Advanced Materials Performance and the Federal Aviation Administration’s Center of Excellence for Composites and Advanced Materials.

NIAR headquarters is located on WSU’s main campus. Off-site NIAR locations include the Environmental Test labs at Air Capital Flight Line, laboratories within the National Center for Aviation Training, and the Aircraft Structural Test and Evaluation Center at the former Kansas Coliseum.

Find out more at the NIAR website (http://www.niar.wichita.edu), or by calling (316) 978-6427, or (800) NIAR-WSU.

Plaza of Heroesines
Surrounded by Ablah Library, Jabara Hall, Grace Memorial Chapel and Clinton Hall, the Plaza of Heroesines is a beautiful and welcome gathering place. Dansuese Espagnole (Spanish Dancer), by artist Sophia Vari, is a striking addition to WSU’s highly regarded outdoor sculpture collection and the centerpiece of the plaza. Landscaping and benches surround the sculpture enhancing the circular plaza, constructed of bricks and granite pavers engraved with the names of honored women. Proceeds from the plaza project benefit the Center for Women’s Studies scholarship fund.

Ulrich Museum of Art
Join the contemporary arts conversation! Most recognized for the iconic Joan Miró Personnages Oiseaux, the Ulrich Museum of Art is located in the southwest section of campus. WSU students are eligible for free museum memberships and may activate their memberships by phone (316) 978-3664, email (ulrich@wichita.edu), or in person at the museum. Members receive e-newsletters along with free admission to events, programs and exhibitions.

The Ulrich Museum presents contemporary and modern art exhibitions, prominent guest speakers and compelling performances that explore today’s visual culture and provide students with the opportunity to be engaged with some of the most important art of today. Exhibition openings (complete with live music and complimentary food and beverages) give WSU students an opportunity to see great works of art in a fun and relaxed setting, while students visiting during regular hours will find a quiet, contemplative space.

In addition to the art inside the museum, the Ulrich has one of the top 10 outdoor sculpture collections on a college/university campus in the United States (2006 Public Art Review). Free maps of the outdoor sculpture collection are available at the museum’s main desk.

Hours: 11 a.m. to 5 p.m. Tuesday through Friday and 1–5 p.m. Saturday and Sunday. Closed Mondays and major/university holidays.

- Admission: free
- Phone: (316) 978-3664
- Email (ulrich@wichita.edu)
- Website (http://ulrich.wichita.edu)
- Facebook (http://facebook.com/ulrichmuseum)
- Twitter (http://twitter.com/ulrichmuseum)

WSU South
WSU South, located at 200 West Greenway Street, Suite 115A, Derby, is only 20 minutes by car from the main campus in Wichita. It features state-of-the-art audio-visual instructional technology and equipment.
In particular, there is a high-definition Interactive Distance Learning (IDL) facility with which WSU lectures are broadcast to colleges in other cities. There is a 30-workstation computer laboratory with class-related software. There is WSU Secure and Guest Wi-Fi throughout the building. Parking is free and convenient. Active security measures are in place.

WSU South offers both general education courses and professional degree programs such as the accelerated nursing program that allows nursing students to graduate with a bachelor’s degree (BSN) in only 13 months, as well as a bachelor's degree (BA) in elementary education in two years. Psychology majors can complete their psychology class requirements at our location. Other degree completion programs will be offered in the future. WATC Shocker Pathway students have the option of completing their WSU Associate of Arts degree or even some bachelor’s degree requirements at WSU South.

Select student services including free career counseling and math tutoring are available. Students and patrons can order materials from both the WSU Bookstore and WSU libraries to be delivered to WSU South for pickup. WSU library materials may also be returned to the library dropbox at WSU South. A student lounge/lactation room complements the outstanding customer service at WSU South.

**WSU West**

WSU offers general education and upper-level courses in select disciplines each semester at WSU West, located at 3801 N. Walker Avenue, which is near the intersection of 37th Street North and Maize Road. In addition, library book delivery (online checkout only) and return are available. Textbook ordering and delivery are also available through the University Bookstore.

WSU West has access to the WSU Wi-Fi network for use by WSU faculty, staff and students, as well as the general public. Parking permits are not required to park in the WSU West parking lot.

For further questions call: (316) 978-6777, or visit the WSU West website (http://wichita.edu/west).

**University and Student Support Areas**

**Alumni Association**

Courtney M. Marshall, president and CEO

The WSU Alumni Association is the oldest and largest support organization for Wichita State University. Founded in 1913, the alumni association is the network through which the university community and its alumni communicate with and serve one another. The primary intent of the partnership between the association and the university is to ensure the continued excellence of Wichita State. But this serious mission certainly doesn’t mean the association isn’t serious about fun, too. Scores of exciting Shocker opportunities to participate in fun programs and events prove this point every semester.

Many traditional university events — including commencement and homecoming — are supported by association dollars or volunteers. The association also sponsors Shockers Forever, a dynamic student group. Shockers Forever provides students unequaled opportunities to network with fellow students and WSU alumni of all ages. Another WSU initiative that directly benefits students and relies on alumni participation for its success is the Drive Your Pride license plate program. This program offers alumni and students the chance to sport WuShock on their official Kansas tags, and at the same time, contribute to student scholarships. The tag program pours thousands of dollars each year into scholarships for deserving students.

For more information about the groups, events, projects and publications of the WSU Alumni Association, visit the association online (http://wichita.edu/alumni), call (316) 978-3290, or drop by the Woodman Alumni Center, 4205 E. 21st Street, just east of Eck Stadium/Tyler Field.

**Career Development Center**

WSU’s full-service career center!

Nail the resume, land the interview and prepare for the job with the Career Development Center. Build marketable skills and gain professional work experience before and after graduation through targeted internships, one-on-one counseling, special workshops, career fairs and more. Now is the time to develop the right habits and skills for a lifetime of professional success.

Need help choosing a major? No problem! The Career Development Center understands that deciding on a major isn’t always easy — and sometimes it’s downright hard. That’s why the center provides every student the perfect environment to explore their interests, discover their options and create a blueprint for success.

WSU students also have access to the one of the best cooperative education and internship programs. WSU students can earn work experience, college credit and a paycheck — all while bolstering their resumes and getting a leg up on the competition. Get started today by calling (316) 978-3688, visit online (http://wichita.edu/careerdevelopment), or visit in person at the center's main office in Brennan III, or one of the center's satellite locations in CH 021B, RSC 205 or WH 300.

**WSU Foundation**

Elizabeth H. King, president and CEO

The WSU Foundation, the private fund-raising organization of the university, strives to enhance a community of learning excellence for students and faculty through philanthropy and stewardship. Private contributions are necessary to support the programs and vision of the university beyond current funding from fees, tuition and government monies.

Gifts of cash, stock, real estate and in-kind gifts are coordinated through the foundation. Planned gifts, most commonly established through a donor’s estate or retirement plan set up to benefit the university, also are coordinated through the foundation.

For fiscal year 2016, $7.2 million was given to university programs from endowed funds of the foundation. Of that, $3.7 million was in the form of scholarships to undergraduate and graduate students. The remainder funds projects such as faculty support, research, Ablah Library and the Ulrich Museum of Art.

For more information, contact (316) 978-3040 or the foundation website (http://foundation.wichita.edu) where contributions can be made online.

**Student Involvement, Services**

**Disability Services**

The Office of Disability Services provides academic accommodations for students who experience physical, learning or mental disabilities. Students are required to provide appropriate documentation to the
director of disability services before classroom services are provided. For more information, contact:

Office of Disability Services
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0132
(316) 978-3309 front office
(316) 978-6128 for rides
(316) 854-3032 video phone
(316) 978-3114 fax
Webpage (http://wichita.edu/disserv)

Services are based on the student’s need for academic accommodation. Disability services encourages students to be independent on campus and to use those services which help maximize their educational experience.

**Diversity and Inclusion**

The Office of Diversity and Inclusion aims to cultivate and sustain an inclusive campus that strives for academic excellence by creating an environment that educates, empowers and mobilizes all members of the Shocker community. The office provides dynamic programs, which range from speakers and film showings to award ceremonies, cultural festivities and LGBTQQA programming — each representing a small piece of the diversity displayed on the WSU campus. The Office of Diversity and Inclusion collaborates with many campus departments and student organizations for various diversity and multicultural student success initiatives. In conjunction with campus partners, the office celebrates Hispanic Heritage, LGBTQ, Native American, Black History, Women’s History and Asian/Pacific American Heritage months.

The office also sponsors the Multicultural Student Mentoring Program (MSMP) which facilitates the retention, academic success, holistic development and timely graduation of all minority students at WSU, through academic support services, educational and cultural programming, interpersonal relationships and mentoring. MSMP matches successful continuing WSU students with freshmen and transfer students to help ease the transition from high school or community college to WSU. The program helps new students quickly identify all the support services available and provides direct tutorial assistance to any program participants who have committed to achieving their personal best.

The Office of Diversity and Inclusion is located in the Rhatigan Student Center, suite 208. Much more detailed information describing the Ambassadors for Diversity and Inclusion, Men of Excellence and Phenomenal Women support groups and additional resources the office provides can be found at the office website (http://wichita.edu/odi).

**International Student Services**

The Office of International Education serves the special needs of approximately 1,750 international students from more than 100 countries enrolled at Wichita State University. (See the international student admission section for requirements.) An orientation program specially designed for new international students prepares them for entrance into the U.S. academic system and way of life.

The office also sponsors the Cultural Ambassador Program and other activities that promote interaction between U.S. and international students.

In addition, the office houses a study abroad reference center which provides information to U.S. students on study, work and travel opportunities abroad. For more information, contact the Garvey International Center, (316) 978-3232.

**Military and Veteran Services**

Wichita State is proud to be committed to helping veterans, active service members, dependents and spouses receiving military benefits make the successful transition into WSU’s academic community. Whether it’s needing assistance with educational benefits, access to resources that ease the transition into the university, or wanting to connect with fellow vets, WSU has access to resources that will help smooth the transition. An overview of resources can be found at the military student services website (http://wichita.edu/military).

In the capacity of serving active duty military and veterans, the Director of Adult Learning serves as the point of contact (POC) for inquiries pursuant to the Department of Defense Memorandum of Understanding. For questions concerning POC needs, contact Dr. Susan Norton via the Adult Learning website (http://wichita.edu/adultlearning).

**Captain Riley Leroy Pitts Military and Veteran Student Center**

The Captain Riley Leroy Pitts Military and Veteran Student Center, in Grace Wilkie Hall 105, exists to build and maintain a community of students with military experience and to provide comprehensive support for the unique needs of veterans, military members and military dependents in an environment of respect. All students with military experience—past or present—and military dependents are welcome to visit the Military and Veteran Student Center to ask questions, find resources, make connections, study, use the free computer stations or to just unwind between classes. Call (316) 978-3856 or visit the Military and Veteran Student Center website (http://wichita.edu/veterancenter) for more information. (Current or recent military members needing help with the transition to college can also contact the TRIO Veterans Upward Bound program.)

**Veteran Benefits**

The Office of Military and Veteran Services provides assistance to military members, veterans and their dependents in using their VA education benefits. It provides information on education benefit programs through the Department of Veterans Affairs, the application process for obtaining education benefits, and the certification process for using these benefits. Additionally, military-connected students who are admitted to Wichita State as non-Kansas residents may be eligible for in-state tuition rates. For additional information, please visit the WSU VA Education Benefits webpage (http://wichita.edu/veterans), stop by Grace Wilkie 105, call (316) 978-3547 or email: veterans.services@wichita.edu.

**OneStop**

OneStop offers student-focused support for most WSU student related needs. OneStop allows students the ability to get many answers for admissions, financial aid, advising, student accounts and registration in a central place. OneStop offers self-service options 24/7/365 online (http://wichita.edu/onestop) and toll-free phone service at (855) 978-1787. Students will need a OneStop telephone access code found by going to the myWSU portal and selecting “Manage your Password” for current students or “New to myWSU” for incoming students. In-person service is also available in the OneStop office.
OneStop also provides first-year advising for incoming traditional freshman students. OneStop Specialists (first-year advisors) work collaboratively with academic college advising offices to develop degree plans for each student as well as educate them on the operational tools and resources that will aid in their success at Wichita State.

OneStop is located in Jardine Hall, Room 112. Regular office hours are 8 a.m.–7 p.m. Mondays–Thursdays, and 8 a.m.–5 p.m. on Fridays.

Student Government Association

Wichita State believes that one of its primary tasks is preparing students for the responsibilities of citizenship in a democratic society. With this in mind, the university places an increasing emphasis on the role the Student Government Association plays on campus.

The legislative, executive and judicial responsibilities of SGA are vested in the Student Senate, the executive officers and cabinet, and the University Supreme Court. The senate appoints students to many university and faculty senate committees, recognizes and funds more than 200 student organizations, and allocates approximately $10 million annually in student fees to campus agencies including the Heskett Center, Rhatigan Student Center and Student Health Services.

SGA also provides opportunities to fund education through the Rhatigan Leadership Scholarship. The cabinet executes the decisions of the senate and the officers. The Supreme Court issues opinions on constitutional questions and also serves as an appellate court for traffic appeals. Each of these entities also participates in the determination of university policy.

Each student is automatically a member of SGA and is eligible to vote in the annual elections in April. Throughout the year, openings exist on the Student Senate, as well as in many of the university committees. All students are encouraged to participate in student government through the many opportunities SGA offers.

For more information, contact the Student Government Association, Room 219, Rhatigan Student Center, Wichita State University; (316) 978-3480.

Student Money Management

Students wanting to learn more about managing their finances can receive free help from certified peer financial coaches. Located in 115 Neff Hall, the Office for Student Money Management (OSMM pronounced “awesome”) is open during normal office hours and is available in the evenings by appointment.

OSMM, as part of the Office of Student Success, is designed to help increase retention and graduation rates by addressing one of the major stressors for WSU students and one of the major reasons for dropping out of college across the country: struggles related to money.

OSMM provides students with information and coaching on a variety of topics related to personal finances in college — including completing the FAFSA, making and sticking with a spending plan, matching a plan for paying for college with a plan for graduation, ways to establish good credit or get out of credit trouble, figuring out how much to borrow for college and how to pay it back and finding campus and community resources.

OSMM does not offer scholarships, credit counseling or advice related to bankruptcy, investment or retirement. Contact (316) 978-3254, or email (osmm@wichita.edu) the office for more information or to make an appointment to meet with a peer financial coach.

Student Organizations

Student organizations may be granted the privileges of university recognition if they are registered with Student Involvement and approved by the Student Government Association (SGA). To be approved, each organization must create a profile on WSU.Orgsync.com, which can be accessed through myWSU. A completed WSU Student Organization Registration form, lists of officers with contact information, a copy of the organization’s constitution and bylaws, and an advisor’s name and contact information must be uploaded into OrgSync. Once an organization has provided all necessary information, it may be granted official recognition by SGA which means it may use Wichita State in its name, use university venues for meetings/events, use university marketing resources, request funds from SGA in accordance with established procedures and guidelines, and be listed as a WSU organization in university publications. Records of recognized organizations are maintained in Student Involvement.

For more information on how to become a recognized student organization, please see the Student Involvement website (http://wichita.edu/involvement).

For a list of current recognized student organizations, visit the WSU Orgsync website (http://wsu.orgsync.com).

TRIO Programs

• Disability Support Services
• Educational Opportunity Centers
• McNair Scholars Program
• Student Support Services
• Talent Search — Project Discovery
• Upward Bound —
  • Communication
  • Galaxy Experience
  • Veterans
• Wichita Prep

Disability Support Services, Educational Opportunity Centers, McNair Scholars Program, Student Support Services, Talent Search Project Discovery and four Upward Bound programs — Communication, Regional Math-Science Center/The Galaxy Experience, Veterans and Wichita Prep — are special programs designed to help students prepare for university life, succeed on a university campus and successfully complete their course of study.

The TRIO Disability Support Services program provides opportunities for academic development, assists students with basic college requirements and motivates students with disabilities toward the successful completion of a baccalaureate degree.

The program’s goal is to increase the college retention and graduation rates of students with learning, physical and psychological disabilities.

Services provided by TRIO DSS include individualized academic tutoring, advice and assistance in postsecondary course selection and degree planning, assistance with graduate and professional program applications, and career exploration and referral. TRIO DSS assists students with information about financial aid programs and scholarship opportunities, provides assistance in completing financial aid applications, and offers education or counseling services designed to improve financial/economic literacy. Students at TRIO DSS sharpen life/study skills through workshops, access to the computer technology
lab and textbook loan program, and exposure to cultural events and academic programs on campus and in the community.

For information, contact TRIO DSS at (316) 978-5949, stop by 158 Grace Wilkie Annex, or visit the TRIO DSS website (http://wichita.edu/dss).

**The Educational Opportunity Centers (EOC)** program, seeks to provide free counseling and assistance on college admissions for qualified adults who want to improve their job opportunities through entering or re-entering an educational program beyond high school. The program assists clients with a broad spectrum of comprehensive services. Assistance is given to individuals age 19 and over in applying for admission to institutions that offer programs of postsecondary education, including assistance in preparing the necessary applications for use by admissions and financial officers. Services include: assistance with completing college admissions applications; completing financial aid applications; career guidance and other specialized workshops; academic advice, personal counseling and study skills assistance; General Educational Development (GED test preparation and testing), English as a Second Language (ESL), or Adult Basic Education (ABE) test preparation; and community referrals. For more information, contact TRIO EOC at (316) 978-7800, or visit the website (http://wichita.edu/EOC).

**The Ronald E. McNair Postbaccalaureate Achievement Program** encourages qualified college juniors and seniors to pursue graduate studies. Named in honor of Challenger space shuttle crew member Dr. Ronald E. McNair, the program provides services which prepare students for postbaccalaureate study, including assistance in locating financial aid, preparation for the Graduate Record Examination (GRE), and opportunities to attend and present papers at national conferences and to write for scholarly publications. Scholars participate in research conducted by university faculty. Local and national symposiums provide an opportunity for students to present their research. In addition, regular workshops encourage students’ serious consideration of doctoral study. For more information, contact (316) 978-3139, or visit the website (http://wichita.edu/mcnair).

**Student Support Services**, a federally-funded program, provides limited income, first generation college students, and individuals with disabilities with a multiplicity of academic support services which assist students to persist and graduate from WSU. The program has three components which provide individualized semester-long peer tutoring, academic advice and course selection, computer and typewriter usage, textbook-loan library, scholarships, comprehensive degree planning, study skills development, and graduate school advisement. The program serves 250 students each year and has been in operation at WSU since 1970.

For additional information, visit the website (http://wichita.edu/sss), or call (316) 978-3715.

**Talent Search—Project Discovery**, a federally-funded Talent Search Program, was established at Wichita State University in July 1977. The project assists approximately 1,165 low-income and/or first generation individuals in gaining admission to postsecondary institutions throughout the nation and preparing them for secondary school and secondary completion. The program provides assistance to middle school students, high school students, dropouts from secondary and postsecondary schools, and adults. Specific help is provided with admission forms, financial aid forms, and preparation for ACT/SAT assessment examinations. Tutorial assistance and instruction to middle school students also are provided. The project’s office at Wichita State serves middle schools, high schools and community agencies in Wichita. The office is located in Brennan I, third floor. Visit the Talent Search website (http://wichita.edu/talentsearch), or call (316) 978-3127.

**The Upward Bound** programs are federally-funded programs that have been at WSU since 1966 (Wichita Prep) and 1991 (The Galaxy Experience). Communication and Veterans were added in 2008. The **Communication Upward Bound** program offers youth in the Wichita area an opportunity to hone their communication skills and learn how to work with and write for varied media outlets. The centerpiece of the program is a four-week intensive residential summer camp for high school students housed on the Wichita State University campus and run by faculty and staff in the Elliott School of Communication. Year-round tutoring in all academic areas, field trips and Saturday activities help students stay in touch with their peers and their mentors. Students learn about the new world of communication while learning and perfecting public speaking, writing and media production skills. Students produce their own newspapers, video broadcasts and websites, and learn to work together in a professional setting to express their unique views. Community media professionals contribute their time and skills to help mentor this important generation of future communicators. All services are provided to program participants completely free of charge. In fact, students receive a small stipend for their participation. For more information call (316) 978-6731, or visit the website (http://wichita.edu/cub).

The **Upward Bound Regional Math-Science Center — The Galaxy Experience** is designed to serve 74 economically disadvantaged high school students who have the potential to be the first in their family to attend college and earn a four-year degree, preferably in a science or mathematics field. It is the mission of the Upward Bound Math Science Regional Center to: educate students with the propensity for study in STEM (Science, Technology, Engineering and Mathematics) areas for postsecondary; to stimulate and sustain interest in STEM careers; and to motivate low-income and potential first generation college students to realistically consider the attainment of a post-secondary degree in STEM.

The UBMS program is provided to students in two interrelated components, a summer component known as the Galaxy Experience and an academic year component referred to as The Leadership Academy. With major focus on acquisition of 21st century learning skills, mastery of core content and application of concepts mastered, and development of leadership talents, the center works with students via homework assistance, community service projects, bi-weekly leadership training and monthly academic skills workshops. The center also offers its students the opportunity to interact with industry and peer mentors and participate in campus visits and social/cultural events. Visit the Upward Bound Math Science Center website (http://wichita.edu/ubms), or call (316) 978-3316.

The **Veterans Upward Bound** program (VUB) is an educational and skills program designed specifically to serve the needs of today’s veterans. This program offers a unique range of services designed to prepare eligible veterans for success when they enter their chosen educational program whether it is at a two-year community college, a four-year college or university, a public or private school, or a vocational or technical school. All services, including instruction, textbooks, advising and supplies, are provided free of charge. VUB is a TRIO program funded by the U.S. Department of Education and is administered by student affairs at Wichita State University. It serves veterans in Wichita, Sedgwick County, Butler County and Harvey County. The main office is located on the Wichita State University campus and run by faculty and staff in the Elliott School of Communication.
For more information, visit the website (http://wichita.edu/vub). For more information, contact SWGU at (316) 978-6742.

Wichita Prep assists high school students from limited-income backgrounds who are first generation university students with academic potential but who may have inadequate secondary school preparation. The Wichita-area high school students participate in an intensive six- to eight-week summer and nine-month academic year schedule to improve academic and social skills. Services include tutorial assistance; academic, career and personal counseling; postsecondary admission; and academic classes and workshops. The program serves 97 students each year. The residential program for students returning to high school assists them in the completion of secondary requirements and gives them exposure to college life. An eight-week residential program for students who will enroll in university classes in the fall provides them their first experience with college coursework. Visit the website (http://webs.wichita.edu/ubwp), or call (316) 978-3019.

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

Wichita State University hosts a seven-year statewide federal grant, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP), 50 percent funded by the U.S. Department of Education, with foster students identified as priority students for receiving educational support. Students in state custody (JIAI KDOC) also qualify for this program. The overall goal of Kansas Kids @ GEAR UP is to increase the number of students graduating from middle and high school who are prepared for enrollment in postsecondary education, thereby enabling students to reach their full potential and consequently improve educational and social outcomes.

Kansas Kids @ GEAR UP works to expand existing efforts to enhance student achievement by partnering with DCF and privatized foster care agencies, the Kansas Board of Regents, the Kansas State Department of Education, TRIO programs, school districts, and other community and state agencies. Key components of Kansas Kids @ GEAR UP are academic development through homework assistance and workshops, mentoring and counseling (academic and career planning), postsecondary access education and providing scholarships for postsecondary education.

For more information, contact Kansas Kids @ GEAR UP at (316) 978-7810 or visit the GEAR UP website (http://wichita.edu/gearup).

North Wichita GEAR UP (NWGU)

is a college access program that is federally funded through the U.S. Department of Education and is designed to help students prepare for postsecondary education. North Wichita GEARUP is an exclusive cohort program that serves current USD 259 8th grade students enrolled at Hadley, Hamilton, Marshall, Meadow and Paskenta middle schools in Wichita. The program continues when students enroll at Wichita North or Wichita West high schools. For more information, contact NWGU at (316) 973-7936, or visit the website (http://wichita.edu/nwgu).

South Wichita GEAR UP (SWGU)

is a college access program that is federally funded through the U.S. Department of Education and is designed to help students prepare for postsecondary education. South Wichita GEARUP is an exclusive cohort program that serves current USD 259 8th grade students enrolled at Coleman, Curtis, Jardine and Truesdell middle schools in Wichita. The program continues when students enroll at Wichita South or Wichita Southeast high schools. For more information, contact SWGU at (316) 973-7934, or visit the website (http://wichita.edu/swgu).

Rhatigan Student Center

The Rhatigan Student Center (RSC) is the community center for Wichita State University. Through its facilities and services, the RSC serves students, faculty, staff, alumni and the Wichita community.

The RSC Food Court features Taco Bell Express®, Chick-Fil-A Express®, Pizza Hut Express®, Fast Break & Freshens Smoothies & Yogurts and Erbert and Gerbert’s Bistro.

The University Bookstore, on the first floor of the RSC, stocks textbooks for rent or purchase, casual and professional Shocker apparel, art supplies, Shocker souvenirs and gifts.

The RSC’s Shocker Sports Grill and Lanes is for leisure use. Located on the lower level of the RSC, it includes billiards, bowling, poker tournaments, darts, and fun foods and beverages. It’s the perfect place for Shocker basketball watch parties, birthday parties and group events.

The RSC has meeting rooms of all sizes, as well as a 7,800 square foot ballroom, and all are made available for campus and noncampus group rentals at reasonable rates. The University Event Services office schedules the use of all facilities in the RSC as well as most university facilities for out-of-classroom use.

The RSC is home for the Student Government Association, Student Advocate, the Office of Diversity and Inclusion, Student Affairs, the dean of students, Student Involvement, a satellite office for Career Development, the Shocker Card Center, the University Information Center (UIC), Commerce Bank, Campus Ministry, Lords and Ladys Hair Salon, and the Engraving Shop.

The nationally ranked Shocker men’s and women’s bowling teams are also housed in the RSC.

Visit the RSC online (http://wichita.edu/RSC) for more information.

Sports and Recreation

Numerous sports and recreation programs exist at the university.

As an NCAA Division I member, Wichita State competes in the American Athletic Conference; WSU men compete in basketball, baseball, cross country track, tennis and golf. WSU women compete in basketball, softball, cross country track, tennis, golf and volleyball. The university fields teams in bowling and crew as independent sports.

There is also an extensive campus recreation program. Club sports include spirit squad, dance squad, racquetball, men’s and women’s soccer, men’s volleyball, wheelchair athletics, ice hockey and aikido. Intramural sports include flag football, basketball, table tennis, badminton, soccer, softball, bowling, swimming and racquetball.

Students with a current Shocker ID card are admitted free to all varsity athletic events.

Sport Facilities

The 10,506-seat Charles Koch Arena, which is used for intercollegiate basketball games; the 7,851-seat Eck Stadium–Home of Tyler Field, home to the Shocker baseball program, which underwent a $7.8 million renovation in 2000 and ranks among the finest college baseball facilities in the country; the Sheldon Coleman Tennis Complex with eight lighted courts, home to WSU’s men’s and women’s intercollegiate tennis program; and the 1,000-seat C. Howard Wilkins Softball Facility for intercollegiate softball for women. Visit Shocker sports online (http://goshockers.com).
Wellness Programs

Campus Recreation

Campus Recreation is the primary destination for everything Shockers need to get their fitness, leisure and recreation groove on! Many indoor programs and activities take place in the Heskett Center. This 166,000 square-foot facility has everything fitness enthusiasts need for healthy, enjoyable, and productive college careers. By presenting a current Shocker ID card students open a door into the very best in fitness and recreation! Features include:

- Five convertible basketball/volleyball/badminton courts;
- Complimentary Shocker Fit, group fitness classes to all registered students. Over 34 classes/week including Cycle Fit, F45, PiYo, Yoga, and Zumba.
- Two hundred (200) meter indoor track;
- Three Shocker fitness studios, + CYCLE Fit studio + NEW F45 Functional Fitness Team Training Studio;
- Racquetball and squash courts;
- Mount Wu, a 25 foot-high climbing wall;
- Five thousand (5,000)+ square feet of fitness specific activity space including cardiovascular, and strength and conditioning equipment;
- Twenty-five (25) meter swimming pool with separate dive well;
- Six outdoor, lighted, hard-court tennis courts;
- Spacious men’s and women’s locker rooms; and
- Extensive sports and competition program consisting of many seasonal intramural opportunities as well as year-long sport club programs and activities.

Individual services available for purchase by members include:

- Personal training session packages;
- Massage session packages; and
- Variety of special event style activities including the Pumpkin Run 5k race, NIRSA Day and health fair.

Campus Recreation is here to provide students with solutions to their fitness, leisure and recreational needs. To learn more about the programs and services provided check out the Campus Recreation website (http://wichita.edu/campusrecreation), Like us on Facebook, or speak with a guest services assistant at (316) 978-3082.

Counseling and Testing Center

The Counseling and Testing Center provides services for personal and mental health issues. Psychological testing for learning disabilities is offered. Workshops and seminars on a variety of mental health and wellness topics are available. Academic testing services are also part of the center’s function. The center’s testing offerings include the credit by exam program, certification tests for community professionals, CLEP tests, and entrance exams for colleges and graduate schools.

Contact the Counseling and Testing Center in 320 Grace Wilkie Hall, at (316) 978-3440, or online (http://wichita.edu/counselingtesting).

Student Health Services (SHS)

Student Health Services provides convenient and affordable on-campus health care for all currently enrolled WSU students. The medical staff provides a wide range of services from routine and preventive care to managing acute illness and minor injuries. SHS is located at 209 Ahlberg Hall and open Monday – Thursday 8 a.m. to 7 p.m. and Friday 8 a.m. to 5 p.m.

Student Health offers the convenience of onsite lab and medication services to save students time and money.

Health insurance is not needed to be seen at Student Health Services. Students can pay their bill with cash, check or credit card. SHS will file insurance claims for students with the KBOR student insurance plan.

Scheduling an appointment is recommended and there are same day appointments available each day. Appointments can be scheduled anytime through the student portal (http://studenthealth.wichita.edu), or by calling 316-978-3620 during regular hours.

Keeping students healthy is the priority! Whether students need a physical exam, are not feeling well, or need vaccinations such as meningitis or HPV, SHS will work to meet their health care needs.

For more information, call (316) 978-3620, or visit the Student Health Services website (http://wichita.edu/shs).

Child Development Center

The WSU Child Development Center is located at 3026 East 21st Street North, at the NW corner of Hillside and 21st Street. It is a licensed child care center for children of WSU students, faculty, staff and alumni. A diverse staff of qualified lead teachers and WSU student assistants facilitates developmentally appropriate activities — art, language, science, math, music and literature — in a hands-on learning environment. The child care center is open Monday through Friday from 7:30 a.m. to 5:30 p.m. for children 6 weeks to 6 years old.

Enrollment is limited so it is recommended to get on the waiting list as soon as possible. There is a $70, nonrefundable fee to be added to the waitlist.

Students taking 6 hours or more receive a $50 discount. Students who receive financial aid and have an EFC of 0 receive a $100 discount.

For more information, call (316) 978-3109, or visit the Child Development Center website (http://wichita.edu/childdevelopmentcenter).
University Policies and Procedures
Notice of Nondiscrimination
Wichita State University does not discriminate in its employment practices, educational programs or activities on the basis of age, ancestry, color, disability, gender, gender expression, gender identity, genetic information, marital status, national origin, political affiliation, pregnancy, race, religion, sex, sexual orientation, or status as a veteran. Retaliation against an individual filing or cooperating in a complaint process is also prohibited. Sexual misconduct, relationship violence and stalking are forms of sex discrimination and are prohibited under Title IX of the Education Amendments Act of 1972. Complaints or concerns related to alleged discrimination may be directed to the Director of Equal Opportunity or the Title IX Coordinator, Wichita State University, 1845 Fairmount, Wichita KS 67260-0138; telephone (316) 978-3187.

Inquiries for large print, Braille or audio versions of this catalog should be addressed to the Office of Disability Services.

Release of Student Information Policy (Privacy Law)
The Family Educational Rights and Privacy Act of 1974 (FERPA), as amended, is a federal law that sets forth requirements pertaining to the disclosure of, and access to, education records maintained by Wichita State University.

Wichita State University accords all rights under the law to students. Those rights are:

1. The right to inspect and review the student’s education records;
2. The right to request amendment of the student’s education records to ensure that they are not inaccurate, misleading or otherwise in violation of the student’s privacy or other rights;
3. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent; and
4. The right to file with the U.S. Department of Education a complaint concerning alleged failures by Wichita State University to comply with the requirements of FERPA.

No one outside the institution shall have access to, nor will the institution disclose any information from, students’ education records without the prior written consent of the student(s) except to personnel within the institution who have a legitimate educational interest, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order, to persons in an emergency in order to protect the health or safety of students or other persons, or to other persons or entities to whom disclosure is permitted under the act. Upon request, the institution also discloses education records, without consent, to officials of another school in which a student seeks or intends to enroll, or is enrolled.

Within the Wichita State community, only those members, individually or collectively, acting in the students’ “legitimate educational interests” are allowed access to student education records. These members include personnel in the offices of admissions, registrar, financial operations, computing center, dean of students, financial aid, career services, cooperative education, planning, testing, library, college deans, academic advisors, and other administrative and academic personnel within the limitation of their need to know. “Legitimate educational interests” means:

1. The information or records requested is/are relevant and necessary to the accomplishment of some task or determination; and
2. The task or determination is an employment responsibility for the inquirer or is a properly assigned subject matter for the inquirer’s employment responsibility.

A Social Security number and student status data may be provided to other state agencies for use in detection of fraudulent or illegal claims against state monies.

Family Educational Rights and Privacy Act (FERPA)
1. Definitions
   a. Consent: Consent shall be in writing and shall be signed and dated by the student giving consent. It shall include:
      i. Specification of records to be released;
      ii. Purposes for such release; and
      iii. Parties or class of parties to whom such records may be released.
   b. Directory Information: FERPA regulations define directory information as: “Information contained in an education record of a student which would not generally be considered harmful or an invasion of privacy if disclosed.” Under the regulation, such information includes, but is not limited to, the student’s name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status, participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended.
   c. Disclosure: Permitting access or the release, transfer, or other communication of education records of the student or the personally identifiable information contained therein, orally, or in writing, or by electronic means, or by any other means to any party.
   d. Education Records: Those records that are directly related to a student and that are maintained by the university or by a party acting for the university. Excluded from the category of “education records” are the following and to which the law does not guarantee the right of student access:
      i. Records that are kept in the sole possession of the maker, are used only as a personal memory aid, and are not accessible or revealed to any other person except a temporary substitute for the maker of the record.
      ii. Records relating to an individual who is employed by an educational agency or institution that are made and maintained in the normal course of business; relate exclusively to the individual in that individual’s capacity as an employee; and are not available for use for any other purpose.
      iii. Medical and psychological or other recognized professional or paraprofessional record of a student who is 18 years of age or older and is attending WSU that are maintained only in connection with provision of treatment to the student and that are not available to persons other than those providing treatment except that such records may be personally reviewed by a physician or other appropriate professional of the student’s choice and with the student’s written consent.
iv. Records of the WSU Police Department maintained solely for law enforcement purposes, which are maintained separately, and which are not disclosed to individuals other than law enforcement officials sharing the same territorial jurisdiction.

v. Records that contain only information relating to a person after that person is no longer a student at the university. An example would be information collected by the university or the WSU Alumni Association pertaining to the accomplishments of its alumni.

vi. Grades on peer-graded papers before the grades are collected and recorded by a teacher.

e. **Legitimate Educational Interests:** The interests of university personnel who have a demonstrably legitimate need to review records in order to fulfill their official professional responsibilities. Such responsibilities must involve the university in its primary educational and scholarly functions and/or secondary administrative functions of maintaining property, disbursing funds, keeping records, providing living accommodations and other services, sponsoring activities, and protecting the health and safety of persons or property in the university community. If a question arises concerning the legitimacy of a request to review records, such question shall be referred to the registrar, and/or the general counsel.

f. **Parent:** Includes a parent, a guardian, or an individual acting as a parent of a student in the absence of a parent or guardian.

g. **Personally Identifiable Information:** Includes the name of the student; the student’s parent(s) or other family member(s); the address of the student or student’s family; personal identifiers such as a social security number, student number, or biometric record; or other indirect identifiers such as the student’s date of birth, place of birth, and mother's maiden name; or other information that, alone or in combination, is linked or linkable to a specific student that would allow a reasonable person in the school community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty; or information requested by a person who WSU reasonably believes knows the identity of the student to whom the education record relates.

h. **School Official:** A “school official” includes a teacher, school principal, president, chancellor, board member, trustee, registrar, counselor, admissions officer, attorney, accountant, human resources professional, information systems specialist, and support or clerical personnel. A contractor, consultant, volunteer, or other party to whom a school or institution has outsourced institutional services or functions may also be considered a “school official” provided that they are performing an institutional service or function for which the agency would otherwise use employees and is under the direct control of the agency or institution with respect to the use and maintenance of education records.

i. **Student:** For purposes of this policy, anyone who is or has been enrolled at Wichita State University, with the following exception:

A person who has applied for admission to, but has never been in attendance at a component unit of the university (such as the various schools and colleges of the university), even if that individual is or has been in attendance at another component unit of the university, is not considered to be a student with respect to the component to which an application for admission has been made.

j. **Unit Custodian of Student Records:** Except as otherwise designated in this policy, the head of each academic or administrative unit is responsible for the education records within the unit.

2. **Student Access to Education Records**

a. A student has the right and shall be accorded the opportunity to inspect, review, and/or receive copies of his or her educational record, except as provided for below. The university must comply with the student’s request within a reasonable period of time, not to exceed 45 days after the request.

b. The student has the right to a reasonable request for explanation of the records and to copies of the records where necessary to provide full inspection and review. Such copies will be provided at the student’s request and expense; however, the charge to the student for any such records may not exceed $.25 per page. The university may not charge a fee to search for or retrieve a record. If any question arises as to the identity of the requesting student, the student shall be asked to provide his or her university ID card and/or other positive identification.

c. The university is not required to afford inspection and review of the following records:

i. Financial records of the student’s parents submitted as part of the financial aid process;

ii. Confidential letters and statements of recommendation that were placed in the student’s education records prior to January 1, 1975, if such letters were submitted with an understanding of confidentiality, and are used only for the purpose for which they were specifically intended;

iii. Confidential letters and statements of recommendation received after January 1, 1975, for which the student has signed a waiver of the right to access and which pertain to:

1. Admission to this or any other educational institution or agency;

2. Application for employment;

3. Receipt of an honor or honorary recognition so long as these letters are used solely for the purpose(s) for which they were specifically intended.

d. If an education record contains information about more than one student, the student may inspect only the information about himself or herself.

3. **Waiver of Rights**

The university may request, but not require, students to waive rights under this policy; the waivers must be in writing and signed by the student. Applicants for admission to the university and eligible students may waive rights to review confidential letters of recommendation only if:

A. The applicant or student, upon request, is notified of the names of all persons providing letters;

B. The letters are used only for the purpose for which they were originally intended;

C. The waiver is not required as a condition of admission or for any other service or benefit of the university.

All waivers under this paragraph must be executed by the individual, regardless of age, rather than by the parent of the individual. All waivers must be in writing and signed by the student.

The student may revoke any waiver in writing; the revocation to apply only to documents received or entered into the record after the date of execution of the revocation.
4. Disclosure of “Personally Identifiable” and “Directory Information”

The university shall obtain the written consent of the student before disclosing personally identifiable information from education records except as otherwise provided in this policy. The university may, without the consent of the student, disclose directory information. If a student wishes to have such information withheld, he or she must notify the Office of the Registrar in writing, as described previously. If a student wishes to prevent the inclusion of such information in the online student directory, he or she must notify the Office of the Registrar. The university may disclose personally identifiable information without the consent of the student to school officials within the institution determined to have legitimate educational interests; to contractors, consultants, volunteers and other parties to whom the university has outsourced institutional services or functions as permitted by FERPA regulations; to authorities to comply with a judicial order or subpoena, provided the university makes a reasonable effort to notify the student in advance of compliance (unless judicial order or subpoena specifically prohibits such contact); to financial aid personnel in conjunction with an application for financial assistance; to organizations conducting studies for accrediting functions; and to appropriate persons in a health or safety emergency. Disclosure of personally identifiable information without the consent of the student may also be made when required by law or government regulation. The university may disclose personally identifiable information from the education records of a student without a student’s consent if the institution determines that there is an articulable and significant threat to the health or safety of a student or other individuals. Disclosures for this purpose shall take into account the totality of the circumstances pertaining to the threat to the health or safety of a student or other individuals. If the university determines that there is an articulable and significant threat to the health or safety of a student or other individuals, it may disclose information from education records to any person whose knowledge of the information is reasonably considered to be necessary to protect the health or safety of the student or other individuals. Disclosures for this purpose may be made without the consent of the student or other individuals. The university shall obtain the written consent of the student before disclosing personally identifiable information from education records to authorized representatives of federal, state and local educational authorities, to organizations conducting studies for or on behalf of educational agencies or institutions, to accrediting organizations, to comply with judicial orders or lawfully issued subpoenas, to victims of a crime of violence or nonforcible sex offense, in connection with university disciplinary proceedings, or if disclosure concerns sex offenders and other individuals required to register under federal law.

The university student health service is required to report to the Kansas Department of Health the names of students who have certain communicable diseases such as hepatitis, tuberculosis, and venereal disease. The health service is also required to report to local law enforcement officials the name of any student who is wounded with a deadly weapon.

5. Release of a Student’s Grades

Board of Regents policy provides that the university may not withhold the written record of grades earned by any dependent student when the university receives a written request for any such grades from a student, or the student’s parents or legal guardian. The student will be notified in writing of any disclosure of his or her grades made to his or her parents or legal guardian. Dependency, for this purpose, is defined by the Internal Revenue Code, as amended. Should the student be financially indebted to the university, a transcript request will not be honored and the person submitting the request will be so notified.

6. Notice to Third Parties

The university must inform the parties to whom personally identifiable information is given that they are not permitted to disclose that information to others without the written consent of the student and that the information is to be used only for the purpose(s) intended.

7. Providing Copies of Disclosed Records

When the unit custodian discloses personally identifiable information from the education record of a student, the unit custodian shall, at the student’s request and expense, provide a copy of the disclosed record to the student, unless otherwise specified by this policy.

8. Destruction of Records

Education records shall be maintained consistent with university policy on the retention of records. No education record, however, may be destroyed if there is an outstanding request to inspect and review the record. Also, the record of access to the education record and any explanations which are a part of the record must be maintained for as long as the education record to which it pertains is maintained.

9. Maintaining Records of Requests and Disclosures

The unit custodian shall maintain a record of requests and disclosures of personally identifiable information from a student’s education record. The record shall include, whether requests are granted or not, the name(s) of the person(s) who requested the information and their legitimate interests in the information. Records of requests and disclosures will not be maintained:

a. For requests made by the student;
b. For requests for which the student has given written consent;
c. For requests made by school officials with legitimate educational interests;
d. For requests for directory information;
e. For disclosures in compliance with certain judicial orders or lawfully issued subpoenas, after a reasonable attempt has been made to notify the eligible student or parent.
The record of requests and disclosures may be inspected by the student, by school officials responsible for the custody of the records, and by federal and state officials who have been given permission to access records by the registrar.

10. Students’ Right to Challenge Information Contained in Education Records

A student may challenge the content of an education record on the grounds that the record is inaccurate, misleading or otherwise in violation of the privacy or other rights of the student. No hearing under this policy shall be granted for challenging the underlying basis for the grade. However, the accuracy of its recording could be challenged.

The following procedure for challenging the content of an education record shall apply:

a. The student has the right, upon reasonable request, for a brief explanation and interpretation of the record in question from the respective unit custodian.

b. The unit custodian of the challenged education record, after reviewing the record with the student, may settle the dispute informally with the student with regard to the deletion or modification of the education record. The unit custodian shall make his or her decision within a reasonable amount of time and shall notify the student of the decision.

c. In the event the unit custodian disapproves the student’s request to delete or modify the record in question, the student shall be notified by the unit custodian, in writing, of the decision and of the student’s right to a formal hearing upon the request.

i. All requests for formal hearings by the student shall be directed to the registrar, and shall contain a plain and concise written statement of the specific facts constituting the student’s claim.

ii. The hearings shall be conducted by a university staff member (hearing officer) who does not have a direct interest in the outcome of the challenge and who shall be appointed by the registrar. The hearing shall be held within a reasonable time of receipt of the student’s request and the student shall be notified reasonably in advance by the hearing officer of the date, place, and time of the hearing.

iii. At the hearing the student shall be afforded a full and fair opportunity to present evidence relevant to the claim and may, at his or her expense, receive assistance or be represented by any individuals of choice.

iv. Based solely on the evidence presented at the hearing and within ten (10) working days of the hearing, the hearing officer shall make a written recommendation to the registrar together with written findings of fact concerning the student’s request. Within an additional fourteen (14) working days of receipt of the hearing officer’s report, the registrar shall notify the student in writing of the decision. The decision must include a summary of the evidence and the reasons for the decision.

d. In the event the decision of the registrar is adverse to the student’s request, the student shall be notified of the opportunity to place with the education record a summary statement explaining the reason for disagreeing with the decision. If the questioned document is released to a third person, the student’s summary statement shall accompany the release of any such information. The summary information shall be maintained for as long as the contested record is maintained.

e. If a student challenge to the content of a given record is successful, the university shall amend the education record accordingly and so inform the student. Upon the student’s specific written request to the registrar, the university shall make a reasonable effort to contact student-designated third persons who have received copies of the previous record to inform them of the change which has been made.

11. Complaint Procedure

If a student believes that the university is not in compliance with FERPA, the student should first contact the office involved and/or the Office of the Registrar.

If a student wishes to file a complaint with the federal government concerning the university’s failure to comply with FERPA, he or she must submit the complaint, in writing, within 180 days of an alleged violation of FERPA to the Family Policy Compliance Office (FPCO), U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202. The FPCO office will notify the student when the complaint has been received. The FPCO office will investigate the complaint, and may require further information of its findings and basis for such findings. In the event the university is found not to be in compliance, it will be afforded the necessary time to comply. If it does not then comply, the matter will be sent to a review board for a hearing. For information concerning this hearing procedure, see 34 C.F.R. Sections 99.64 through 99.67.

Public Notice Designating "Directory Information"

At its discretion the institution may provide “directory information” to anyone in accordance with the provisions of the act.

Wichita State University hereby designates the following student information as public or directory information.

“Directory Information” includes the student’s name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status, participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended.

The name(s) and address(es) of the student’s parent(s) or guardian(s) may be disclosed when used for an official university news release about the student’s receipt of degrees or awards or about participation in officially recognized activities or sports. Parent name, address, telephone number, and e-mail address is designated as directory information for the limited purpose of disclosure to the Wichita State University Foundation, Inc. to support programs and activities of the institution and the WSU Foundation.

Currently enrolled students may withhold disclosure of “directory information” (on an all or none basis) to non-institutional persons or organizations. Students have an option to protect their privacy and not have such information released by completing a written request.

The form for requesting the withholding of directory information is available from the Office of the Registrar, 117 Jardine Hall, or call (316) 978-3090 to have one mailed or faxed. The completed form is returned to the registrar’s office with a readable copy of one of the student’s government issued photo IDs, such as driver’s license. The form is processed by the business day after it is received. Withholding directory information excludes the student from the online directory,
which is available on the WSU website to anyone with a myWSU ID. It also has other ramifications. Students should consider very carefully the consequences of any decision to withhold directory information to outside parties. Doing so could be a disadvantage should a lender, insurance company, employer, etc., want to quickly verify a student’s enrollment or graduation. It also excludes a student from the Dean’s Honor Roll or graduation lists that are sent to the media.

The institution will honor a student’s request to withhold directory information, but cannot assume responsibility to contact students for subsequent permission to release it. Regardless of the effect on a student, the institution assumes no liability for honoring instructions to withhold information.

The same form and process is also used to remove a previous do not disclose instruction. Requests for nondisclosure may be filed anytime. Requests will be honored until withdrawn.

Additional Policies and Procedures

Injury or Accident

The state of Kansas and Wichita State University do not insure against, and are not responsible for, accidents or injury to students which may occur during university-sponsored activities on or off campus. The university will make every reasonable attempt to advise students concerning potential danger of accident or injury. Students are expected to act responsibly by taking necessary precautions to prevent accidents. Students also are advised to protect themselves from the financial burden of accident or injury through a personal insurance policy.

Offender Registry

Law enforcement agency information concerning registered sex offenders who are employed by or who are currently enrolled at Wichita State University may be obtained from the university police department. This information is made available to the campus community pursuant to the requirements of the Campus Sex Crimes Prevention Act. Further information on any registered offender can be obtained from the Kansas Bureau of Investigation or the sheriff’s office in the registrant’s county of registration.

Safety

Campus safety is a priority at Wichita State. The university campus is well lighted and parking lots are regularly patrolled by WSU police officers. WSU police and parking services personnel are available to provide safety escorts for students in the evenings. In case of emergencies, phones (designated by a blue light at the top of the pole) with direct access to the university police station are strategically placed around the campus.

More information about campus safety including links to emergency news and the option to opt in to ShockerAlert System emergency notifications can be found at the campus safety website (http://wichita.edu/safety).

The annual security and fire report is available online (http://wichita.edu/annualsecurityreport). Review safety and crime prevention information in addition to daily crime logs and crime statistics at the police website (http://wichita.edu/police).

Care Team (UBIT)

Wichita State cares about the well-being of all members of the campus community. The Care Team applies a multidisciplinary approach to assisting students in need. More information may be found at the Care Team website (http://wichita.edu/UBIT).

Title IX

Title IX of the Educational Amendments of 1972 prohibits discrimination based on sex in any educational institution that receives federal funding. Wichita State University does not tolerate sex discrimination of any kind including: sexual misconduct, sexual harassment, relationship/sexual violence and stalking. These incidents may interfere with or limit an individual’s ability to benefit from or participate in the university’s educational programs or activities. Students are asked to immediately report incidents to the University Police Department, (316) 978-3450 or the Title IX coordinator (316) 978-5177. Students may also report incidents to an instructor, faculty or staff member, who are required by law to notify the Title IX coordinator. If a student wishes to keep the information confidential, the student may speak with staff members of the Counseling and Testing Center (316) 978-3440 or Student Health Services (316) 978-3620. For more information, visit the Title IX website. (http://wichita.edu/titleix)

Tobacco-Free Campus

Wichita State University is committed to provide a tobacco-free environment for the health, well-being and safety of university students, employees and visitors; accordingly, Wichita State University is a tobacco-free campus.

This policy includes buildings and parking lots and covers traditional as well as other types of tobacco use such as vaping and electronic cigarettes or devices.

University Weapons Policy

For the full text of the policy, please refer to Wichita State University Policy 11.19 (http://www.webs.wichita.edu/inaudit/ch_11.htm).

It is the policy of the Kansas Board of Regents, to the extent permitted by law, to allow concealed carry of handguns and prohibit possession of other weapons and open carry of firearms on the university campus.

Beginning July 1, 2017, any individual who is 21 years of age or older and who is lawfully eligible to carry a concealed handgun in Kansas can do so on the Wichita State University campus except in buildings and public areas of buildings for which adequate security measures are provided, as restricted by policy, or as otherwise prohibited by law.

There are no university buildings that have been designated as gun-free with permanent adequate security measures. The university may designate a specific location as temporarily gun-free. Appropriate notice will be given whenever this temporary designation is made.

Each individual who lawfully possesses a handgun on campus shall be wholly and solely responsible for carrying, storing and using that handgun in a safe manner and in accordance with law and policy. Nothing in this policy shall be interpreted to require individuals who lawfully possess a handgun to use it in defense of others.

Possession of weapons, other than concealed handguns, anywhere on any campus location shall be prohibited. This includes the open carry of any weapon, including a handgun or handguns. Every entrance to each building and facility at any campus location shall be conspicuously posted with appropriate signs indicating that openly carrying a weapon into that building or facility is prohibited. Additional signs may be posted as appropriate.

Residency Defined

The residence of students, for tuition and fee purposes, is determined by acts of the Kansas legislature, rather than university policy. The legislature has also granted the Kansas Board of Regents certain
authority to adopt regulations and guidelines for the determination of residence, within the broader state law. The law and regulations are different than those that govern residency for any other purpose.

According to Kansas law and regulations, a resident, for tuition purposes, is someone who has resided (been physically present) in Kansas for 12 consecutive months prior to enrollment/re-enrollment and who has demonstrated, during those 12 months, the intent to make Kansas his or her permanent home. Intent is evaluated in light of:

1. The person’s statement about why she or he came to Kansas in the first place, and
2. What the person has done since coming to Kansas (objective, verifiable facts).

Many factors are considered when evaluating intent. The Kansas Board of Regents’ guidelines list nonconclusive factors or circumstances that could help support a claim for resident classification. The guidelines also specify a qualifier: “Any such factor, to be given weight, must be of at least one year’s duration prior to enrollment/re-enrollment.”

Residents of Kansas (for fee purposes) who leave the state retain their residency as long as they return to Kansas permanently within 60 months of departure.

A person who comes to Kansas to go to school, and who enrolls full time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain exceptions are authorized by state law to pay the equivalent of resident fees:

1. Regular employees of the university and their spouses and dependent children (does not apply to student assistants and graduate assistants);
2. Persons who are current military including members of the Kansas Air or Army National Guard, and their spouses and dependent children;
3. Veterans who live in Kansas and are eligible for post-9/11 benefits, or the eligible spouse or dependent child using the veteran’s benefits;
4. Persons who graduated from a four-year program at an accredited Kansas high school within six months of their enrollment at a state university, and who were Kansas residents for fee purposes at, or within 12 months of, high school graduation;
5. Dependent students as long as at least one parent is a Kansas resident for fee purposes;
6. Persons who were recruited to, or transferred to Kansas within the last 12 months for a full-time job, and their spouses and dependent children; and
7. Any person who is attending or has attended Haskell Indian Nations University and who is enrolled as an American Indian on a tribal membership roll maintained by the Bureau of Indian Affairs of the U.S. Dept. of the Interior.

The details about each of these exceptions are critical and are not all on this page. Several require certification of appropriate information on a special form. None of them is automatic. Contact the registrar’s office for more information.

A person who is residing in Kansas and would not otherwise be considered a resident of Kansas will be considered to be a resident for tuition purposes if she or he has attended three years of high school in Kansas and graduated from an accredited Kansas high school or earned a Kansas GED and she or he is not on a student visa or eligible to pay resident rates in another state. This can apply to undocumented aliens and former Kansans who have not been back in Kansas long enough to re-establish residency. This law does not apply to an eligible person’s spouse or dependents. People who have been admitted as nonresidents and think they are eligible to be considered residents because of this provision should contact the registrar’s office. The three years of high school in Kansas (includes 9th grade), and Kansas high school graduation, must be documented. It doesn’t matter when the person attended or graduated. Aliens with nonpermanent resident status must document that. Aliens must sign an affidavit indicating that they will apply for permanent residency as soon as they are eligible. All students must sign an affidavit indicating that they are not eligible to pay resident rates in any other state.

Students applying for residency should contact the Office of the Registrar, 102 Jardine Hall. There are many details about establishing Kansas residency for tuition purposes that will be explained upon further inquiry.

Residency of new students enrolling for the first time at Wichita State is determined by the appropriate (undergraduate, graduate or international) admissions office according to the above law/regulations. Such students should address questions concerning residency to the appropriate admissions office.

When a continuing student, who was initially classified as a nonresident, thinks he or she meets these residency requirements, then he or she must apply for residency using a form available from the registrar’s office. Lower fees do not necessarily mean that someone has been classified as a resident — there are no nonresident fees, for example, for workshops.

The responsibility of registering under proper residence is placed on the student. If there is any possible question of residence classification, it is the duty of a student when registering and paying fees to raise the question with the registrar’s office. Students who disagree with their residency classification are entitled to an appeal, provided they file a written appeal with the registrar within 30 days from enrollment and pay the fees as originally assessed. A standard appeal form is provided by the registrar’s office. If notice of the appeal is not given in writing within 30 days, the classification or reclassification by the registrar becomes final. Appeals are reviewed and decided by the university committee on residency, and its decision is final. The committee is not empowered to make exceptions, just to apply the law and regulations to individual circumstances.

Students must report their correct address at the time of registration each semester. The address given must be the student’s actual place of residence, because it will be the one to which all correspondence from Wichita State is sent. Any change in residence must be reported within three days to the registrar’s office. More complete information on the residence law and regulations can be obtained from the registrar’s office.

The information in this section is a summary of Kansas law. Kansas law and Kansas regulations are controlling in case of conflict.
General Education Program

Well-Rounded Learning

Wichita State strives to offer the most complete college experience possible to produce well-rounded, successful Shocker graduates. Through general education courses, students explore subjects outside of their major, expanding their knowledge, perspective and skills and making a positive impact on their career and life.

Benefits of general education courses:

- Improved critical thinking skills
- Better communication, written and spoken
- Increased analytical reasoning and problem solving
- An acquired knowledge of natural and social science, the arts and humanities

Improve skills by taking courses that include diversity content, study abroad experiences, service learning and experience-based learning.

General Education Course Requirements

The 42-hour general education program at WSU consists of three tiers containing four kinds of courses.

Tier 1 Foundation Courses

Complete four courses within the first 48 hours of enrollment with a grade of C- or better. Foundation courses cover the fundamental skills needed throughout college and should be taken at the very beginning of a student’s studies.

- ENGL 100 or ENGL 101
- COMM 111
- ENGL 102
- MATH 111, MATH 112 or MATH 131

MATH 111 or any math course that requires MATH 111 or MATH 112 as a prerequisite. MATH 131 does not fulfill the prerequisite for any further math course. MATH 131 does not meet degree requirements in all colleges.

Tier 2 Introductory Courses in the Disciplines

Complete seven courses.¹ ²

These courses introduce students to the scope of human knowledge and inquiry. Skills learned in Tier 1 are used in these courses.

<table>
<thead>
<tr>
<th>Fine Arts (Division A)</th>
<th>Humanities (Division A)</th>
<th>Social/Behavioral Sciences (Division B)</th>
<th>Mathematics and Natural Sciences (Division C)³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Area</td>
<td>Subject Area</td>
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<td>Subject Area</td>
</tr>
<tr>
<td>Art History</td>
<td>Communication⁴</td>
<td>Anthropology</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Dance</td>
<td>English⁴</td>
<td>Criminal Justice</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>Musicology/Composition</td>
<td>History</td>
<td>Economics</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Theater</td>
<td>Modern and Classical Languages &amp; Literature</td>
<td>Entrepreneurship</td>
<td>Computer Science</td>
</tr>
<tr>
<td></td>
<td>Linguistics</td>
<td>Ethnic Studies</td>
<td>Geology</td>
</tr>
<tr>
<td></td>
<td>Philosophy</td>
<td>Geography</td>
<td>Mathematics/Statistics⁴</td>
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<tr>
<td></td>
<td>Religion</td>
<td>Political Science</td>
<td>Physics</td>
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<tr>
<td></td>
<td>Women's Studies</td>
<td>Psychology</td>
<td>Public Health</td>
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<td></td>
<td>Sociology</td>
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<td></td>
<td>Social Work</td>
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</tbody>
</table>

Requirement

- one course
- two courses, one in each of two subject areas
- two courses, one in each of two subject areas
- two courses, one in each of two subject areas

¹ Courses within a student’s major department shall not count toward fulfilling general education requirements (this restriction applies only to one major. For students with a double major, courses in the second major could count toward fulfilling their requirements).
² An approved advanced course can be used as an introductory course.
³ One class must be from biological sciences, chemistry, geology or physics.
⁴ Excluding foundation courses.
Tier 3 Advanced Further Study and Issues & Perspectives Courses in the Disciplines
Complete three courses

From addressing broad issues to providing more focused studies, these courses allow students to follow up on interests developed during Tier-2 courses in the following divisions:

• Fine Arts and Humanities (division A)
• Social and Behavioral Sciences (division B)
• Mathematics and Natural Sciences (division C)

One course must be an advanced further study (FS), one must be an advanced issues and perspectives (I&P), the third course can be either. If a student takes two FS and one I&P, the two FS courses must be distributed over two divisions; if a student takes one FS and two I&Ps, the I&P courses must be in at least two subject areas.

— Visit http://wichita.edu/generaleducation —

Additional College/School General Education Requirements

• **Business** requires MATH 144 or MATH 242 and ECON 201 and ECON 202. MATH 111 or MATH 112 meets the prerequisite for MATH 144.
  Philosophy requirements: PHIL 125 counts as an introductory course and PHIL 306, an advanced course.

• **Education** requires PSY 111. Teacher education students must take STAT 370 (Secondary Math majors must take MATH 242 instead of STAT 370). MATH 111 is a prerequisite for STAT 370. Elementary majors must earn a C (2.000) or higher in MATH 111 in order to take higher level MATH courses.

• **Engineering** students are required to take MATH 242, MATH 243 and CHEM 211. Students fulfill advanced issues and perspective requirements with PHIL 385 and PHIL 354. Students cannot take an advanced further study course in the division of Fine Arts.

• **Fine Arts** students majoring in art education, music education and special education music are required to take PSY 111 and STAT 370 (or a higher level MATH course).

• **Health Professions** requirements are listed by major. General education requirements vary.

• **Honors College** requires the following:
  • Honors students fulfill general education requirements set by their major college. Honors students have dual advising: They should meet first with their major college advisor and then as needed with an Honors advisor to choose Honors courses that meet general education requirements.
  • Students working toward the Emory Lindquist Honors Scholar distinction or the Honors Baccalaureate degree are required to fulfill any 3 of their general education credits with an HRNS seminar.
  • Honors Baccalaureate students meet with an honors advisor to select additional courses to fulfill the 42-hour general education program.

• **Liberal Arts and Sciences** requires the following:
  • English or foreign language literature (humanities)
  • HIST 131, HIST 132 (humanities) or POLS 121 (social science)
  • Three natural science courses: At least one biology course and one physical sciences course; one must have a laboratory experience (does not include mathematics, personal computing, statistics, or computer science)
  • Foreign language in all BA degrees and the BS degree in criminal justice

Exploratory students meet with an academic advisor in the Liberal Arts and Sciences Advising Center. Students who have not declared a major may want to take a variety of courses to help clarify interests and identify possible majors and remain academically flexible.

Amendment to WSU General Education Policy – May 2014

Community College Transfers

• A student transferring to WSU having earned an AA or AS degree from a Kansas public community college will be considered to have satisfied WSU’s general education curriculum provided that he or she successfully completes at WSU (with a grade of C- or better) two Tier 3 general education courses numbered 300 or above (Tier 3 courses are those designated as advanced further study or issues & perspectives). The two courses must be in two separate divisions or subject areas. Students must also complete the foundation skills courses of ENGL 101 and ENGL 102, COMM 111, and MATH 111 or equivalent.

RN-to-BSN and Dental Hygiene Degree Completion Students

• A student enrolled in WSU’s RN-to-BSN degree completion program having earned an associate degree in nursing will be considered to have satisfied WSU’s general education curriculum provided that he or she successfully completes (with a grade of C- or better) two issues & perspectives courses.

• A student enrolled in WSU’s dental hygiene degree completion program having earned an associate degree in dental hygiene will be considered to have satisfied WSU’s general education curriculum provided that he or she successfully completes (with a grade of C- or better) two issues & perspectives courses.

These policies are effective for any student graduating from WSU fall 2014 or beyond.
Our Advice? Go See an Advisor
The best way to stay on course toward graduation is to meet with an advisor each semester before registering for classes. Advisors will help in selecting and sequencing classes that meet particular degree requirements. To schedule a meeting, contact the advising office in the college of your major.

- Business - (316) 978-3203
- Education - (316) 978-3300
- Engineering - (316) 978-3420
- Health Professions - (316) 978-3304
  - Nursing - (316) 978-5801
- Honors - (316) 978-3375
- Liberal Arts & Sciences - (316) 978-3700
- Fine Arts
  - Art, Design & Creative Industries - (316) 978-7701
  - Music - (316) 978-6430
  - Performing Arts - (316) 978-6634
  - Dance - (316) 978-3530
### General Education Courses

#### General Education Courses

General education courses must be at least 3 credit hours and from the approved general education course list. For more information, visit the general education website (http://wichita.edu/generalEducation).

General education courses offered in a given semester are identified in the online schedule of courses (http://wichita.edu/schedule).

#### Foundation Courses

Foundation courses cover the fundamental skills needed throughout college. They should be completed within the first 48 hours of enrollment with a grade of C- or better.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111H</td>
<td>Public Speaking - Honors</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 100</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
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<tr>
<td>MATH 112</td>
<td>Precalculus Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>MATH 123</td>
<td>College Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 131</td>
<td>Contemporary Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 144</td>
<td>Business Calculus</td>
<td>3</td>
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<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>5</td>
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<tr>
<td>MATH 242H</td>
<td>Calculus I - Honors</td>
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</tbody>
</table>

#### Introductory Courses

##### Fine Arts Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 103</td>
<td>Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 125</td>
<td>Introduction to Visual and Material Culture</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 125A</td>
<td>Introduction to Visual and Material Culture: Play</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 125B</td>
<td>Introduction to Visual and Material Culture: Bodies</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 125C</td>
<td>Introduction to Visual and Material Culture: Power and Propaganda</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 270</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>DANC 140</td>
<td>Art of The Dance</td>
<td>3</td>
</tr>
<tr>
<td>FA 110</td>
<td>Introduction to the Fine Arts</td>
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</tr>
<tr>
<td>HNRS 104</td>
<td>Seminar I: Fine Arts</td>
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</tr>
<tr>
<td>HNRS 104B</td>
<td>Seminar II: Fine Arts</td>
<td>3-4</td>
</tr>
<tr>
<td>MUSC 113</td>
<td>Introduction to Music Literature</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 160</td>
<td>What to Listen for in Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 161</td>
<td>Music Through the Ages</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 162</td>
<td>World Music</td>
<td>3</td>
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<tr>
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<td>The Art of the Theater</td>
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##### Humanities Courses

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### Social and Behavioral Sciences Courses

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### Mathematics and Natural Sciences Courses

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### Advanced Further Study Courses

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WOMS 338  Philosophy of Feminism  3
WOMS 361  Women and Work  3
WOMS 385  Lesbian, Gay, Bisexual, Transgender Studies  3
WOMS 387  Women in Society: Cultural Images  3
WOMS 391  Women's Global Issues  3
WOMS 511  Women in Early America, 1600-1830  3
WOMS 516  Sociology of Gender Roles  3
WOMS 580AB  Women and Reform in America, 1830-Present  3

Social and Behavioral Sciences Courses

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AGE 405  Sociology of Aging  3
AGE 512  Diversity and Aging  3
ANTH 200  Intercultural Relations  3
ANTH 303  World Cultures  3
ANTH 305  World Archaeology  3
ANTH 307  Peoples of Africa  3
ANTH 312  Asia Pacific Cultures  3
ANTH 318  Psychological Anthropology  3
ANTH 327  Magic, Witchcraft and Religion  3
ANTH 335  Archaeology of North America  3
ANTH 344  Ecological Anthropology  3
ANTH 352  Anthropological Linguistics  3
ANTH 370  Uncovering Race and Class in the American Past  3
ANTH 388  Cognitive Anthropology  3
ANTH 506  Peoples of the Pacific  3
ANTH 508  Ancient Civilizations of the Americas  3
ANTH 511  The Indians of North America  3
ANTH 515  China  3
ANTH 516  Japan: People and Culture  3
ANTH 522  Art and Culture  3
ANTH 528  Medical Anthropology  3
ANTH 555  Paleanthropology and Human Paleontology  3
ANTH 611  Southwestern Archaeology  3
ANTH 613  Archaeology of the Great Plains  3

CJ 351  The Victim in Criminal Justice  3
CJ 355  Special Populations in the Criminal Justice System  3
CJ 394  Courts & Judicial Systems  3
CJ 453  Crime Prevention  3
CJ 513  Violent Crime  3
CJ 518  Criminal Justice & Crime in Film  3
CJ 593  Crime Causation and Criminal Justice Policy  3
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### Advanced Issues and Perspectives Courses

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<td>Science, Religion &amp; Philosophy</td>
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<td>Hunger in NYC: Service and Leadership Needed</td>
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<td>Media Innovation, and Entrepreneurship</td>
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<td>Alternative Break: Service Leadership</td>
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<td>Work In Modern Society</td>
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<td>Cancer: Perspectives and Controversies</td>
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<td>Impact of Disease Upon Global Events</td>
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<td>Physics of Sound</td>
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<td>GEOL 300</td>
<td>Energy, Resources and Environment</td>
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<td>HNRS 307</td>
<td>Seminar III: Mathematics and Natural Sciences</td>
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Institute for Interdisciplinary Creativity

Jeremy Patterson, professor and director
(316) WSU-3010
http://wichita.edu/iic

Overview
The Institute for Interdisciplinary Creativity at Wichita State University (WSU) administers and supervises interdisciplinary degrees, certificates and other credentials (e.g., badges). The institute provides opportunities for faculty across campus to come together in a collaborative environment to develop/participate in academic programs and related research and creative projects in support of interdisciplinarity.

The primary goals of the Institute for Interdisciplinary Creativity are to encourage independent scholarship and to develop competence in collaborative research and creative activity. Students are expected to master special fields as well as to develop appropriate methods of inquiry for future professional growth.

Program Representatives to the Institute
The Institute for Interdisciplinary Creativity works closely with individual program areas to ensure that program operations function in compliance with university policies and regulations. As part of this process, and on a voluntary basis, a faculty member can be recommended by his or her department chair to the institute director to serve as the program representative to the institute in matters of interdisciplinarity. Although the nature of responsibilities varies throughout program areas, they have a primary role in working with students and faculty in their academic programs. As a standard of expectation, program representatives are charged with the responsibility for overseeing the evaluation of applications for admission, and the transmittal of recommendations for admission, academic performance, degree completion and exceptions to graduate and undergraduate regulations. Program representatives also have a primary role in coordinating information between their programs and the institute office, working with their departmental chairs or other administrators in maintaining the quality and viability of their graduate programs, and serving as the local agent for the faculty in their program areas.

Programs in the Institute for Interdisciplinary Creativity
- Master of Innovation Design (MID) (http://catalog.wichita.edu/graduate/institute-interdisciplinary-creativity/mid–master-of-innovation-design/#admissiontext)

Certificates in the Institute for Interdisciplinary Creativity
- Leadership Certificate (p. 65)

Courses in the Institute for Interdisciplinary Creativity
- Interdisciplinary Creativity (IIC) (p. 380)
- Innovative Design (ID) (p. 380)

Leadership Certificate
Leadership Certificate Goals and Objectives
Goal: Upon completion of the leadership certificate, students will have contemporary leadership skills in order to effectively contribute more to their profession and community.

Objectives: Upon completion of the leadership certificate, students are able to:

1. Identify leadership theories and concepts;
2. Differentiate leadership practices across settings, organizations, disciplines and systems;
3. Identify cultural strengths and differences through a leadership framework;
4. Develop leadership skills based on personal strengths and professional interests; and
5. Lead individuals in teamwork exercises.

Leadership Certificate Checklist
In order for students to receive the leadership certificate, students must:

1. Complete 12 credit hours of leadership courses:
   • IIC 301 or HNRS 351
   • Course #2
   • Course #3
   • Course #4

2. Submit a portfolio (of selected class projects) to coordinator to be used for assessment purposes.

3. Complete exit reflection questions:
   • What were the main benefits (strengths) of the leadership certificate?
   • What strengths did you gain from the program?
   • What would you tell others about your experience?
   • How do you plan to use the skills learned in the leadership certificate in your future?
   • How would you improve the leadership certificate program?

Together, these courses cover objectives 2–5.

Curriculum
Students are required to complete 12 credit hours, and must take courses that cover objectives 1–5. These courses may include courses required for certain undergraduate degrees. However, either IIC 301 or HNRS 351 is required to satisfy objective one. Additionally, honors students must select courses designated as honors courses. Some courses meet multiple objectives.

Objective One Course
IIC 301 Leadership is Essential Seminar 3
or HNRS 351 Survey of Leadership

Objective Two Courses
CI 795 Change, Creativity and Innovation 3

CI 796 Family and Professional Collaboration 3

COMM 325 Speaking in Business and the Professions 3
### Objective Three Courses

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<td>Teamwork, Leadership and Group Communication</td>
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<td>HMCD 308</td>
<td>Leadership in Self and Society</td>
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<tr>
<td>HMCD 333</td>
<td>Organizational Behavior and Leadership in Health Organizations</td>
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<td>HNRS 310S</td>
<td>Honors Tutorial - Emerging Leaders</td>
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<td>HNRS 310T</td>
<td>Summer Leadership Institute</td>
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<tr>
<td>HNRS 351</td>
<td>Survey of Leadership</td>
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<td>HPS 310</td>
<td>Organization and Administration of Physical Education Program</td>
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<td>HPS 510</td>
<td>Coaching Principles</td>
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<td>MGMT 360</td>
<td>Principles of Management</td>
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<td>NURS 337</td>
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<td>Nursing Leadership Practicum for the Practicing RN</td>
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<td>Psychology of Sport and Physical Activity</td>
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<td>Family and Professional Collaboration</td>
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<td>Human Resources Management in Health Care Organizations</td>
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<td>Community Health and Development</td>
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<td>Sociology of Coaching</td>
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\(^1\) Cross-listed courses

A cumulative grade point average of at least 2.000 is required for all courses comprising the certificate program and no grades below \(C\).

Additional courses can be added to this list as approved by the certificate coordinator.

A maximum of one course (3 credit hours) may be transferred from another institution if an articulation exists for one of the courses listed above.
Dorothy and Bill Cohen Honors College

Kimberly S. Engber, dean
A1180 Shocker Hall • (316) WSU-3375
http://wichita.edu/honors

The Dorothy and Bill Cohen Honors College aims to prepare students for innovative work in a complex society, to engage students across campus in intellectual inquiry and debate and to support exploration, discovery and community engagement. Honors students pursue meaningful work in honors seminars and interdisciplinary tracks to earn honors distinctions on the transcript or diploma. They apply what they have learned in class to honors research and creative activity, internships, student exchange and study abroad.

Students are encouraged to meet with the Cohen Honors College dean, faculty and advisors to design an honors course of study that meets their academic needs and professional goals or passions. Visit the college website to find a form to petition for an exception to honors curriculum requirements.

The college also provides opportunities for students who are not members through the undergraduate research and creative activity grants program and leadership programs in partnership with Student Involvement.

Honors Values
Members of the Dorothy and Bill Cohen Honors College community uphold four pillars, aiming to be:

Innovative
Innovative people solve problems creatively. They spot needs and take risks that their proposals will satisfy those needs. Innovation often requires bringing together the people, resources and expertise to develop new solutions, a sense of entrepreneurship. Innovation frequently involves interdisciplinary applications—borrowing from one field of endeavor to solve problems in another.

Professional
Professionals get results while committing themselves to high standards. Professionals do a good job for the sake of it. Professionals persevere in passionate pursuit of long-term goals.

Intellectual
The intelligent person masters the knowledge of a chosen specialty but also knows the value of knowledge from many other disciplines. A true intellectual is not simply a person who knows a lot or gets good grades. An intellectual is an intelligent person with a passion for and interest in knowledge, wisdom and inquiry.

Transformational
Transformational people strive to make a positive difference for a better world, a better community. Transformational people commit themselves passionately to a cause larger than themselves, put themselves in service to others, and practice good citizenship. They open their minds to the diverse views of others and deliberate the issues.

Policies
Admission Requirements
- For students with fewer than 24 college credit hours: a minimum high school GPA of 3.700, or a composite ACT score of 27 (SAT 1220) or better.

Students who have a passion for learning but who do not meet the admission requirements may petition the Cohen Honors College for special admission. For more information, contact the Dorothy and Bill Cohen Honors College office by email: honors@wichita.edu, or phone (316) 978-3375.

1 SAT scores (critical reading and math only) are converted to ACT scores by the WSU admissions office.

Normal Progress
Students should take at least 6 hours in honors seminars (HNRS prefix) or departmental honors courses (H following the course number) each year in order to graduate within four years with the minor in university honors or the honors baccalaureate diploma. Note that many of the requirements of the university’s general education program can be fulfilled by taking HNRS or H courses.

Probation and Dismissal
Students whose overall WSU GPA drops below 3.250 or who do not take any honors courses for a period of one year will be placed on probation and will be required to meet with an honors advisor. At the end of either the fall or spring semester immediately following the semester in which the student is put on probation (whichever comes first), the case will be reviewed by the Honors College dean who will decide to either return the student to good standing or dismiss the student from the Honors College. Students may also be dismissed from the Cohen Honors College at the discretion of the dean for violations of principles of academic integrity or other behavioral offenses. Students may appeal dismissals from the Honors College to the Honors Advisory Council.

Honors Living-Learning Community
All students admitted to the Dorothy and Bill Cohen Honors College may apply to live in the Honors College Living-Learning Community in Shocker Hall. Students who live in the Living-Learning Community area shall maintain active honors status:
- take at least 3 credit hours each year in honors courses;
- participate in the social, cultural, academic and service programs offered; and
- abide by the rules set by housing and residence life.

The Honors Living-Learning Community is designed to promote close interactions among honors students and to create an environment that maximizes learning, social development, civic engagement and personal growth.

Undergraduate Research and Creative Activity Grants
The Cohen Honors College offers opportunities for all undergraduate students across campus to receive funding, recognition, and guidance for faculty-mentored research and creative activity. For more information, stop by the Cohen Honors College office or visit the undergraduate research webpage (http://wichita.edu/honors/undergraduateresearch).

Self-directed research and creative activity guided by a faculty mentor prepares students for professional advancement or graduate study and fosters an innovation-oriented intellectual culture across the university. Individual students or small groups of students learn to formulate a
relevant question or articulate a creative problem, design research methodology or project timeline, and present results to a disciplinary or diverse audience. Students from all majors and backgrounds are eligible to pursue undergraduate research and creative activity. Past student research grant winners have undertaken any number of tasks, including library research, designing and administering surveys, interviewing, conducting laboratory or field experiments, entering and verifying data, analyzing data, writing reports, establishing connections to arts communities outside of Wichita, presenting at regional and national conferences, and working in national archives.

**Honors Curriculum: Distinctions on the Transcript or Diploma**

The Cohen Honors College offers multiple honors distinctions, ranging from a 12-credit-hour Emory Lindquist Honors Scholar transcript distinction, to 12-credit-hour Interdisciplinary Honors Tracks, to a 24-credit-hour minor in university honors, to an Honors Baccalaureate (HB) conferred by the Dorothy and Bill Cohen Honors College. The Honors Baccalaureate is the highest academic honor a student can receive on a WSU diploma.

Students who transfer to WSU having completed all or part of an honors program at another university, college or community college should speak to the Honors College dean or advisor about having those credits counted toward an honors award at WSU.

**Honors Course Offerings**

Students can earn honors credits for a range of courses and experiences:

**Honors Seminars (HNRS-prefix courses)**

Discussion-based seminars that fulfill Tier 2 and Tier 3 general education requirements are offered every semester and are open only to Cohen Honors College students. These courses carry the HNRS prefix.

**Departmental Honors Courses**

Many departments offer honors sections of traditional courses, as well as innovative courses designed specifically for Cohen Honors College and departmental honors students. These courses are marked with an H after the course number.

**Honors Research Seminar (HNRS 485)**

The Honors Research Seminar presents methods of inquiry and research concepts from several academic disciplines and provides students with opportunities to participate directly in research projects.

**Experience-Based Learning**

Honors College students are encouraged to engage in experience-based learning including the following honors courses:

- **HNRS 310**: Honors Tutorial (special topics or service-learning experience; 1–2 credit hours, repeatable to 3 credit hours)
- **HNRS 398**: Travel Seminar (up to 4 credit hours)
- **HNRS 410**: Independent Study (repeatable up to 6 credit hours)
- **HNRS 481**: Cooperative Education (up to 4 credit hours)
- **HNRS 481N**: Cooperative Education: Internship (up to 4 credit hours)

**Honors Option Contracts**

A student may petition to receive honors credit for any course taught by a full-time faculty member by submitting an honors option contract. Each honors option contract must be approved by the instructor and the Cohen Honors College dean or advisor. A student may take only one honors option each academic year.

An honors option requires a student to design meaningful work to supplement regular course material. (Examples include, but are not limited to, more in-depth research and writing assignments, presenting additional material to the class, and service projects with written reflection.) Students are required to:

- meet with the instructor before the end of the third week of classes to design a special assessment or project;
- fill out and turn in the honors option contract to the Cohen Honors College dean by the end of the third week of classes;
- schedule at least two additional meetings with the instructor, with at least one meeting before midterm;
- complete all requirements for the honors option two weeks before the final day of class.

When a student has completed the honors option contract requirements, the instructor notifies the Honors College dean who then asks the registrar to update the student’s transcript to show that the student earned honors credit for the course. There is no penalty if the student does not complete the additional work.

**Course Descriptions**

Courses in the Dorothy and Bill Cohen Honors College are offered in three formats. Because course descriptions are listed in numerical sequence, the following summary is presented to assist in locating courses by format:

**Introductory Honors Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNRS 101</td>
<td>Introduction to the University</td>
</tr>
<tr>
<td>HNRS 300</td>
<td>Introduction to the University for Transfer Students</td>
</tr>
</tbody>
</table>

**General Education Seminars**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNRS 104</td>
<td>Seminar I: Fine Arts</td>
</tr>
<tr>
<td>HNRS 105</td>
<td>Seminar I: Humanities</td>
</tr>
<tr>
<td>HNRS 106</td>
<td>Seminar I: Social and Behavioral Sciences</td>
</tr>
<tr>
<td>HNRS 107</td>
<td>Seminar I: Mathematics and Natural Sciences</td>
</tr>
<tr>
<td>HNRS 150</td>
<td>Seminar II: Fine Arts</td>
</tr>
<tr>
<td>HNRS 151</td>
<td>Seminar II: Humanities</td>
</tr>
<tr>
<td>HNRS 152</td>
<td>Seminar II: Social and Behavioral Sciences</td>
</tr>
<tr>
<td>HNRS 153</td>
<td>Seminar II: Mathematics and Natural Sciences</td>
</tr>
<tr>
<td>HNRS 304</td>
<td>Seminar III: Fine Arts</td>
</tr>
<tr>
<td>HNRS 305</td>
<td>Seminar III: Humanities</td>
</tr>
<tr>
<td>HNRS 306</td>
<td>Seminar III: Social and Behavioral Sciences</td>
</tr>
<tr>
<td>HNRS 307</td>
<td>Seminar III: Mathematics and Natural Sciences</td>
</tr>
<tr>
<td>HNRS 351</td>
<td>Survey of Leadership</td>
</tr>
<tr>
<td>HNRS 352</td>
<td>Survey of Law &amp; Public Policy</td>
</tr>
<tr>
<td>HNRS 404</td>
<td>Seminar in Fine Arts</td>
</tr>
</tbody>
</table>
Emory Lindquist Honors Scholar (12 credit hours)
The Emory Lindquist Honors Scholar track is recommended particularly for first-year and second-year students because it includes courses that count toward general education requirements and requires a collaborative or independent research experience. Continuing and transfer students are also welcome to complete this track. Lindquist Honors Scholars explore intersections among academic disciplines and professions and participate in academic research and creative activity with a faculty mentor or mentors.

To receive the transcript designation Emory Lindquist Honors Scholar, a student must maintain a cumulative GPA of 3.250 and complete 12 honors credit hours comprising:

- One honors general education introductory seminar (HNRS-prefix course)
- HNRS 485 Honors Research Seminar
- Electives chosen from honors seminars (HNRS-prefix courses) or departmental honors courses

Total Credit Hours 12

A student who wishes to take an honors general education advanced issues & perspectives course or upper-division honors course to fulfill the honors general education introductory seminar requirement may petition the Honors College for an exception.

Leadership Track (12 credit hours)
Students who complete the requirements for the leadership track earn the Honors Leadership Track notation on their transcript and earn a leadership certificate. The leadership track curriculum is designed to involve students in study, reflection and application of leadership principles on campus and beyond.

Students select electives from courses already offered in colleges across the university. Through electives, students are introduced to a variety of leadership theories and perspectives. The track culminates in an internship or study abroad experience approved by the faculty coordinator.

Individualized, on-the-job experience allows students to shadow leaders as they work. Ideally a student would intern with a leader in his or her area of interest. For example, a student interested in business leadership might intern with a CEO. A student interested in volunteer leadership might intern with a food bank organizer. A student interested in governmental leadership might intern with a congressional representative or senator. A student interested in educational leadership might intern with a university president, and a student interested in religious leadership intern with a clerical leader.

Objectives:
- To recognize the main leadership theories
- To identify different leadership perspectives
- To recognize applications of leadership
- To understand the benefits and challenges of leadership.

Requirements:

Core Course
- HNRS 351 Survey of Leadership

Electives
- Select two of the listed courses. ¹
  - HNRS 315H The Presidency - Honors
  - MGMT 462H Leading & Motivating - Honors
  - HNRS 405H Leadership in Self and Society - Honors
  - or HNRS 407H Leadership Challenge
  - or PSY 413H Leadership in Self and Society - Honors

Experience-Based Learning
- Select one of the following three courses
  - HNRS 398 Travel Seminar
  - HNRS 481 Cooperative Education
  - HNRS 481N Cooperative Education: Internship

Total Credit Hours 12

¹ If a course on this list is not offered during an academic year, the student may request a substitute course by petitioning the Cohen Honors College for an exception.

Law and Public Policy Track (12 credit hours)
Students who complete the requirements for the law and public policy track earn a notation on their transcript. A student may petition the Cohen Honors College to count an alternative course toward the track requirements. Faculty may submit courses to the Cohen Honors College for consideration in the track. Contact honors@wichita.edu for more information.

Requirements:

Core Course
- HNRS 352 Survey of Law & Public Policy

Electives
- Select one course from each of the following sections: ¹
  - Theory
    - HIST 517 Constitutional History of the United States
    - HIST 518 Constitutional History of the United States
    - HIST 599W Law in American Society
    - HIST 599AA Law & Modern Amer Civ Rights
    - PHIL 311H Philosophy of Law - Honors
    - PHIL 313 Political Philosophy
    - POLS 232 Political Theory & Philosophy
  - Applied
    - BLAW 431 Legal Environment of Business
    - CJ 315 Criminal Law
    - CJ 320 Criminal Procedure
To receive either the diploma distinction or the minor in university honors, a student must maintain a cumulative GPA of 3.250 and complete 24 honors credits comprising:

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>HNRS 410</td>
<td>Independent Study</td>
</tr>
<tr>
<td>3</td>
<td>HNRS 398</td>
<td>Travel Seminar</td>
</tr>
<tr>
<td>3</td>
<td>HNRS 481</td>
<td>Cooperative Education</td>
</tr>
<tr>
<td>3</td>
<td>HNRS 481N</td>
<td>Cooperative Education: Internship</td>
</tr>
</tbody>
</table>

Students who complete the requirements for a minor in university honors receive an Emory Lindquist Honors Scholar transcript designation, an honors interdisciplinary track transcript designation, and the diploma designation University Honors. Up to 3 honors credit hours counted toward the student’s major may be counted toward the minor in university honors.

A student may petition for an exception to the minor in university honors curriculum. To request an exception, the student must meet with the Cohen Honors College advisor or dean to create an independent interdisciplinary plan of study. Each student’s plan of study form must be signed by the Cohen Honors College dean and will be submitted to the student’s college advisor as well as to degree evaluation.

**Honors Baccalaureate (63 credit hours)**

The Honors Baccalaureate (HB) degree is conferred by the Dorothy and Bill Cohen Honors College. The degree is designed for students with diverse interests in academic areas across campus. It can prepare students for careers such as university teaching, medicine, law or management. A student who wishes to receive the HB degree works closely with a Cohen Honors College advisor or dean to select two or three academic disciplines from at least two of the six other colleges on campus. The Cohen Honors College advisor coordinates with faculty and advisors from the colleges and major departments to select a program of study that provides the student with a rigorous academic experience. To receive the Honors Baccalaureate, students must:

- Complete at least 18 credit hours in each of two departmental majors/disciplines from at least two colleges (for a total of at least 36 credit hours)
- Complete at least 12 credit hours in each of three departmental majors/disciplines from at least two colleges (for a total of at least 36 credit hours)

**Emory Lindquist Honors Scholars program**

- Honors interdisciplinary track. The student must complete the requirements for one of the interdisciplinary honors tracks
- Honors thesis. The student works with a faculty mentor who supervises a capstone thesis project during the student’s last semester:
  - HNRS 410 Independent Study

**Total Credit Hours**

63

Honors interdisciplinary track

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>HNRS 410</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

Electives: To fulfill the 120 credit hours required for an undergraduate degree at WSU, the HB student completes elective courses selected with the help of the Cohen Honors College advisor or dean.

**Departmental Honors (12 Credit hours)**

Some departments and colleges at WSU offer students the opportunity to receive departmental honors through their major. Departmental honors tracks are currently offered in aerospace engineering, communication sciences and disorders, modern and classical languages and literatures, mathematics, political science and psychology (under development).

To enroll as a candidate for departmental honors, a student must have junior standing and a cumulative grade point average of 3.250 (higher if department requirements so specify).

Departmental honors tracks consist of at least 12 credit hours of upper-division coursework, including a senior thesis, senior project, senior recital, or equivalent capstone experience. Each department or college specifies requirements for satisfactory completion of the honors track,
but a minimum grade point average of 3.500 for work in the honors track is required.

Students who complete all requirements for departmental honors receive a diploma designation. Up to 3 honors credit hours counted toward the student’s major may be counted toward the minor in university honors. For current information about departmental honors requirements, check individual department information in the Undergraduate Catalog.

Courses in the Dorothy and Bill Cohen Honors College
• Honors (HNRS) (p. 368)
W. Frank Barton School of Business

Anand S. Desai, dean
100 Clinton Hall • (316) WSU-3200
http://wichita.edu/business
James Clark, associate dean
Khawaja Asad Saeed, associate dean, graduate studies in business

Mission Statement
The Barton School of Business prepares students for lifelong learning and success in the global marketplace, advances the knowledge and practice of business, and supports economic growth through research, outreach and knowledge transfer. In pursuit of its mission, the school is committed to integrity, excellence and collegiality.

The vision of the Barton School of Business is to be internationally recognized as a model of research, knowledge transfer and applied business learning.

Consistent with the university’s role as the Regents’ urban serving research university, the Barton School aggressively pursues regional and national prominence for its academic and professional programs.

This mission is influenced by the location of the school in the largest economic and cultural center in the state of Kansas. As an integral part of the state’s designated urban university, the faculty of the Barton School of Business are committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional and cultural health of the state and nation.

Within this context, the faculty of the school have adopted the following educational goals of the Barton School which are listed below under the headings of Students, Faculty and Programs. For each grouping, a preamble states the basic values of the Barton School faculty.

Students
Students are the reason for the Barton School’s existence. It is the faculty’s responsibility to create programs and learning environments that ensure the ultimate success of students. We, the faculty, want our students to evaluate positively their Barton School experiences, both while enrolled in courses and afterwards.

Goals
To ensure that students completing Barton School programs possess skills that make them competitive with students from the best business programs in the region. To increase the quality and quantity of students.

Faculty
Faculty are the means by which the university creates a learning environment. The quality of the faculty and the opportunities provided to faculty for continuous improvement are of paramount importance to the success of the Barton School.

Goal
To have faculty who are widely recognized for their commitment to students and scholarship.

Programs
The programs offered by the Barton School link it to its multiple constituencies. The rich diversity of these programs reflects the university’s unique urban mission.

Goal
To increase the recognition of the Barton School through programs that are relevant, competitive and up-to-date.

The school is a member of AACSB International — The Association to Advance Collegiate Schools of Business; its undergraduate and graduate programs are accredited by this organization. The School of Accountancy has separate accreditation from AACSB for the undergraduate and graduate programs in accounting. The Barton School is one of only 182 schools globally to have both accreditations from AACSB.

Three of the centers sponsored by the Barton School are described below.

The Center for Economic Development and Business Research (CEDBR) engages in business and economic research for a wide variety of clients in both private and public sectors. The center collects, analyzes and disseminates information to support activities in government, education, business and economic development organizations.

The CEDBR maintains a comprehensive database of economic indicators including population, personal income, employment, construction and census data. Activities focus on issues related to the economic health of the region. The center publishes the Kansas Economic Report and a supplemental monthly, Kansas Economic Indicators.

The Center for Entrepreneurship, housed in Devlin Hall, encourages entrepreneurial thinking and activities through quality education, research and community involvement to better serve its customers and stakeholders. The center provides a comprehensive curriculum in entrepreneurial studies at both the undergraduate and graduate level.

The Center for Management Development (CMD) offers noncredit management development seminars to Wichita and the surrounding area. The CMD seminars and workshops have been acclaimed for their usefulness to practicing business people and other professionals in a wide variety of organizations.

Admission
Degree-bound students who select a business major are admitted to the Barton School of Business in program status. All students in the Barton School of Business must maintain a 2.250 grade point average. Students must complete 6 credit hours of English composition, 3 credit hours of communication, and 3 credit hours of college algebra with a grade of C- or better in each within their first 48 college hours. Failure to complete this requirement will bar a student from enrolling in upper-division business courses.

Advanced Standing
Students who qualify for advanced standing have:

1. An overall and WSU institutional grade point average of 2.250;
2. Completed the following courses:

   - ACCT 210 Financial Accounting 3
   - ACCT 220 Managerial Accounting 3
   - ECON 201 Principles of Macroeconomics 3
   - ECON 202 Principles of Microeconomics 3
   - ECON 231 Introductory Business Statistics 3
ECON 232  Statistical Software  1
BADM 160  Business Software  3
MATH 144  Business Calculus  3

• or equivalent courses, and:

3. Completed all parts of the Barton School Advanced Standing Exam.

For degree-seeking students in the Barton School of Business, advanced standing is a prerequisite for all upper-division courses in the school.

Transfer students
Students planning to transfer into the Barton School of Business from another institution to obtain the BBA must complete BADM 301, in their first semester at WSU. Transfer students should be aware that 50 percent of their business coursework must be taken at Wichita State University.

Date of Catalog Requirements
Students entering or transferring into the Barton School of Business are placed on the most current catalog based on the semester they begin at the Barton School of Business and must complete the degree requirements of that catalog. Students who have been out of the university for two consecutive years or more must complete the most current catalog requirements.

Second Business Degree
Graduation requirements are determined by the catalog degree requirements in place at the time of the student’s first enrollment term for the second degree. This ensures that the knowledge and skills acquired by students will be current with the state of knowledge in the field of business.

Probation and Dismissal
Probation
Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the university.

1. Students are placed on probation whenever their overall or WSU institutional grade point average falls below 2.250 and they have attempted at least 6 credit hours at Wichita State University.
2. Probation is removed when the overall and WSU institutional grade point averages reach the required 2.250 level.
3. Students continue on probation when they earn a 2.250 or better semester grade point average but their overall or WSU institutional grade point average remains below 2.250.

Students on academic probation are limited to taking 12 credit hours in a 16-week term, 6 credit hours in an eight-week term, and 3 credit hours in a four-week term. Students on academic probation may not enroll in a two-week course. Exceptions to these limitations may be made by filing a written petition with the Barton School of Business exceptions committee. Petitioners must meet with an academic advisor before filing a written petition.

Dismissal
1. Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average at or above the minimum 2.250 requirement, and have an overall or WSU institutional grade point average also below the minimum 2.250 requirement. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.
2. Regardless of GPA, students may be dismissed from the Barton School for violations of the WSU Student Responsibility and Student Code of Conduct policies (see Student Code of Conduct and Student Academic Honesty for excerpts (p. 39)). The entire Student Code of Conduct is located online in section 8.05 of the WSU Policies and Procedures Manual (http://wichita.edu/policiesprocedures).
3. Additionally, students studying abroad or participating in an academic co-op or National Student Exchange will be subject to dismissal for failure to comply with the rules, regulations or professional standards governing the universities/colleges or companies/firms.

Students must apply to the Barton School of Business exceptions committee to be considered for readmittance in probationary status. Cases for readmission must be developed by the student after consultation with an advisor. The petition is then considered by the Barton School of Business exceptions committee and forwarded to the university’s committee for final action.

Dismissal from the Barton School of Business because of poor academic performance constitutes dismissal from the university. Nonetheless, a dismissed student whose grade point average qualifies him or her for admission to another college at WSU may apply to the exceptions committee of that college.

Limitations on Student Load
Initially admitted Barton School of Business students are limited to a maximum of 16 credit hours, to which may be added 1 credit hour of elective. Students admitted to advanced standing in the college are limited to a maximum of 18 credit hours, to which may be added 1 credit hour of elective.

All Barton School of Business students are limited to enrollment in one course during a summer pre-session, one course in any four-week summer session and two courses in any eight-week summer session. If a student is enrolled in both an eight-week and a four-week summer session, the maximum enrollment is two courses. Students on probation may not enroll in two-week courses.

Cooperative Education (Co-op)
The Barton School of Business participates in the university’s cooperative education program. The program is designed to provide relevant paid employment experiences that integrate, complement and enhance the student’s academic program. Students are placed in co-op positions in a variety of business settings, including government agencies, financial institutions, social agencies, accounting firms, entrepreneurial companies and many others. Individual academic projects are formulated in consultation with the student’s faculty advisor.

Business students may enroll in 1 credit hour of co-op per semester with a 2.250 overall and WSU institutional grade point average as early as their sophomore year. Students enrolling in 2 or 3 credit hours of co-op during a single semester must have junior standing and at least an overall and WSU institutional GPA of 2.250. (A higher GPA may be required by their major area.) The number of hours of co-op credit that can be applied to different majors is explicitly stated in each area.

Co-op placements must be approved by the student’s faculty advisor. See the business coordinator in the cooperative education office for more information.
Advising
The Business Advising Center provides academic advising to support students in finding their way through the Barton School of Business. The advisor is the link between the student and the university—with its faculty, policies and procedures. The focus of advising in the Barton School of Business is to help students progress toward their educational objectives and career goals.

Types of Advising Assistance Available
Program Planning
Students are encouraged to outline an entire plan of study early in their academic career by using the suggested degree completion plans for each of the majors and consulting with their advisors.

Schedule Building
Schedule building is the determination of specific courses a student should take in a given semester. Students should refer to the schedule of courses and catalog in consultation with a business advisor to determine a specific course of study. Selection of specific sections and of times for courses is the student’s responsibility.

Transcript Evaluation
Two aspects of transcript evaluation are:
1. The evaluation of coursework to be transferred to Wichita State University for a degree, and
2. The continuing evaluation of completion of graduation requirements.

Evaluation of transfer work is accomplished by a business advisor, working in conjunction with the Office of the Registrar and the various departments within the school.

Counseling
Students seeking career guidance, personal counseling or other types of assistance will be directed to the appropriate university office by the staff of the advising center.

Academic Honesty
The faculty of the Barton School of Business strongly endorse the statement on academic honesty appearing in the Student Code of Conduct. (See Student Code of Conduct and Student Academic Honesty for excerpts (p. 39).)

Students accused of academic misconduct may appeal through the W. Frank Barton School of Business Dean’s Office. The detailed appeals process may be found on the Barton School of Business website (http://wichita.edu/business).

Undergraduate Degrees

Bachelor of Business Administration
The undergraduate curriculum of the Barton School of Business leads to the Bachelor of Business Administration (BBA). Areas of emphasis or majors are offered in several fields within the School of Accountancy and the following departments: economics; finance, real estate and decision sciences; management and marketing.

Students may obtain a second bachelor’s degree in the Barton School of Business if they:
1. Complete a minimum of 30 hours in residence in the Barton School of Business (in addition to the work required for the first bachelor’s degree); and
2. Satisfy the school’s general requirements and emphasis/major requirements in effect at the time they embark on the program leading to a second bachelor’s degree.

Graduate Degrees
Master’s degree programs in the school lead to the Executive Master of Business Administration (EMBA), Master of Business Administration (MBA), Master of Accountancy (MACC), and the Master of Arts (MA) in economics.

For additional information on graduate programs, see the Wichita State University Graduate Catalog.

Certificates
A graduate certificate in enterprise systems and supply chain management is offered jointly with the College of Engineering. The Barton School also offers a graduate certificate in entrepreneurship and innovation.

Business Emphases in Other University Programs
Students in Fairmount College of Liberal Arts and Sciences may major in economics. Students from all colleges may minor in accounting, economics, entrepreneurship, finance, general business, information technology, and management information systems, international business, management, marketing, operations management, and personal selling. A minor in general business is not available to students pursuing a degree in the Barton School of Business.

A field major in international studies is offered in cooperation with Fairmount College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world or in international business, economics or public affairs. The major prepares students for careers in international organizations, within the U.S. government and in business firms. Additionally, a cooperative chemistry/business program is offered in the department of chemistry.

Inter-College Double Major
An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 38).

Majors in the W. Frank Barton School of Business
- Bachelor of Business Administration (BBA) (p. 78)
  - BBA - Accounting (p. 79)
  - BBA - Economics (p. 79)
  - BBA - Entrepreneurship (p. 80)
  - BBA - Finance (p. 80)
  - BBA - General Business (p. 80)
  - BBA - Human Resource Management (p. 81)
  - BBA - International Business (p. 81)
  - BBA - Management (p. 82)
  - BBA - Information Technology and Management Information Systems (p. 82)
  - BBA - Marketing (p. 83)
Real Estate Emphasis
An emphasis in real estate is available to students majoring in economics, entrepreneurship, finance or marketing. See those majors for details.

Minors in the W. Frank Barton School of Business:
- Accounting (p. 83)
- Economics (p. 83)
- Entrepreneurship (p. 83)
- Finance (p. 84)
- General Business (p. 84)
- Human Resource Management (p. 84)
- International Business (p. 85)
- Management (p. 85)
- Operations Management (p. 85)
- Information Technology and Management Information Systems (p. 84)
- Marketing (p. 85)
- Personal Selling (p. 86)

Courses in the W. Frank Barton School of Business
- Accounting (ACCT) (p. 263)
- Business Administration - General (BADM) (p. 291)
- Business Law (BLAW) (p. 291)
- Decision Sciences (DS) (p. 329)
- Economics (ECON) (p. 332)
- Entrepreneurship (ENTR) (p. 345)
- Finance (FIN) (p. 348)
- Human Resource Management (HRM) (p. 377)
- International Business (IB) (p. 381)
- Management (MGMT) (p. 385)
- Management Information Systems (MIS) (p. 386)
- Marketing (MKT) (p. 387)
- Real Estate (RE) (p. 433)
- WSU General - Business (WSUB) (p. 455)

Course Descriptions
Business courses numbered 100 to 299 are designed primarily for freshmen and sophomores, but students from other classes may be admitted for lower-division credit.

Business courses numbered 300 to 499 are available only to juniors and seniors. Graduate students may not take these courses for graduate credit.

Business courses numbered 500 to 699 are available to juniors and seniors, but graduate students may also receive graduate credit for these courses.

Business courses numbered 700 to 799 are structured primarily for graduate students, but undergraduate, upper-division students may be admitted if they meet course prerequisites.

Courses numbered 800 to 899 are designed for graduate students only, and students may not be admitted to these courses unless they have been admitted to the Graduate School. (See the Academics section of the catalog for special conditions under which seniors may be admitted to graduate courses.)

Cross-listed Courses
Selected courses in the Barton School of Business are cross-listed because course content is suitable to more than one discipline. Every department or program which offers cross-listed courses provides a separate catalog description. Students may enroll in cross-listed courses to meet major and minor requirements, but credit may be earned under only one of the course listings.

Bachelor of Business Administration
Candidates for the Bachelor of Business Administration degree must satisfy the following Barton School of Business requirements:

NOTE: If a minimum grade is required, it is listed after the course, example: (C-)

1. Complete the Barton School of Business orientation requirement:
   a. For incoming freshmen:
      BADM 101 & BADM 102
      Becoming a Business Student I
      and Becoming a Business Student II
   b. For transfer students:
      BADM 301
      Transferring to the Barton School of Business

2. Complete WSU foundation, general education, and any additional university graduation requirements (p. 55). Business majors need either:
   Select one of the following:
   MATH 111 College Algebra (C-) 1
   MATH 112 Precalculus Mathematics (C-) 1

3. Complete advanced standing requirements and exams:
   Select one of the following:
   MATH 144 Business Calculus 1
   MATH 242 Calculus I 1
   ECON 231 Introductory Business Statistics
   ECON 232 Statistical Software Applications for Business
   BADM 160 Business Software (C-)
   ACCT 210 Financial Accounting
   ACCT 220 Managerial Accounting 2
   ECON 201 Principles of Macroeconomics 1
   ECON 202 Principles of Microeconomics 1

4. Complete the college requirements for a major in the Barton School of Business.
   Select one of the following:
   PSY 111 General Psychology 1
   SOC 111 Introduction to Sociology 1
   PHIL 105 Critical Reasoning 1
   PHIL 306 Business Ethics 1

5. Complete business core requirements for the Bachelor of Business Administration degree:
   MKT 300 Marketing 2
### BBA - Accounting

**School of Accountancy**

Candidates for the Bachelor of Business Administration (BBA) degree in accounting must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

#### Accounting Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 310</td>
<td>Financial Accounting and Reporting: Assets</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 320</td>
<td>Accounting for Decision Making and Control</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 410</td>
<td>Financial Accounting and Reporting: Equities</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 430</td>
<td>Introduction to Federal Income Tax</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 560</td>
<td>Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 610</td>
<td>Financial Accounting and Reporting: Special Entities and Complex Issues</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 620</td>
<td>Accounting for Strategic Support and Performance Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 630</td>
<td>Taxation of Business Entities</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 640</td>
<td>Principles of Auditing</td>
<td>3</td>
</tr>
</tbody>
</table>

#### College Requirement for ACCT Majors

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 210</td>
<td>Composition: Business, Professional and Technical Writing</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 27

Credit hours in ACCT 481 cannot be included in the accounting major. All accounting courses must be completed with a grade of C (2.000) or better. A minimum of 90 credit hours must be earned outside accounting.

Accounting Majors may NOT enroll in ACCT 210 Online or ACCT 220 Online at Wichita State University.

External Link - How to contact the Kansas Board of Accountancy for questions relative to the CPA Exam requirements in the State of Kansas (http://ksboa.org)

### BBA - Economics

**Department of Economics**

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

#### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 301</td>
<td>Intermediate Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 302</td>
<td>Intermediate Microeconomics</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Upper-Division Electives

Select 15 credit hours with at least 9 credit hours in economics, another 6 with advisor consent

Total Credit Hours: 21

Credit hours in co-op may not be counted toward the economics major.

**Note:** ECON 201 and ECON 202 cannot be used to meet general education requirements for ECON majors.

#### Economics Emphasis in Real Estate

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 301</td>
<td>Intermediate Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 302</td>
<td>Intermediate Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>RE 310</td>
<td>Principles of Real Estate</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

- ECON 340
- or ECON 709
- or RE 709

#### Electives

Select 12 credit hours of upper-division (300 or above) economics or real estate courses

Total Credit Hours: 24
No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

Of the 24 hours required for the economics emphasis in real estate major, 12 credit hours must come from ECON courses and 12 credit hours must come from RE courses. Urban Economics (RE 709/ECON 709) may be counted as either an ECON or RE class.

**BBA - Entrepreneurship**

*Department of Management*

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 440</td>
<td>New Venture Feasibility Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 455</td>
<td>Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 620</td>
<td>Growing and Managing an Entrepreneurial Firm</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 668</td>
<td>New Venture Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select 9 credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 481</td>
<td>Cooperative Education</td>
</tr>
<tr>
<td>ENTR 491</td>
<td>Independent Study/Project</td>
</tr>
<tr>
<td>ENTR 605</td>
<td>Technology Entrepreneurship</td>
</tr>
<tr>
<td>ENTR 608</td>
<td>Selling and Sales Force Management</td>
</tr>
<tr>
<td>ENTR 690</td>
<td>Special Topics in Entrepreneurship</td>
</tr>
<tr>
<td>HRM 466</td>
<td>Fundamentals of Human Resource Management</td>
</tr>
<tr>
<td>MKT 404</td>
<td>Retail Management</td>
</tr>
<tr>
<td>MKT 601</td>
<td>International Marketing</td>
</tr>
<tr>
<td>RE 310</td>
<td>Principles of Real Estate</td>
</tr>
</tbody>
</table>

Total Credit Hours: 21

**Entrepreneurship Emphasis in Real Estate**

*Required Courses*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 440</td>
<td>New Venture Feasibility Analysis</td>
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<td>ENTR 455</td>
<td>Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 620</td>
<td>Growing and Managing an Entrepreneurial Firm</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 668</td>
<td>New Venture Development</td>
<td>3</td>
</tr>
<tr>
<td>RE 310</td>
<td>Principles of Real Estate</td>
<td>3</td>
</tr>
<tr>
<td>RE 619</td>
<td>Urban Land Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select 6 credit hours of upper-division (300 or above) real estate courses

Total Credit Hours: 24

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 310</td>
<td>Financial Accounting and Reporting: Assets</td>
<td>3</td>
</tr>
<tr>
<td>ECON 340</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>FIN 440</td>
<td>Financial Management II</td>
<td>3</td>
</tr>
<tr>
<td>FIN 620</td>
<td>Investments</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select 15 credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 450</td>
<td>Applied Financial Analysis</td>
</tr>
<tr>
<td>FIN 610</td>
<td>Insurance &amp; Risk Management</td>
</tr>
<tr>
<td>FIN 611</td>
<td>Real Estate Finance</td>
</tr>
<tr>
<td>FIN 618</td>
<td>Real Estate Investment Analysis</td>
</tr>
<tr>
<td>FIN 622</td>
<td>Future and Options Markets</td>
</tr>
<tr>
<td>FIN 625</td>
<td>International Financial Management</td>
</tr>
<tr>
<td>FIN 631</td>
<td>Fixed Income Securities and Markets</td>
</tr>
<tr>
<td>FIN 632</td>
<td>Bank and Financial Institution Management</td>
</tr>
<tr>
<td>FIN 635</td>
<td>Commodity &amp; Energy Trading</td>
</tr>
<tr>
<td>FIN 660</td>
<td>Cases in Finance</td>
</tr>
<tr>
<td>FIN 675</td>
<td>Spreadsheet Modeling for Decision Making</td>
</tr>
</tbody>
</table>

Total Credit Hours: 27

**Finance Emphasis in Real Estate**

*Required Courses*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 440</td>
<td>Financial Management II</td>
<td>3</td>
</tr>
<tr>
<td>FIN 450</td>
<td>Applied Financial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>RE 310</td>
<td>Principles of Real Estate</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE 611</td>
<td>Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>or RE 618</td>
<td>Real Estate Investment Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select 9 credit hours of upper-division (300 or above) real estate courses

Select 3 credit hours of upper-division (300 or above) finance courses

Total Credit Hours: 24

No more than 3 credit hours of FIN 481 or RE 481 may be used to satisfy the elective component of this degree.

Majors in finance or finance emphasis in real estate must complete FIN 340 with a C+ or better to continue in the major.

**BBA - General Business**

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 310</td>
<td>Financial Accounting and Reporting: Assets</td>
<td>3</td>
</tr>
<tr>
<td>ECON 340</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>FIN 440</td>
<td>Financial Management II</td>
<td>3</td>
</tr>
<tr>
<td>FIN 620</td>
<td>Investments</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select 15 credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 450</td>
<td>Applied Financial Analysis</td>
</tr>
<tr>
<td>FIN 610</td>
<td>Insurance &amp; Risk Management</td>
</tr>
<tr>
<td>FIN 611</td>
<td>Real Estate Finance</td>
</tr>
<tr>
<td>FIN 618</td>
<td>Real Estate Investment Analysis</td>
</tr>
<tr>
<td>FIN 622</td>
<td>Future and Options Markets</td>
</tr>
<tr>
<td>FIN 625</td>
<td>International Financial Management</td>
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<tr>
<td>FIN 631</td>
<td>Fixed Income Securities and Markets</td>
</tr>
<tr>
<td>FIN 632</td>
<td>Bank and Financial Institution Management</td>
</tr>
<tr>
<td>FIN 635</td>
<td>Commodity &amp; Energy Trading</td>
</tr>
<tr>
<td>FIN 660</td>
<td>Cases in Finance</td>
</tr>
<tr>
<td>FIN 675</td>
<td>Spreadsheet Modeling for Decision Making</td>
</tr>
</tbody>
</table>

Total Credit Hours: 27

1 No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

**BBA - Finance**

*Department of Finance, Real Estate & Decision Sciences*
### MKT 405  Consumer Behavior  3

- Designing Effective Organizations  3

- Leading and Motivating

- Fundamentals of Human Resource Management  3

- Labor Economics

### IB Elective

Select one of the following:  

- IB 450  Negotiating Across Cultures  3

- MGMT 460  Designing Effective Organizations  3

- MGMT 462  Leading and Motivating

- HRM 466  Fundamentals of Human Resource Management  3

- ECON 660  Labor Economics

### Directed Electives

Select 9 credit hours of directed electives: 9

- Upper division business electives from the following business disciplines (must be spread over at least two disciplines): decision sciences, economics, entrepreneurship, finance, management information systems, or real estate.

### Total Credit Hours 21

Credit hours in co-op may not be counted toward the general business major.

**Note:** Other courses may be used as directed electives with a business advisor’s consent.

### BBA - Human Resource Management

**Department of Management**

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

### Required Courses

- HRM 466  Fundamentals of Human Resource Management  3

- HRM 665  Employment Law  3

- HRM 666  Human Resource Staffing  3

- HRM 668  Compensation  3

- HRM 669  Training and Development  3

### Electives

Select 6 credit hours from the following: 6

- Leading and Motivating

- Designing Effective Organizations

- Building Effective Work Teams

- Communicating Effectively in Organizations

- Managing in Diverse Organizations

### Other courses may be used as electives with advisor consent, including:

- HRM 481  Cooperative Education

- HRM 491  Independent Study/Project

- HRM 690  Seminar in Selected Topics

### Total Credit Hours 21

A maximum of 3 credit hours of co-op may be used in the major.

### BBA - International Business

**Department of Management**

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

Students majoring in international business must make four choices early in their program:

1. **Regional emphasis.** Latin America, Europe or Asia Pacific. This choice dictates language and cultural/area studies choices.

2. **Language.** Depending on regional emphasis, there may be two or more language options. A minimum of 10 credit hours of an appropriate foreign language is required. Students who already have language skills beyond the elementary level should consult with an advisor.

3. **Minor.** International business majors must choose a functional area of business as a minor: accounting, economics, entrepreneurship, finance, human resource management, management, management information systems, marketing, operations management or personal selling.

4. **International Experience.** International business majors are required to participate in an academic international experience. The preferred option is to study abroad at least one semester at a university in the student’s regional emphasis. An alternative is a short-term academic international study tour to the student’s regional emphasis.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB 561</td>
<td>International Economics and Business</td>
<td>3</td>
</tr>
<tr>
<td>IB 600</td>
<td>International Management</td>
<td>3</td>
</tr>
<tr>
<td>IB 601</td>
<td>International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>IB 625</td>
<td>International Financial Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### Directed Electives

Select 9 credit hours from the following: 9

- IB 400  Principles of Global Supply Chain Management and Logistics

- IB 450  Negotiating Across Cultures

- IB 481  Cooperative Education

- IB 491  Independent Study/Project

- IB 602  Legal Environment of International Business

- IB 690  Special Topics in International Business

- DS 665  Supply Chain Management

- POLS 220  Introduction to International Relations

- POLS 226  Comparative Politics
BBA - Management

Candidates for the Bachelor of Business Administration (BBA) degree must satisfy the additional requirements of the following curricular major.

All majors must contain at least 12 unduplicated credit hours. All minors must contain at least 3 unduplicated credit hours.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 466</td>
<td>Fundamentals of Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 460</td>
<td>Designing Effective Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 462</td>
<td>Leading and Motivating</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 463</td>
<td>Building Effective Work Teams</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives

Select three of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 430</td>
<td>Business, Government and Society</td>
<td></td>
</tr>
<tr>
<td>MGMT 450</td>
<td>Negotiating Across Cultures</td>
<td></td>
</tr>
<tr>
<td>MGMT 464</td>
<td>Communicating Effectively in Organizations</td>
<td></td>
</tr>
<tr>
<td>MGMT 662</td>
<td>Managing in Diverse Organizations</td>
<td></td>
</tr>
<tr>
<td>MGMT 680</td>
<td>Making Effective Decisions</td>
<td></td>
</tr>
<tr>
<td>ENTR 440</td>
<td>New Venture Feasibility Analysis</td>
<td></td>
</tr>
<tr>
<td>ENTR 620</td>
<td>Growing and Managing an Entrepreneurial Firm</td>
<td></td>
</tr>
</tbody>
</table>

### Total Credit Hours

21

1. Up to 3 credit hours may be substituted from upper-level courses in business administration with advisor’s consent, including MGMT 481, MGMT 491 and MGMT 690.

Note: Information Technology and Management Information Systems (ITMIS) majors are not required to complete MIS 395 in the business core. Up to two non-ITMIS courses can be used toward the ITMIS major. Co-op credits may not be counted toward the major.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 310</td>
<td>Fundamentals of Business Application</td>
<td>3</td>
</tr>
<tr>
<td>MIS 325</td>
<td>Data Communications and Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>MIS 600</td>
<td>Database Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 605</td>
<td>Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>MIS 610 or MIS 615</td>
<td>Dynamic Web Programming Advanced Business Application Development</td>
<td>3</td>
</tr>
<tr>
<td>MIS 696</td>
<td>Management of the IS Function</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives

Select 6 credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 610</td>
<td>Dynamic Web Programming</td>
<td></td>
</tr>
<tr>
<td>MIS 611</td>
<td>Topics in Computer Networking</td>
<td></td>
</tr>
<tr>
<td>MIS 615</td>
<td>Advanced Business Application Development</td>
<td></td>
</tr>
<tr>
<td>MIS 690</td>
<td>Seminar in Selected Topics</td>
<td></td>
</tr>
<tr>
<td>MIS 750</td>
<td>Business Intelligence and Analytics</td>
<td></td>
</tr>
<tr>
<td>DS 660</td>
<td>Enterprise Systems</td>
<td></td>
</tr>
<tr>
<td>DS 665</td>
<td>Supply Chain Management</td>
<td></td>
</tr>
<tr>
<td>DS 675</td>
<td>Spreadsheet Modeling for Decision Making</td>
<td></td>
</tr>
</tbody>
</table>

### Total Credit Hours

24

Note for international students: International students who are already studying abroad at WSU or who have transferred to WSU from another country may be deemed to have met the international experience requirement. International students who choose their home region need to work with an advisor to plan their courses to fulfill the language and cultural/area studies requirements. It is recommended that non-English speakers choose English language courses and courses on U.S. culture, history and/or political systems to fulfill these requirements. International students who choose a regional emphasis outside their home region are required to fulfill the same language and cultural/area studies requirements as domestic students.
BBA - Marketing
Department of Marketing

Required Courses
- MKT 403 Marketing Research (3)
- MKT 405 Consumer Behavior (3)
- MKT 609 Marketing Programs (3)

Directed Electives
Select 6 credit hours from the following:
- MKT 404 Retail Management
- MKT 407 Marketing for Service and Nonprofit Organizations
- MKT 601 International Marketing
- MKT 607 Promotion Management
- MKT 608 Selling and Sales Force Management

Approved Electives
Electives — 6 credit hours from the following:
- COMM 311 Persuasion
- COMM 312 Nonverbal Communication
- COMM 325 Speaking in Business and the Professions
- ENTR 620 Growing and Managing an Entrepreneurial Firm
- ENTR 668 New Venture Development
- ENTR 706 Seminar in New Product and Technology Development
- HRM 466 Fundamentals of Human Resource Management
- MGMT 462 Leading and Motivating
- MGMT 463 Building Effective Work Teams
- MGMT 680 Making Effective Decisions
- MKT 481 Cooperative Education

Total Credit Hours: 21

Marketing Emphasis in Real Estate

Required Courses
- MKT 403 Marketing Research (3)
- MKT 405 Consumer Behavior (3)
- MKT 609 Marketing Programs (3)
- RE 310 Principles of Real Estate (3)
Select one of the following:
- MKT 607 Promotion Management (3)
- or MKT 608 Selling and Sales Force Management

Electives
Select 9 credit hours of upper-division (300 or above) real estate courses

Total Credit Hours: 24

Credit hours in co-op may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better. Accounting coursework must be completed with a grade of C (2.000) or better.

Economics Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor in economics consists of a minimum of:

- ECON 201 Principles of Macroeconomics (3)
- ECON 202 Principles of Microeconomics (3)

Total Credit Hours: 15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Entrepreneurship Minor

All minors must contain at least 3 unduplicated credit hours.

In addition to the major, there are two options for minors in entrepreneurship: a minor that requires advanced standing in the Barton School, and a minor for nonbusiness majors that does not require advanced standing. Students in the Barton School are not eligible for the nonbusiness minor.

Entrepreneurship Minor - Business Students
This minor consists of 12 upper-division credit hours of entrepreneurship courses. Students in this minor must have advanced standing in the Barton School of Business. Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Entrepreneurship Minor - Nonbusiness Students
All WSU students completing a nonbusiness minor must complete the following:

- Overall GPA for minor must be 2.250 or better;
- Students must be a junior in good standing in their major (college); and
- Students must have completed 12 credit hours at WSU.

Required Courses
- ENTR 440 New Venture Feasibility Analysis (3)
- ENTR 668 New Venture Development (3)

Electives
Select 9 credit hours from the following:
- ENTR 455 Entrepreneurial Finance (3)
- ENTR 491 Independent Study/Project (3)

Accounting Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor in accounting consists of:

- BADM 160 Business Software (3)
- ACCT 210 Financial Accounting (3)
- ACCT 220 Managerial Accounting (3)
- 9 credit hours of upper-division accounting

Total Credit Hours: 18

No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

Majors in marketing or marketing emphasis in real estate must complete MKT 300 with a C+ or better to continue in the major.

No more than 3 credit hours of RE 481 may be used to satisfy the elective component of this degree.

Majors in marketing or marketing emphasis in real estate must complete MKT 300 with a C+ or better to continue in the major.

Accounting Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor in accounting consists of:

- BADM 160 Business Software (3)
- ACCT 210 Financial Accounting (3)
- ACCT 220 Managerial Accounting (3)
- 9 credit hours of upper-division accounting

Total Credit Hours: 18

Credit hours in co-op may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better. Accounting coursework must be completed with a grade of C (2.000) or better.

Economics Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor in economics consists of a minimum of:

- ECON 201 Principles of Macroeconomics (3)
- ECON 202 Principles of Microeconomics (3)

Total Credit Hours: 15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Entrepreneurship Minor

All minors must contain at least 3 unduplicated credit hours.

In addition to the major, there are two options for minors in entrepreneurship: a minor that requires advanced standing in the Barton School, and a minor for nonbusiness majors that does not require advanced standing. Students in the Barton School are not eligible for the nonbusiness minor.

Entrepreneurship Minor - Business Students
This minor consists of 12 upper-division credit hours of entrepreneurship courses. Students in this minor must have advanced standing in the Barton School of Business. Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Entrepreneurship Minor - Nonbusiness Students
All WSU students completing a nonbusiness minor must complete the following:

- Overall GPA for minor must be 2.250 or better;
- Students must be a junior in good standing in their major (college); and
- Students must have completed 12 credit hours at WSU.

Required Courses
- ENTR 440 New Venture Feasibility Analysis (3)
- ENTR 668 New Venture Development (3)

Electives
Select 9 credit hours from the following:
- ENTR 455 Entrepreneurial Finance (3)
- ENTR 491 Independent Study/Project (3)
Finance Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in finance is available to any student whose major field or area of emphasis is outside of finance. A minor in finance consists of:

ACCT 310  Financial Accounting and Reporting: Assets  3
FIN 340  Financial Management I  3
FIN 440  Financial Management II  3
6 additional credit hours of upper-division finance courses  6

Total Credit Hours  15

Minors in finance must complete FIN 340 with a C+ or better to continue in the minor. Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Human Resource Management Minor - Nonbusiness Students

Only WSU students who are not business students are eligible for this minor. Other requirements include the following:

- Overall GPA for minor must be 2.250 or better;
- Students must be a junior in good standing in their major (college);
- Students must have completed 12 credit hours at WSU.

This minor consists of 15 upper-division hours of courses.

HRM 466  Fundamentals of Human Resource Management  3
Select at least two of the following:  6-12
HRM 665  Employment Law
HRM 666  Human Resource Staffing
HRM 668  Compensation
HRM 669  Training and Development

Other courses that may be used to complete the minor include:

MGMT 450  Negotiating Across Cultures
MGMT 463  Building Effective Work Teams
MGMT 662  Managing in Diverse Organizations
ECON 660  Labor Economics
ECON 663  Economic Insecurity

Total Credit Hours  9-15

Information Technology and Management Information Systems Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in information technology and management information systems (ITMIS) is available to any student whose major field or area of emphasis is outside of information technology and management information systems. A minor in ITMIS consists of:

MIS 310  Fundamentals of Business Application Development  3
MIS 325  Data Communications and Computer Networks  3
MIS 395  Management Information Systems  3
MIS 600  Database Management Systems  3

Select one of the following:  3
MIS 605  Systems Analysis and Design  
MIS 610  Dynamic Web Programming  
MIS 611  Topics in Computer Networking  
MIS 615  Advanced Business Application Development  
MIS 690  Seminar in Selected Topics  
MIS 750  Business Intelligence and Analytics  
DS 660  Enterprise Systems  
DS 665  Supply Chain Management  
DS 675  Spreadsheet Modeling for Decision Making  
DS 755  Project Management  

Total Credit Hours 15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

**International Business Minor**

All minors must contain at least 3 unduplicated credit hours.

A minor in international business is available to any student whose major field or area of emphasis is outside of international business. Prerequisites:

- ECON 201  Principles of Macroeconomics  3  
- ECON 202  Principles of Microeconomics  3  
- ACCT 210  Financial Accounting  3  
- IB 333  International Business  3

A minor consists of:

- IB 561  International Economics and Business  3  
- IB 600  International Management  3  
- IB 601  International Marketing  3  
- IB 625  International Financial Management  3  
- 3 credit hours of another upper-division international business elective approved by a business advisor, or study abroad, or an international study tour  3

Total Credit Hours 15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a GPA of 2.250 or better in all upper-division IB courses.

**Management Minor**

All minors must contain at least 3 unduplicated credit hours.

A minor in management is available to any student whose major field or area of emphasis is outside of management. A minor in management consists of:

- MGMT 360  Principles of Management  3  
- 12 credit hours of upper-division management courses selected from the following  12  
  - MGMT 430  Business, Government and Society  
  - MGMT 450  Negotiating Across Cultures  
  - MGMT 460  Designing Effective Organizations

Total Credit Hours 15

Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

**Marketing Minor**

All minors must contain at least 3 unduplicated credit hours.

A minor in marketing is available to any student whose major field or area of emphasis is outside of marketing. A minor in marketing consists of:

- MKT 300  Marketing  3  
- MKT 405  Consumer Behavior  3  
- MKT 609  Marketing Programs  3  
- Select 6 credit hours of upper-division marketing courses from the following  6  
  - MKT 403  Marketing Research  
  - MKT 404  Retail Management  
  - MKT 407  Marketing for Service and Nonprofit Organizations  
  - MKT 601  International Marketing  
  - MKT 607  Promotion Management  
  - MKT 608  Selling and Sales Force Management

Total Credit Hours 15

Minors in marketing must complete MKT 300 with a C+ or better to continue in the minor. Co-op credits may not be counted toward the minor. At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

**Operations Management Minor**

All minors must contain at least 3 unduplicated credit hours.

A minor in operations management is available to any student whose major field or area of emphasis is outside of operations management. A minor in operations management consists of:

**Required Courses**

- DS 350  Introduction to Production and Operations Management  3  
- DS 675  Spreadsheet Modeling for Decision Making  3  
- DS 755  Project Management  3

**Upper-division Operations Management Courses**

Select 6 credit hours from the following  6  
- DS 400  Principles of Global Supply Chain Management and Logistics
Personal Selling Minor

All minors must contain at least 3 unduplicated credit hours.

A minor in personal selling is available to any student whose major field or area of emphasis is outside of personal selling. A minor in personal selling consists of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 300</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 405</td>
<td>Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKT 608</td>
<td>Selling and Sales Force Management</td>
<td>3</td>
</tr>
<tr>
<td>COMM 302</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one upper-division communication course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 311</td>
<td>Persuasion</td>
</tr>
<tr>
<td>COMM 312</td>
<td>Nonverbal Communication</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
</tr>
</tbody>
</table>

Total Credit Hours 15

At least 9 credit hours must be taken at WSU with a minor GPA of 2.250 or better.

Courses in the W. Frank Barton School of Business

- Accounting (ACCT) (p. 263)
- Business Administration - General (BADM) (p. 291)
- Business Law (BLAW) (p. 291)
- Decision Sciences (DS) (p. 329)
- Economics (ECON) (p. 332)
- Entrepreneurship (ENTR) (p. 345)
- Finance (FIN) (p. 348)
- Human Resource Management (HRM) (p. 377)
- International Business (IB) (p. 381)
- Management (MGMT) (p. 385)
- Management Information Systems (MIS) (p. 386)
- Marketing (MKT) (p. 387)
- Real Estate (RE) (p. 433)
- WSU General - Business (WSUB) (p. 455)

Cross-listed Courses

Selected courses in the Barton School of Business are cross-listed because course content is suitable to more than one discipline. Every department or program which offers cross-listed courses provides a separate catalog description. Students may enroll in cross-listed courses.
**College of Education**

Shirley Lefever, dean  
104 Corbin Ed. Center • (316) WSU-3300  
http://wichita.edu/education  
Clay Stoldt, assistant dean  
Ashlie Jack, assistant dean/accreditation officer

The WSU College of Education comprises four departments whose synergy provides a powerful understanding of life span development and academic innovation in living and learning. It prepares teachers, school professionals, school counselors, educational psychologists, exercise scientists, athletic trainers and sport professionals for 21st century careers. College faculty also contribute to the improvement of the profession at local, state, national and international levels through teaching, research and professional service.

The College of Education (COEd) houses programs accredited by:

- The Kansas State Department of Education (KSDE);
- The National Council for the Accreditation of Teacher Education;
- The National Association of School Psychologists;
- The Commission on Accreditation of Athletic Training Education;
- The Commission on Sport Management Accreditation.

The college offers BA degree programs in teacher education, exercise science, sport management and athletic training.

Teacher education programs prepare individuals who become eligible for Kansas teacher licensure in early childhood unified, elementary, middle level or secondary education, to teach in public or private school settings.

The exercise science degree program prepares students for careers involving exercise physiology, health promotion, clinical exercise-related fields or graduate education. The Athletic Training Education Program (ATEP) prepares students for entry-level positions in the broad allied health field of athletic training.

The sport management degree program prepares students for careers in a variety of sport settings, including school and college athletics, major and minor league professional sports, fitness centers, recreation services, sporting goods, and sport service providers.

**Transfer Credit**

Courses completed at a community college or four year institution of higher education other than WSU may be accepted as the College of Education program’s course equivalency at the discretion of the program faculty and upon a review by the program faculty of related issues, e.g., the transfer course content, grade earned, year course completed, etc. The COEd has formal agreements with Butler County Community College and Cowley College for 2+2 programs in which students complete two years at community college and the remaining two years at WSU.

**Undergraduate Admission**

Students who have declared a major in one of the programs in the College of Education and have the required 2.000 GPA (2.500 for athletic training and teacher education programs), will be admitted directly into the college upon admission to WSU. Students are required to maintain at least a 2.000 overall GPA (2.500 for athletic training and teacher education programs) to remain in good standing.

**Advising**

The College of Education faculty and staff advisors are available to assist and guide students regarding course requirements in accordance with teacher education licensure program(s) and/or degree requirements.

The COEd’s Education Support Services (ESS) (http://wichita.edu/education/ess) office staff is available to advise undergraduate students, complete transcript analysis for undergraduate and/or teacher education program coursework, and maintain undergraduate student records.

COEd faculty advise undergraduate juniors and seniors. Graduate faculty advise students pursuing a graduate degree, graduate coursework and/or degree options. Students should call ESS for information regarding student advising.

**Enrollment Limits**

Students enrolled in the College of Education may not enroll in more than 21 credit hours per semester during the academic year without permission by the dean. Summer session enrollments are limited to a maximum of 6 credit hours for each four-week session or 12 credit hours during the eight-week summer session. Students who have completed at least 24 credit hours at WSU with a WSU grade point average of 3.000 or better may petition their department chairperson for permission to enroll in excess hours.

**Probation and Dismissal**

Students who are admitted into the College of Education are placed on probation at the end of any semester when either their cumulative or WSU GPA has fallen below the required 2.000 (2.500 for athletic training and teacher education programs). As long as a student’s semester GPA is at least a 2.000, the student is eligible to take classes.

Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average of 2.000 (2.500 for athletic training and teacher education programs). Students who have been dismissed for academic reasons should seek the counsel of their advisor to explore their options. A dismissed student whose GPA qualifies the student for admission to another college at WSU may apply to the exceptions committee of that college.

**Transfer Students**

Transfer students admitted on probation must complete at least 12 hours of credit work and achieve a 2.000 grade point average (2.500 for athletic training and teacher education programs) on work at Wichita State before probation is removed.

Students on probation normally are limited to a maximum load of 14 credit hours per semester, although exceptions may be made. The limitation of 14 credit hours also applies to students who have declared a transition semester.

All students on probation who have accumulated 12 attempted credit hours after being placed on probation and who do not have a 2.000 grade point average (2.500 for athletic training and teacher education programs) for the most recent semester or summer session will be academically dismissed. Students who have been dismissed may seek readmission to the College of Education by appealing, in writing, for an exception to the regulations.

**WSU General Education Requirements**

The College of Education conforms to the policy set forth by the division of academic affairs at Wichita State University. Many College of Education programs incorporate specific general education courses,
which are required. Students should refer to the General Education Program (p. 55) requirements as well as their specific program check sheet.

Cooperative Education Internships

The College of Education participates in the university’s cooperative education internship program. This program is designed to provide off-campus, paid work experiences that integrate, complement and enhance the student’s regular academic program. Students are placed in a variety of educational experiences which range from public schools to university athletic departments. Participation in the program requires completion of 12 credit hours with the required GPA and enrollment for credit in specific cooperative education courses designated by the appropriate academic department in the college. To enroll in the program or for more information, students should contact the cooperative education coordinator.

Admission to Teacher Education

Students are advised on the basis of the program requirements (check sheet) in effect when they began their college or university work.

Admission to the College of Education does not mean that a student is accepted into one of the licensure programs in teacher education. Students must satisfy the following requirements to be admitted as a candidate for a Kansas teacher’s license:

1. Foundation courses:
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Description</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>and College English II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra (MATH 242 for math majors)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

   Note: Above courses must be completed within a student’s first 48 hours of college credit.

2. PSY 111;
3. STAT 370;
4. Thirty-five (35) hours of general education courses with a 2.750 GPA or above; (may include up to 10 credit hours of required coursework in the subject major);
5. Standardized test requirement

   Note: A prospective teacher education candidate must meet only one of the following four standardized test requirements. The basic skills test used to fulfill his or her admission requirements must have been taken within 10 years from the date of his or her application to the teacher education program. Candidates may not mix and match category scores between the CAAP and Praxis Core exams unless they have filed an application to do so and have received approval by the unit’s exceptions committee:
   
a. ACT: composite score of 21 or above; or
b. SAT: combined score of 980 or above; or
c. College Assessment of Academic Proficiency (CAAP): minimum required scores — writing, 55; reading, 56; and mathematics, 53; or
   d. Praxis Core Academic Skills: minimum required scores — reading (exam code 5712) 152; writing (exam code 5722) 162; and mathematics (exam code 5732) 142.
6. Prospective Elementary/Early Childhood majors only must also complete two sections of the CBASE test (i.e., social studies and science) with a minimum required score. The social studies and science CBASE scores are used to affirm a candidate’s mastery of elementary education content. The social studies minimum score is 235, the science minimum score is 235.

   CBASE registration website: http://registerblast.com/wsu
   for additional information: http://arc.missouri.edu/product_cbase.aspx
7. Introduction to the Education Profession, CI 270 (B- or better);
8. Criminal background check: Prospective teacher education candidates are required to pass a criminal background check that they obtain at their own expense. Information regarding the approved background check service provider is available from Education Support Services.
9. Grade Point Average (GPA)
   a. Overall: 2.500;
   b. WSU: 2.500.
10. Signed attestation of eligibility;
11. Signed grounds for dismissal regulations; and

The application packet is available online (http://wichita.edu/education/ess) and at the Education Support Services office, 107 Corbin.

Teacher Education Requirements

Professional education coursework, disciplinary or content area coursework, and extensive field experiences in professional development schools form the structure for all teacher education licensure areas.

Field Experiences

All initial teacher preparation programs at Wichita State University employ a professional development school model that engages students in field experiences. Beginning in their freshman year, students may enroll in cooperative education where they are paid as school district employees while earning Wichita State University course credit. As students matriculate through the teacher education program, responsibilities during field experiences increase from observation in early field experiences to more active involvement in teaching responsibilities during the final semesters while enrolled in pedagogy coursework. In total, Wichita State University students spend a minimum of four semesters in supervised field experiences in private and/or public school settings.

Early Childhood Unified (Birth through Grade 3)

Wichita State University provides Kansas state licensure preparation for birth through grade 3 through the early childhood unified program, preparing teachers to work with typical and atypical developing children birth through grade 3 in special day schools, inclusive settings, and public school regular education classrooms. The program of study contains courses in general education, teacher education and content courses in reading/language arts/literacy, mathematics, science, social studies, the arts, and health/nutrition/physical education offered in the colleges of education, fine arts, and liberal arts and sciences.

Elementary Education (Kindergarten through Grade 6)

The elementary major prepares students to teach in grades K–6, the range of grades covered in a typical elementary school. The program of study covers general education, teacher education and content courses in reading/language arts, mathematics, science, social studies, the arts, and health/nutrition/physical education offered in the colleges...
of education, fine arts, and liberal arts and sciences. The selection of courses is made with an academic advisor representing the College of Education and should begin as soon as possible.

**Middle Level (Grades 5–8)**
The middle level programs prepare students to teach in grades 5–8, the range of grades covered in a typical middle school. Students desiring to teach at the middle level must complete coursework in two of the four available endorsement areas: i.e., math, history comprehensive, English/language arts and/or science. Each content area includes approximately 30 hours in the liberal arts and sciences beyond general education courses. In addition, candidates must complete teacher education coursework.

**Secondary Education (Grades 6–12)**
Students majoring in secondary education should meet the requirements in the general education program as defined on the respective program check sheet. In addition to the professional education coursework, students complete approximately 30 hours of content coursework in the liberal arts and sciences beyond general education.

**PreK–12**
The teacher education program includes PreK–12 licensure in foreign language, music, art and physical education. Students complete approximately 30 hours of content coursework in their content area beyond general education and professional education requirements.

*Check sheets that list the requirements are available in the Office of Education and Support Services (107 Corbin) and on the COEd website (http://wichita.edu/education/ess).*

**Requirements for Teacher Licensure**
Upon completion of a bachelor’s degree, the college may recommend teacher education candidates for Kansas state initial teacher licensure in one or more areas of teaching.

All WSU graduates applying for teacher licensure in Kansas are required to:

1. Pass all examinations established by the Kansas State Department of Education: the Principles of Learning and Teaching (PLT), and the Praxis content(s) examination;
2. Have a passing score on the Kansas Performance Teaching Portfolio;
3. Meet 2.500 GPA requirements; and
4. Receive a B- or better in all methods courses, practicums and teaching internship. Some programs specify B- or better grade requirements in additional courses.

Teacher education students assume responsibility for knowing and fully understanding their respective program assessment plan and transition point requirements.

**Undergraduate**
The college offers teaching and nonteaching programs leading to the bachelor’s degree. For a list of programs and required coursework, visit the COEd website (http://wichita.edu/education/programs).

**Bachelor’s Degrees**
- Athletic training
- Exercise science
- Sport management
- Teacher education

**Initial Licensure Teaching Programs**
State teacher licensure preparation is offered at the early childhood, elementary, middle, secondary and PreK–12 levels.

The Kansas State Department of Education regulates standards for all teaching licenses. Curricula offered by the college may be altered as needed to meet changes in the KSDE requirements.

The COEd recommends to KSDE those students who have met all approved program licensure requirements in the following programs:

- PreK–12
  - Art¹
  - Music (instrumental)¹
  - Music (vocal)¹
  - Physical education
  - French
  - Spanish
- Early childhood unified
- Elementary education
- Middle childhood unified
- Secondary education
  - Biology
  - Chemistry
  - Earth and space science
  - English/language arts
  - History/government
  - Math
  - Physics

¹ Art and music education degrees are awarded by the College of Fine Arts.

**Inter-College Double Major**
An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 38).

**Transition to Teaching Program**
The Transition to Teaching program represents an alternative initial licensure program for those students possessing a bachelor’s degree in a middle or secondary endorsement area (e.g., mathematics, English). All of the standards of the traditional teacher education program are required, but the model of delivery is designed to meet the needs of schools and adults making the transition from another career into teaching. Please contact the Transition to Teaching program coordinator in the department of curriculum and instruction for more information.
Second Bachelor’s Degree
A student may obtain a second bachelor’s degree in the College of Education. This requires:

1. Admission to the College of Education,
2. Completion of a minimum of 30 credit hours in a program not required for the first bachelor’s degree, and
3. Completion of all the requirements for graduation from the College of Education.

Graduate
The College of Education offers three programs leading to the Master of Arts in Teaching (MAT): transition to teaching, early childhood residency, and middle level and secondary residency for high need areas. Additional degrees include Master of Education (MEd) in counseling, educational leadership, educational psychology, exercise science, learning and instructional design, sport management and special education; the Specialist in Education (EdS) in school psychology; and the Doctor of Education (EdD) in educational administration. Courses are available to support the continued academic and professional development of teachers and other school professionals. Endorsements, certificates and license are also offered at the graduate level.

Endorsements
In addition to initial licensure, the COEd offers programs leading to endorsement in the following areas: district administrators, school counselors, early childhood teachers, English as a Second Language teachers, second content area teachers, special education teachers and reading specialists.

Certificates
The College of Education offers graduate certificates in building-level leadership, child/play therapy, engineering education, educational technology, functional aging, higher education leadership and literacy.

Licensure
- Building level
- District level
- School counselor
- School psychologist

Education Programs Housed in Other Colleges
- Art Education (p. 139)
- Music Education (p. 155)

Graduation Requirements
For graduation from the College of Education, students must satisfactorily complete all program requirements, complete a minimum of 121 hours of credit (some programs have higher requirements), have at least a 2.00 grade point average (2.50 for athletic training and teacher education programs) in the major field and must have at least a 2.000 overall and WSU grade point average (2.500 for athletic training and teacher education programs). Students should study any additional requirements (e.g., passing criteria on key program assessments) that may be required for their particular area of study.

Courses in the College of Education
- Counseling, Educational and School Psychology (CESP) (p. 304)
- Counseling, Educational Leadership, Educational and School Psychology (CLES) (p. 305)
- Curriculum and Instruction (CI) (p. 311)
- Educational Leadership (EL) (p. 334)
- Human Performance Studies (HPS) (p. 373)
- Sport Management (SMGT) (p. 445)
- WSU General, First-Year Seminar (WSUD) (p. 456)

Counseling, Educational Leadership, Educational and School Psychology
The department of counseling, educational leadership, educational and school psychology offers courses at the undergraduate level taken by students both in and outside the College of Education. In addition, the department offers graduate programs in counseling, educational leadership, educational psychology, school psychology, and a Doctor of Education (EdD) in educational leadership. The CLES department also offers graduate certificates in Superintendency/School District Leadership, Building Leadership/Principalship, Child/Play Therapy, Higher Education Leadership, and Engineering Education.

For additional information, please visit the counseling, educational leadership, educational and school psychology website (http://wichita.edu/cles).

Courses in the Department of Counseling, Educational Leadership, Educational and School Psychology
- Counseling, Educational and School Psychology (CESP) (p. 304)
- Counseling, Educational Leadership, Educational and School Psychology (CLES) (p. 305)
- Educational Leadership (EL) (p. 334)

Curriculum and Instruction
Undergraduate teacher education in curriculum and instruction is built on the guiding principles of the Conceptual Framework for Preparation of Teachers and Other School Personnel:

1. Professionalism and reflection on the vocation;
2. Human development and respect for diversity;
3. Connection of teaching and assessment;
4. Technology integration;
5. Understanding of content knowledge, pedagogical content knowledge and their alignment with standards; and
6. Collaboration with stakeholders.

The program includes general education, professional education, field experiences and a content major. The professional education experience begins with the Introduction to the Education Profession course and includes four full semesters of field experiences. Through intensive academic and field experience combined with systematic student reflection, the goal of this program is to produce teachers who are competent, collaborative, reflective professionals.
Criteria for entering, matriculating and exiting the program, and for field experiences, graduation and licensure are clearly outlined and monitored by faculty and community professional advisory groups.

Requirements for these criteria are detailed under the Policies heading found at the beginning of the College of Education section of this catalog. Students should see an advisor in the College of Education Office of Education Support Services to determine the appropriate program and check sheet.

**Majors in Curriculum and Instruction**

**PreK-12**
Bachelor of Arts in Education - PreK-12 French (Secondary) (p. 100)
Bachelor of Arts in Education - PreK-12 Latin (Secondary) (p. 113)

**Early Childhood Unified**
Bachelor of Arts in Education - Early Childhood Unified (Elementary) (p. 93)

**Elementary Apprentice**
Bachelor of Arts in Education - Early Child Unified/Elementary Education Apprentice (Elementary) (p. 94)

**Elementary Education**
Bachelor of Arts in Education - Elementary Education (Elementary) (p. 97)

**Middle School**
Bachelor of Arts in Education - English/Science (5-8) (Middle) (p. 99)
Bachelor of Arts in Education - History/English (5-8) (Middle) (p. 105)
Bachelor of Arts in Education - History Comprehensive/Mathematics (5-8) (Middle) (p. 101)
Bachelor of Arts in Education - History Comprehensive/Science (5-8) (Middle) (p. 103)
Bachelor of Arts in Education - Mathematics/English (5-8) (Middle) (p. 108)
Bachelor of Arts in Education - Mathematics (5-8) (Middle) (p. 106)
Bachelor of Arts in Education - Mathematics/Science (5-8) (Middle) (p. 109)
Bachelor of Arts in Education - Science (5-8) (Middle) (p. 112)

**Secondary Education**
Bachelor of Arts in Education - Biology (6-12) (Secondary) (p. 91)
Bachelor of Arts in Education - Chemistry (6-12) (Secondary) (p. 92)
Bachelor of Arts in Education – Earth and Space Science (6-12) (Secondary) (p. 96)
Bachelor of Arts in Education - English/Language Arts (6-12) (Secondary) (p. 98)

Bachelor of Arts in Education - History, Government and Social Studies (6-12) (Secondary) (p. 104)
Bachelor of Arts in Education - Mathematics (6-12) (Secondary) (p. 107)
Bachelor of Arts in Education - Physics (6-12) (Secondary) (p. 111)

**Courses in Curriculum and Instruction**
- Curriculum and Instruction (CI) (p. 311)

**BAED - Biology (Secondary)**
General requirements for a Bachelor's degree: 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

**Requirements for a Major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 330</td>
<td>General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 418</td>
<td>General Ecology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 419</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 420</td>
<td>Molecular Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 533</td>
<td>Elementary Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 300</td>
<td>Energy, Resources and Environment 1</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 36

1 General education course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
</tbody>
</table>

**Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)**

**Core I - Fall Only**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
</tr>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

**Core II - Spring Only**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 425S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 426S</td>
<td>Core II Practicum - Science</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core III - Fall Only**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 413S</td>
<td>Teaching Internship I: Secondary Level Sciences</td>
<td>2</td>
</tr>
</tbody>
</table>
### Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach biology — grades 6-12.

### BAED - Chemistry (Secondary)

**General requirements for a Bachelor’s degree:** 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

**Requirements for a Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I ¹</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 212</td>
<td>General Chemistry II ¹</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 531</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 532</td>
<td>Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 523</td>
<td>Analytical Chemistry (fall only)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 524</td>
<td>Instrumental Methods of Chemical Analysis (spring only)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 661</td>
<td>Introductory Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 300</td>
<td>Energy, Resources and Environment ¹</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours: 48

1. General education course

**Elective**

Select 3 credit hours of elective (to complete 124 credit hours) | 3

Total Credit Hours: 3

---

**Official Program Transition Point Requirements**

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
CI 413S  Teaching Internship I: Secondary Level Sciences  2

CI 417  Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas  2

CI 435S  ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences  3

CI 505  Science Technology & Society  1

CI 780S  Technology in the Classroom: Science  2

Core IV - Spring Only
CI 436S  ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences  2

CI 471S  Teaching Internship II: Secondary Level Sciences  10

Licensure Exams
PLT
Praxis II Science Content Knowledge Test
Total Credit Hours  42

  2  B- or better.

  3  If preferred, this class can be taken with Core III.

Additional College Requirements - counted as General Education
PSY 111  General Psychology  3
STAT 370  Elementary Statistics  3
ENGL 315  Introduction to English Linguistics  3
or LING 315  Introduction to English Linguistics
or ANTH 352  Anthropological Linguistics
Total Credit Hours  9

Elective
Select 1 credit hour of elective (to complete 124 credit hours)  1
Total Credit Hours  1

Official Program Transition Point Requirements:
1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach chemistry — grades 6-12.

BAED - Early Childhood Unified
General requirements for bachelor's degree: 137 minimum credit hours.

Other Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
<tr>
<td>ARTE 311</td>
<td>Art Education Curriculum in Elementary School</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 351</td>
<td>Music Fundamentals for the Classroom Teacher</td>
<td>2</td>
</tr>
<tr>
<td>MATH 501</td>
<td>Elementary Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>CI 520</td>
<td>Physical Science in the Elementary Classroom</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 370</td>
<td>Introductory Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>or GEOL 300</td>
<td>Energy, Resources and Environment</td>
<td>4</td>
</tr>
</tbody>
</table>

| Total Credit Hours | 22 |

  1  Can be taken in various semesters.

  2  B- or better

  3  Must complete before CI 519 and Core IIB

  4  2.000 or better required

  5  Required before Core IIB

  6  General education course

Teacher Education
Must have entrance into teacher education to take any of the following. All teacher education courses require a B- or better (unless otherwise noted).

Spring: Core I: Foundations of Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 311</td>
<td>Introduction to Diversity: Field Experience</td>
<td>1</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 323</td>
<td>Technology Seminar in Elementary Education</td>
<td>1</td>
</tr>
<tr>
<td>CI 317</td>
<td>Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 519</td>
<td>Mathematical Investigations</td>
<td>3</td>
</tr>
</tbody>
</table>

Fall: Core IIA: Methods and Field Experiences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 603</td>
<td>Foundations of Early Childhood Unified</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 402E</td>
<td>Instructional Strategies, Assessment &amp; Management: Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>CI 402I</td>
<td>Instructional Strategies, Assessment and Management: Elementary Social Studies</td>
<td>4</td>
</tr>
<tr>
<td>CI 411A</td>
<td>Preteaching Internship: Elementary Core IIA</td>
<td>2</td>
</tr>
<tr>
<td>HPS 425</td>
<td>Methods in Physical Education and Health</td>
<td>2</td>
</tr>
<tr>
<td>CI 614</td>
<td>ECU Assessment and Methods: Infants, Toddlers and Families</td>
<td>3</td>
</tr>
<tr>
<td>CI 614I</td>
<td>ECU Preteaching Internship: Infant Toddler</td>
<td>2</td>
</tr>
<tr>
<td>CI 703</td>
<td>Assessments and Methods: K-3</td>
<td>3</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
<tr>
<td>CI 796</td>
<td>Family and Professional Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>CI 324</td>
<td>Linguistics for Elementary Teachers</td>
<td>3</td>
</tr>
<tr>
<td>CI 402I</td>
<td>Instructional Strategies, Assessment &amp; Management: Teaching Intermediate</td>
<td>2</td>
</tr>
<tr>
<td>CI 402M</td>
<td>Instructional Strategies, Assessment and Management: Elementary Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>CI 402S</td>
<td>Instructional Strategies, Assessment and Management: Elementary Science</td>
<td>4</td>
</tr>
<tr>
<td>CI 411B</td>
<td>Preteaching Internship: Elementary Core IIB</td>
<td>2</td>
</tr>
<tr>
<td>CI 617</td>
<td>ECU Assessment &amp; Methods: Preschool</td>
<td>3</td>
</tr>
<tr>
<td>CI 617P</td>
<td>ECU Preteaching Internship: Preschool</td>
<td>2</td>
</tr>
<tr>
<td>CI 446</td>
<td>Student Teaching and Classroom Management Seminar: Elementary</td>
<td>2</td>
</tr>
<tr>
<td>CI 647A</td>
<td>Teaching Internship: ECU K–3 (nine weeks)</td>
<td>8</td>
</tr>
<tr>
<td>CI 647B</td>
<td>Teaching Internship: ECU Birth-PreK (six weeks)</td>
<td>4</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 106</td>
<td>The Human Organism (Life Sciences course)</td>
<td>3-5</td>
</tr>
<tr>
<td>or BIOL 210</td>
<td>General Biology I</td>
<td></td>
</tr>
<tr>
<td>or BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 15-17

### Official Program Transition Point Requirements:

1. Admission into teacher education - complete application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses, with the exception of a 2.000 grade requirement in CI 519,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU, and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

### BAED - Early Childhood Unified/Elementary Education Apprentice Admission Requirements

1. Have continuous employment with classroom instructional responsibilities in a Wichita State University College of Education partner school serving students up to 6th grade.
2. Be admitted to Wichita State University meeting the adult learner or transfer requirements (http://webs.wichita.edu/?u=ugrad&p=/qa). When completing the admissions application, please select D 21X Early Childhood Unified/Elementary Education Apprentice as the applicant's major.
3. Have completed a placement assessment indicating readiness for foundation courses (College English I, College Algebra, etc.) or provide official transcripts showing completion of required general education coursework.
4. References: complete the Reference Request form with names and contact information for three references who are qualified to address the applicant's professional skills, communication skills (oral and written), and potential for success as a classroom teacher and as a student in this program.
5. **Certificate of Health**: provide proof of a completed Certification of Health for School Personnel/TB test form (http://webs.wichita.edu/depttools/depptoolsmemberfiles/COEdHome/CERTIFICATION%20OF%20HEALTH%20FOR%20SCHOOL%20PERSONNEL.pdf) (K.S.A. 72-5213) or verification that this has been completed in the last three years per applicant's employer. Please submit this completed form or verification to WSU College of Education by fax (316) 978-3302.

6. **Criminal Background Check**: completed Criminal Background Check (http://webs.wichita.edu/depttools/depptoolsmemberfiles/COEdHome/Directions%20Background%20Check.pdf) and Student Authorization Form (http://webs.wichita.edu/depttools/depptoolsmemberfiles/COEdHome/Student%20Acknowledgement%20and%20Authorization.pdf).

Wichita State College of Education partner schools are those with an established Memorandum of Agreement with the College of Education. If a Memorandum of Agreement does not already exist, Wichita State University College of Education will contact the employing school district. Placements with partner schools will be confirmed prior to program admission.

Requirements per district may vary. Please contact Wichita State University College of Education for approval of acceptable alternative forms.

## Degree Requirements

### Option 1: For candidates who hold an Associate of Arts in elementary education or an Associate of Arts with general emphasis.

A total of 120 credit hours required to earn the Bachelor of Arts in education. (Students will take 67 credit hours of WSU program requirements. Transfer credit from previous degree will likely meet general education requirements.)

### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
<tr>
<td>CI 313</td>
<td>Reading and Writing Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 314</td>
<td>Principles of Effective Mentoring/Mentee Relationships</td>
<td>1</td>
</tr>
<tr>
<td>CI 317</td>
<td>Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 323</td>
<td>Technology Seminar in Elementary Education</td>
<td>1</td>
</tr>
<tr>
<td>CI 324</td>
<td>Linguistics for Elementary Teachers</td>
<td>3</td>
</tr>
<tr>
<td>CI 326</td>
<td>Engaging and Motivating the Learner</td>
<td>3</td>
</tr>
<tr>
<td>CI 402E</td>
<td>Instructional Strategies, Assessment &amp; Management: Elementary Teaching Early Literacy K-2</td>
<td>3</td>
</tr>
<tr>
<td>CI 402I</td>
<td>Instructional Strategies, Assessment &amp; Management: Teaching Intermediate Literacy 3-6</td>
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</table>

### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 402M</td>
<td>Instructional Strategies, Assessment and Management: Elementary Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>CI 414</td>
<td>Instructional Strategies, Assessment and Classroom Management: Elementary Social Studies</td>
<td>3</td>
</tr>
<tr>
<td>CI 415</td>
<td>Differentiated Instruction for Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>CI 416</td>
<td>Classroom Management and Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
<tr>
<td>CI 458</td>
<td>Inquiry Based Learning</td>
<td>2</td>
</tr>
<tr>
<td>CI 481I</td>
<td>Noncredit Internship</td>
<td>0</td>
</tr>
<tr>
<td>CI 502</td>
<td>Math for Exceptionalities</td>
<td>3</td>
</tr>
<tr>
<td>CI 504</td>
<td>Special Education Law</td>
<td>3</td>
</tr>
<tr>
<td>CI 604</td>
<td>ECU Assessment and Methods: Infants, Toddlers and Preschool (B-PreK)</td>
<td>3</td>
</tr>
<tr>
<td>CI 605</td>
<td>Internship I</td>
<td>2</td>
</tr>
<tr>
<td>CI 606</td>
<td>Internship II</td>
<td>2</td>
</tr>
<tr>
<td>CI 607</td>
<td>Internship III</td>
<td>2</td>
</tr>
<tr>
<td>CI 608</td>
<td>Internship IV</td>
<td>2</td>
</tr>
<tr>
<td>CI 796</td>
<td>Family and Professional Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>ARTE 311</td>
<td>Art Education Curriculum in Elementary School</td>
<td>2</td>
</tr>
<tr>
<td>HPS 425</td>
<td>Methods in Physical Education and Health</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 351</td>
<td>Music Fundamentals for the Classroom Teacher</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours: 67

1 Requires a minimum grade of 2.700.

### Option 2: For candidates who do not hold an Associate of Arts in Education.

A total of 120-122 credit hours required to earn the Bachelor of Arts in Education. (Students will take 75 credit hours of WSU program requirements plus meet general education requirements.)

### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
<tr>
<td>CI 313</td>
<td>Reading and Writing Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 314</td>
<td>Principles of Effective Mentoring/Mentee Relationships</td>
<td>1</td>
</tr>
<tr>
<td>CI 317</td>
<td>Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 323</td>
<td>Technology Seminar in Elementary Education</td>
<td>1</td>
</tr>
<tr>
<td>CI 324</td>
<td>Linguistics for Elementary Teachers</td>
<td>3</td>
</tr>
<tr>
<td>CI 326</td>
<td>Engaging and Motivating the Learner</td>
<td>3</td>
</tr>
</tbody>
</table>
BAED - Earth and Space Science (Secondary)

General requirements for a Bachelor's degree: 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

Requirements for a Major

CHEM 211  General Chemistry I 1  5
CHEM 212  General Chemistry II 1  5
GEOL 102  Earth Science and the Environment  4
GEOL 302  Earth & Space Sciences  3
GEOL 312  Historical Geology  4
GEOL 324  Petrology & Petrography  3
GEOL 570  Biogeology  3
or GEOL 574  Special Studies in Paleontology
PHYS 111  Introductory Physics  4
PHYS 195  Introduction to Modern Astronomy  3
PHYS 395  Solar System Astronomy  3
PHYS 502  Science Investigations: Physics  5
BIOL 210  General Biology I  4

Total Credit Hours  46

1  General education course

CI 270  Introduction to the Education Profession  3

Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

Core I - Fall Only

CESP 334  Introduction to Diversity: Human Growth and Development  2
CI 320  Introduction to Diversity: Exceptionalities  2
CI 321  Introduction to Diversity: Cultural Issues  2
CI 325  Instructional Strategies, Assessment and Management: Middle/Secondary General Methods

CI 315  Core I Practicum  1

Core II - Spring Only

CESP 433  Learning Assessment and Evaluation Theory: Evidence-Based Instruction  3
CI 425S  ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences  2
CI 426S  Core II Practicum - Science  1
CI 427  Philosophy, History and Ethics of Education  3

Core III - Fall Only

CI 413S  Teaching Internship I: Secondary Level Sciences  2
CI 417  Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas

CI 435S  ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences  3
CI 505  Science Technology & Society  1
CI 780S  Technology in the Classroom: Science  2

Core IV - Student Teaching - Spring Only

CI 436S  ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences  2
CI 471S  Teaching Internship II: Secondary Level Sciences  10

Licensure Exams

PLT

1  Requires a minimum grade of 2.700.
Official Program Transition Point
Requirements:
1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. Praxis II content test(s) passed, and
   d. Licensure application.

Candidates completing this program are eligible to be certified to teach Earth and space science — grades 6-12.

BAED - Elementary Education
General requirements for bachelor's degree: 124 minimum credit hours; major GPA 2.500

Other Required Courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
<tr>
<td>ARTE 311</td>
<td>Art Education Curriculum in Elementary School</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 351</td>
<td>Music Fundamentals for the Classroom Teacher</td>
<td>2</td>
</tr>
<tr>
<td>GEOG 125 or GEOG 210</td>
<td>Geography with a global perspective</td>
<td>3</td>
</tr>
</tbody>
</table>

Core 1: Foundations of Education
- CESP 334: Introduction to Diversity  
  Human Growth and Development  
  2 credit hours
- CI 311: Introduction to Diversity: Field Experience  
  1 credit hour
- CI 320: Introduction to Diversity: Exceptionalities  
  2 credit hours
- CI 321: Introduction to Diversity: Cultural Issues  
  2 credit hours
- CI 323: Technology Seminar in Elementary Education  
  1 credit hour

Core II: Methods and Field Experiences
- CESP 433: Learning Assessment and Evaluation Theory: Evidence-Based Instruction  
  3 credit hours
  3 credit hours
- CI 402J: Instructional Strategies, Assessment and Management: Elementary Social Studies  
  4 credit hours
- CI 411A: Preteaching Internship: Elementary Core IIA  
  2 credit hours
Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses, with the exception of a 2.000 grade requirement in CI 519,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

BAED - English/Language Arts (Secondary)

General requirements for a bachelor’s degree: 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

Requirements for a Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 310</td>
<td>Nature of Poetry</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 317</td>
<td>History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 322</td>
<td>Origins of Western Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 323</td>
<td>World Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 330</td>
<td>The Nature of Fiction</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 340</td>
<td>Shakespeare</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 515</td>
<td>Studies in Shakespeare</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 346</td>
<td>American Multicultural Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 365</td>
<td>African-American Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 546</td>
<td>Studies in Ethnic Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 360</td>
<td>Major British Writers I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 361</td>
<td>Major British Writers II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 362</td>
<td>Major American Writers I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 363</td>
<td>Major American Writers II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 680</td>
<td>Theory and Practice in Composition</td>
<td>3</td>
</tr>
<tr>
<td>CI 616</td>
<td>Literature for Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>Total Credit Hours</td>
<td>36</td>
</tr>
</tbody>
</table>

Electives

Select 6 credit hours (to complete 124 credit hours)

Total Credit Hours: 6

1 General education course

BAED - English/Language Arts (Secondary)

Requirements for a Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 310</td>
<td>Nature of Poetry</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 317</td>
<td>History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 322</td>
<td>Origins of Western Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 323</td>
<td>World Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 330</td>
<td>The Nature of Fiction</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 340</td>
<td>Shakespeare</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 515</td>
<td>Studies in Shakespeare</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 346</td>
<td>American Multicultural Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 365</td>
<td>African-American Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 546</td>
<td>Studies in Ethnic Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 360</td>
<td>Major British Writers I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 361</td>
<td>Major British Writers II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 362</td>
<td>Major American Writers I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 363</td>
<td>Major American Writers II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 680</td>
<td>Theory and Practice in Composition</td>
<td>3</td>
</tr>
<tr>
<td>CI 616</td>
<td>Literature for Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>Total Credit Hours</td>
<td>36</td>
</tr>
</tbody>
</table>

1 General education course

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses, with the exception of a 2.000 grade requirement in CI 519,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach English/language arts — grades 6-12.

BAED - English/Science (Middle)

General requirements for Bachelor's: 127 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

Middle Level English Language Arts

Content Prerequisites in General Education:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 330</td>
<td>The Nature of Fiction</td>
<td>3</td>
</tr>
</tbody>
</table>

Content Courses Required for Middle Level English Language Arts:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 317</td>
<td>History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 322</td>
<td>Origins of Western Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 323</td>
<td>World Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 346</td>
<td>American Multicultural Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 365</td>
<td>African-American Literature</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 546</td>
<td>Studies in Ethnic Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 680</td>
<td>Theory and Practice in Composition</td>
<td>3</td>
</tr>
<tr>
<td>CI 616</td>
<td>Literature for Adolescents</td>
<td>3</td>
</tr>
</tbody>
</table>

Science

Content Prerequisites in General Education:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 111</td>
<td>Introductory Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 395</td>
<td>Solar System Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 102</td>
<td>Earth Science and the Environment</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CI 505</td>
<td>Science Technology &amp; Society</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours: 60

1 Prerequisite for ENGL 317.

Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

Core I - Fall Only:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
</tbody>
</table>
### Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach science and English — grades 5–8.

### BAED - French (PreK-12)

General requirements for a Bachelor's degree: 126 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

#### Requirements for a Major: 30 credit hours beyond the FREN 210 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 223</td>
<td>Intermediate French Readings I</td>
<td>3</td>
</tr>
<tr>
<td>FREN 300</td>
<td>Intermediate French Readings II</td>
<td>3</td>
</tr>
<tr>
<td>FREN 324</td>
<td>Intermediate Conversation and Composition</td>
<td>3</td>
</tr>
<tr>
<td>MCLL 351</td>
<td>Linguistics and Foreign Languages</td>
<td>3</td>
</tr>
<tr>
<td>FREN 505</td>
<td>Advanced French Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>FREN 525</td>
<td>Advanced French Conversation</td>
<td>3</td>
</tr>
<tr>
<td>FREN 526</td>
<td>Advanced French Composition and Grammar</td>
<td>3</td>
</tr>
<tr>
<td>FREN 552</td>
<td>Contemporary French Civilization</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose two or three of the following courses for a minimum of 6 credit hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 623</td>
<td>Seminar In French</td>
</tr>
<tr>
<td>FREN 629</td>
<td>Medieval French Literature</td>
</tr>
<tr>
<td>FREN 630</td>
<td>Renaissance French Literature</td>
</tr>
<tr>
<td>FREN 631</td>
<td>17th Century French Literature</td>
</tr>
</tbody>
</table>

### 2 B- or better

If preferred, this class can be taken with Core III.

### Additional College Requirements - counted as General Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 6
FREN 632  18th Century French Literature
FREN 633  19th Century French Literature
FREN 634  20th Century French Literature
FREN 636  Contemporary French Literature

Total Credit Hours 30

CI 270  Introduction to the Education Profession 3

Teacher Education

Core I - Fall Only

CESP 334  Introduction to Diversity: Human Growth and Development 2
CI 320  Introduction to Diversity: Exceptionalities 2
CI 321  Introduction to Diversity: Cultural Issues 2
CI 325  Instructional Strategies, Assessment and Management: Middle/Secondary General Methods 1

CI 315  Core I Practicum 2 1

Core II - Spring Only

CESP 433  Learning Assessment and Evaluation Theory: Evidence-Based Instruction 3
CI 425E  ISAM: Middle/Secondary Level Content-Specific Methods I - English 2

CI 426E  Core II Practicum - English/Language Arts 1
CI 427  Philosophy, History and Ethics of Education 3

Core III - Concurrent Enrollment - Fall Only

MCLL 411F  Preteaching Internship PreK-6 1
MCLL 413F  Preteaching Internship 6-12 2 1
MCLL 454F  ISAM: PreK-12 World Languages 3

CI 417  Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas 2

Core IV - Teaching Internship - Spring Only

MCLL 466  Teaching Internship PreK-12 in World Languages 12 2
MCLL 455F  Teaching Internship Seminar in World Languages 1

Licensure Exams

PLT
ACTFL Advisory Oral Proficiency Interview (OPI) - Advanced Low level or higher
Praxis Content Knowledge Test

Total Credit Hours 40

2  B- or better.
3  If preferred, this class can be taken with Core III.

Additional College Requirements - counted as General Education

PSY 111  General Psychology 3
STAT 370  Elementary Statistics 3

Total Credit Hours 6

Electives

Choose 16 credit hours (to complete 124 hours) 16

Total Credit Hours 16

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all methods, practicum and internship courses.
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach French — grades PreK –12.

BAED - History Comprehensive/ Mathematics (Middle)

General requirements for Bachelor's degree: 125 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

History Comprehensive

Content Prerequisites in General Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 121</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>HIST 100</td>
<td>The Human Adventure: World Civilization Since 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 535</td>
<td>History of Kansas</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 303</td>
<td>World Cultures</td>
<td>3</td>
</tr>
</tbody>
</table>

Content Courses Required for Middle Level Content Area

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101</td>
<td>World Civilization to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 131</td>
<td>History of the United States: Colonial to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 132</td>
<td>History of the United States Since 1865</td>
<td>3</td>
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<tr>
<td>ECON 400</td>
<td>Economics in the Classroom Part I</td>
<td>3</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>GEOG 125</td>
<td>Principles of Human Geography</td>
<td>3</td>
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<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
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<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
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<tr>
<td>MATH 121</td>
<td>Geometry for College Students (offered summer only)</td>
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<td>MATH 123</td>
<td>College Trigonometry</td>
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<td>MATH 144</td>
<td>Business Calculus</td>
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<tr>
<td>MATH 300</td>
<td>Evolution of Mathematics (offered summer only)</td>
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<td>MATH 501</td>
<td>Elementary Mathematics</td>
<td>5</td>
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<tr>
<td>MATH 502</td>
<td>Mathematics for Middle School Teachers (offered fall only)</td>
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<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
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<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
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<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
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<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
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<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
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<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
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<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
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<tr>
<td>CI 425J</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - History/Government</td>
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<tr>
<td>or CI 425M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics</td>
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<tr>
<td>CI 426J</td>
<td>Core II Practicum - History/Government</td>
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<tr>
<td>or CI 425M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics</td>
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<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
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<tr>
<td>CI 412J</td>
<td>Teaching Internship I: Middle Level History/Government</td>
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<tr>
<td>CI 412M</td>
<td>Teaching Internship I: Middle Level Mathematics</td>
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<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
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<tr>
<td>CI 435J</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - History/Government</td>
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<td>CI 435M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics</td>
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<td>CI 436J</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods III - History/Government</td>
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<td>CI 436M</td>
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<td>CI 461J</td>
<td>Teaching Internship II: Middle Level History/Government</td>
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<td>CI 461M</td>
<td>Teaching Internship II: Middle Level Mathematics</td>
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<tr>
<td>PLT</td>
<td>Praxis II History and Math Content Knowledge Tests</td>
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<tr>
<td>PSA 111</td>
<td>General Psychology</td>
<td>3</td>
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<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
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<tr>
<td>or LING 315</td>
<td>Introduction to English Linguistics</td>
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<tr>
<td>CI 412J</td>
<td>Teaching Internship I: Middle Level History/Government</td>
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<td>CI 412M</td>
<td>Teaching Internship I: Middle Level Mathematics</td>
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<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
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</tbody>
</table>

Official Program Transition Point Requirements:
1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.50 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.50 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.50 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
e. Licensure application.

Candidates completing this program are eligible to be certified to teach history and mathematics — grades 5–8.

**BAED - History Comprehensive/Science (Middle)**

General requirements for Bachelor’s degree: 130 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

**History Comprehensive**

*Content Prerequisites in General Education*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 100</td>
<td>The Human Adventure: World Civilization Since 1500</td>
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<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>HIST 535</td>
<td>History of Kansas</td>
<td>3</td>
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</table>

**Content Courses Required for Middle Level History**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101</td>
<td>World Civilization to 1500</td>
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<td>History of the United States: Colonial to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 132</td>
<td>History of the United States: Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>ECON 400</td>
<td>Economics in the Classroom Part I</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 303</td>
<td>World Cultures</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 125</td>
<td>Principles of Human Geography</td>
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</table>

**Science**

*Content Prerequisites in General Education*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 111</td>
<td>Introductory Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 395</td>
<td>Solar System Astronomy</td>
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**Content Courses Required for Middle Level Content Area II**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 102</td>
<td>Earth Science and the Environment</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
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<tr>
<td>CI 505</td>
<td>Science Technology &amp; Society</td>
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</table>

Total Credit Hours 57

**Additional College Requirements - counted as General Education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or LING 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
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</table>

Total Credit Hours 9

**Licensure Exams**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLT</td>
<td>Praxis II History and Science Content Knowledge Tests</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 46

1. Must have B- or better.
2. If preferred, this class can be taken with Core III.
Official Program Transition Point
Requirements:
1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.50 GPA (overall, WSU and content), and
e. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.50 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.50 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
e. Licensure application.

Candidates completing this program are eligible to be certified to teach history and science — grades 5–8.

BAED - History, Government and Social Studies (Secondary)
General requirements for a bachelor's degree: 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

Requirements for a Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 100</td>
<td>The Human Adventure: World Civilization Since 1500</td>
<td>3</td>
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<td>HIST 535</td>
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<td>POLS 121</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 300</td>
<td>Energy, Resources and Environment</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>World Civilization to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 131</td>
<td>History of the United States: Colonial to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 132</td>
<td>History of the United States: Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>POLS 220</td>
<td>Introduction to International Relations</td>
<td>3</td>
</tr>
<tr>
<td>POLS 226</td>
<td>Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 210</td>
<td>Introduction to World Geography</td>
<td>3</td>
</tr>
<tr>
<td>ECON 400</td>
<td>Economics in the Classroom Part I</td>
<td>3</td>
</tr>
<tr>
<td>ECON 401</td>
<td>Economics in the Classroom Part II</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 200</td>
<td>Intercultural Relations</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 303</td>
<td>World Cultures</td>
<td>3</td>
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<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
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Total Credit Hours: 42

Core I - Fall Only
<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
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<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
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<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
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Core II - Spring Only
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
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<tr>
<td>CI 425J</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - History/Government</td>
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<tr>
<td>CI 426J</td>
<td>Core II Practicum - History/Government</td>
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<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
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Core III - Fall Only
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CI 413J</td>
<td>Teaching Internship I: Secondary Level History/Government</td>
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<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 435J</td>
<td>ISAM: Middle/Secondary Level Content Specific Methods II - History/Government</td>
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Core IV - Spring Only
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<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
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<td>ISAM: Middle/Secondary Level Content-Specific Methods III - History/Government</td>
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<td>CI 471J</td>
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Licensure Exams
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<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>PLT</td>
<td>Praxis II History/Government Content Knowledge Test</td>
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</table>

Total Credit Hours: 39

2  B- or better.
3  If preferred, this class can be taken with Core III.
Additional College Requirements - counted as General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
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</tr>
<tr>
<td>or LING 315</td>
<td>Introduction to English Linguistics</td>
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</tr>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
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<td><strong>9</strong></td>
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</tbody>
</table>

Elective

Select 16 credit hours of elective (to complete 124 credit hours)

**Total Credit Hours**

16

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach history/government — grades 6-12.

BAED - History/English (Middle)

General requirements for Bachelor's degree: 124 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

History Comprehensive

Content Prerequisites in General Education

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<thead>
<tr>
<th>Course</th>
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<tr>
<td><strong>Total Credit Hours</strong></td>
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<td><strong>3</strong></td>
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Content Courses Required for Middle Level Content Area

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<tr>
<td><strong>Total Credit Hours</strong></td>
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<td><strong>57</strong></td>
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1 Prerequisite for ENGL 317.

CI 270 3 Introduction to the Education Profession

Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

Core I - Fall Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/ Secondary General Methods</td>
<td>1</td>
</tr>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

Core II - Spring Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 425E</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - English</td>
<td>2</td>
</tr>
<tr>
<td>CI 425J</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - History/Government</td>
<td>2</td>
</tr>
<tr>
<td>CI 426E</td>
<td>Core II Practicum - English/ Language Arts</td>
<td>1</td>
</tr>
<tr>
<td>CI 426J</td>
<td>Core II Practicum - History/Government</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
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</table>

Core III - Fall Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 412E</td>
<td>Teaching Internship I: Middle Level English</td>
<td>2</td>
</tr>
</tbody>
</table>
Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach history and English — grades 5–8.

BAED - Mathematics (Middle)

General requirements for Bachelor's degree: 124 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
</tr>
<tr>
<td>MATH 121</td>
<td>Geometry for College Students (offered summer only)</td>
</tr>
<tr>
<td>MATH 123</td>
<td>College Trigonometry</td>
</tr>
<tr>
<td>MATH 144</td>
<td>Business Calculus</td>
</tr>
<tr>
<td>MATH 300</td>
<td>Evolution of Mathematics (offered summer only)</td>
</tr>
<tr>
<td>MATH 501</td>
<td>Elementary Mathematics</td>
</tr>
<tr>
<td>MATH 502</td>
<td>Mathematics for Middle School Teachers (offered fall only)</td>
</tr>
</tbody>
</table>

Math Applications. Select one 5-credit-hour, or two 3-credit-hour courses. (Selected with faculty advisor approval.) 5-6

Total Credit Hours 30-31

1 Needs 2.000 or better as prerequisite for MATH 502.

Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

Core I - Fall Only

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/ Secondary General Methods</td>
</tr>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
</tr>
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</table>

Core II - Spring Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
</tr>
<tr>
<td>CI 425M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics</td>
</tr>
<tr>
<td>CI 426M</td>
<td>Core II Practicum - Mathematics</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
</tr>
</tbody>
</table>

Core III - Fall Only
CI 412M  Teaching Internship I: Middle Level Mathematics  2
CI 417  Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas  2
CI 435M  ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics  3

Core IV - Spring Only
CI 436M  ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics  2
CI 461M  Teaching Internship II: Middle Level Mathematics  10

Licensure Exams
PLT  Praxis II Math Content Knowledge Test

Total Credit Hours  39

2  Must have B- or better.
3  If preferred, this class can be taken with Core III.

Additional College Requirements - counted as General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or LING 315</td>
<td>Introduction to English Linguistics</td>
</tr>
<tr>
<td></td>
<td>or ANTH 352</td>
<td>Anthropological Linguistics</td>
</tr>
</tbody>
</table>

Total Credit Hours  6

Electives

Select 16 credit hours (for 124 credit hour total)  16

Total Credit Hours  16

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach mathematics — grades 5–8.

**BAED - Mathematics (Secondary)**
General requirements for a bachelor’s degree: 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

**Prerequisites to the Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242</td>
<td>Calculus I 1</td>
<td>5</td>
</tr>
<tr>
<td>MATH 243</td>
<td>Calculus II 1</td>
<td>5</td>
</tr>
</tbody>
</table>

**Requirements for a Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 344</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 321</td>
<td>Discrete Structures I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 415</td>
<td>An Introduction to Advanced Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 511</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 531</td>
<td>Introduction to the History of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 615</td>
<td>Elementary Number Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH 621</td>
<td>Elementary Geometry</td>
<td>3</td>
</tr>
<tr>
<td>STAT 460</td>
<td>Elementary Probability and Mathematical Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 503</td>
<td>Mathematics for High School Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 451</td>
<td>Computational Mathematics Using MATLAB</td>
<td></td>
</tr>
<tr>
<td>MATH 513</td>
<td>Fundamental Concepts of Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 545</td>
<td>Integration Techniques and Applications</td>
<td></td>
</tr>
<tr>
<td>MATH 547</td>
<td>Advanced Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 553</td>
<td>Mathematical Models</td>
<td></td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
<td></td>
</tr>
</tbody>
</table>

Math Applications

From the list below, select two different divisions of study. At least one must be a laboratory course from a physical science area such as physics, chemistry, or astronomy. Other options need to be approved by an advisor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>PHYS 195 &amp; PHYS 196</td>
<td>Introduction to Modern Astronomy and Laboratory in Modern Astronomy</td>
<td></td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td></td>
</tr>
<tr>
<td>CS 211</td>
<td>Introduction to Programming</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours  43-47

1  General education course

2  Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

Core I - Fall Only

<table>
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<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours  3
CI 320: Introduction to Diversity: Exceptionalities 2

CI 321: Introduction to Diversity: Cultural Issues 2

CI 325: Instructional Strategies, Assessment and Management: Middle/Secondary General Methods 1

CI 315: Core I Practicum 1

Core II - Spring Only

CESP 433: Learning Assessment and Evaluation Theory: Evidence-Based Instruction 3

CI 425M: ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics 2

CI 426M: Core II Practicum - Mathematics 1

CI 427: Philosophy, History and Ethics of Education 3

Core III - Fall Only

CI 413M: Teaching Internship I: Secondary Level Mathematics 2

CI 417: Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas 2

CI 435M: ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics 3

Core IV - Spring Only

CI 436M: ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics 2

CI 471M: Teaching Internship II: Secondary Level Mathematics 10

License Exams

PLT: Praxis II Mathematics Content Knowledge Test

Select 12 credit hours of elective (to complete 124 credit hours) 12

Total Credit Hours 12

Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

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   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach mathematics — grades 6-12.

BAED - Mathematics/English (Middle)

General requirements for Bachelor’s degree: 125 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

Content Prerequisites in General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 111</td>
<td>College Algebra 1</td>
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</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 121</td>
<td>Geometry for College Students (offered summer only)</td>
<td>3</td>
</tr>
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<td>MATH 123</td>
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<td>Evolution of Mathematics (offered summer only)</td>
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<td>MATH 501</td>
<td>Elementary Mathematics 1</td>
<td>5</td>
</tr>
<tr>
<td>MATH 502</td>
<td>Mathematics for Middle School Teachers (offered fall only)</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics 2</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 322</td>
<td>Origins of Western Literature</td>
<td>3</td>
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<tr>
<td>or ENGL 323</td>
<td>World Literature</td>
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Select one of the choices below:

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<tbody>
<tr>
<td>PHYS 195 &amp; PHYS 196</td>
<td>Introduction to Modern Astronomy and Laboratory in Modern Astronomy</td>
<td>4-5</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
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</table>

Total Credit Hours 10-11

Elective

Additional College Requirements - counted as General Education

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<td>General Psychology</td>
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<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
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<td>or LING 315</td>
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</tr>
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<td>or ANTH 352</td>
<td>Anthropological Linguistics</td>
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</table>

Total Credit Hours 10-11

* B- or better.
* If preferred, this class can be taken with Core III.
### ENGL 317
- History of the English Language
- Credit: 3

### ENGL 330
- The Nature of Fiction
- Credit: 3

### ENGL 346
- American Multicultural Literature
- African-American Literature Studies in Ethnic Literature
- Credit: 3

### ENGL 680
- Theory and Practice in Composition
- Credit: 3

### CI 616
- Literature for Adolescents
- Credit: 3

#### Total Credit Hours
- 58

1. Needs 2.000 or better as prerequisite for MATH 502.
2. Prerequisite for ENGL 317.

### CI 270
- Introduction to the Education Profession
- Credit: 3

#### Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

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<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
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</tbody>
</table>

1. Core I Practicum
- Credit: 1

##### Core II - Spring Only

<table>
<thead>
<tr>
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<th>Course Title</th>
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<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
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<td>ISAM: Middle/Secondary Level Content-Specific Methods I - English</td>
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<tr>
<td>or CI 425M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics</td>
<td></td>
</tr>
<tr>
<td>CI 426E</td>
<td>Core II Practicum - English/ Language Arts</td>
<td>1</td>
</tr>
<tr>
<td>or CI 426M</td>
<td>Core II Practicum - Mathematics</td>
<td></td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
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<th>Course Title</th>
<th>Credit</th>
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<tbody>
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<td>Teaching Internship I: Middle Level English</td>
<td>2</td>
</tr>
<tr>
<td>CI 412M</td>
<td>Teaching Internship I: Middle Level Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
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<tr>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CI 435E</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - English/ Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>CI 435M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics</td>
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##### Core IV - Spring Only

<table>
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<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>CI 436E</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods III - English</td>
<td>2</td>
</tr>
<tr>
<td>CI 436M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics</td>
<td>2</td>
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<tr>
<td>CI 461E</td>
<td>Teaching Internship II: Middle Level English/ Language Arts</td>
<td>5</td>
</tr>
<tr>
<td>CI 461M</td>
<td>Teaching Internship II: Middle Level Mathematics</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Licensure Exams

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLT</td>
<td>Praxis II English/Language Arts and Math Content Knowledge Tests</td>
<td></td>
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</tbody>
</table>

#### Total Credit Hours
- 46

3. Must have B- or better.
4. If preferred, this class can be taken with Core III.

#### Additional College Requirements - counted as General Education

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Total Credit Hours
- 3

### Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach mathematics and English — grades 5–8.

### BAED - Mathematics/Science (Middle)

General requirements for Bachelor's degree: 134 minimum hours; overall GPA 2.500; major content GPA 2.500.

#### Requirements for Middle School Majors

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

Wichita State University – Undergraduate Catalog  109
## Content Prerequisites in General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

## Content Courses Required for Middle Level Content Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 121</td>
<td>Geometry for College Students (offered summer only)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 123</td>
<td>College Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 144</td>
<td>Business Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 300</td>
<td>Evolution of Mathematics (offered summer only)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 501</td>
<td>Elementary Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>MATH 502</td>
<td>Mathematics for Middle School Teachers (offered fall only)</td>
<td>5</td>
</tr>
</tbody>
</table>

## Science Content Prerequisites in General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 111</td>
<td>Introductory Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 395</td>
<td>Solar System Astronomy</td>
<td>3</td>
</tr>
</tbody>
</table>

## Content Courses Required for Middle Level Content Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 102</td>
<td>Earth Science and the Environment</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CI 505</td>
<td>Science Technology &amp; Society</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours: 58

---

### B- or better required as prerequisite for MATH 502

---

### If preferred, this class can be taken with Core III.

## Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)

### Core I - Fall Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

### Core II - Spring Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 425S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences</td>
<td>2</td>
</tr>
<tr>
<td>or CI 425M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>CI 426S</td>
<td>Core II Practicum - Science</td>
<td>1</td>
</tr>
<tr>
<td>or CI 426M</td>
<td>Core II Practicum - Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
</tbody>
</table>

### Core III - Fall Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 412S</td>
<td>Teaching Internship I: Middle Level Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 412M</td>
<td>Teaching Internship I: Middle Level Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 435S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CI 435M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

## Core IV - Spring Only

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 436S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 436M</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>CI 461S</td>
<td>Teaching Internship II: Middle Level Sciences</td>
<td>5</td>
</tr>
<tr>
<td>CI 461M</td>
<td>Teaching Internship II: Middle Level Mathematics</td>
<td>5</td>
</tr>
</tbody>
</table>

## Licensure Exams

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLT</td>
<td>Praxis II Science and Math Content Knowledge Test</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 46

---

2 B- or better.

3 If preferred, this class can be taken with Core III.

## Additional College Requirements - counted as General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or LING 315</td>
<td>Introduction to English Linguistics</td>
<td></td>
</tr>
<tr>
<td>or ANTH 352</td>
<td>Anthropological Linguistics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 6

---

## Official Program Transition Point Requirements:

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. Praxis II content test(s) passed, and
   d. Licensure application.

Candidates completing this program are eligible to be certified to teach math and science — grades 5–8.

**BAED - Physics (Secondary)**

General requirements for a Bachelor’s degree: 124 minimum hours; overall GPA 2.500; major content GPA 2.500.

**Requirements for a Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 214</td>
<td>General College Physics II</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 195</td>
<td>Introduction to Modern Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 501</td>
<td>Special Studies in Physics for Educators</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS 551</td>
<td>Topics in Modern Physics</td>
<td></td>
</tr>
<tr>
<td>MATH 123</td>
<td>College Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 212</td>
<td>General Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 300</td>
<td>Energy, Resources and Environment</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 46

1. General education course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
</tbody>
</table>

**Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)**

**Core I - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
</tr>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

**Core II - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 333</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 425S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 426S</td>
<td>Core II Practicum - Science</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core III - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 413S</td>
<td>Teaching Internship I: Secondary Level Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 435S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CI 505</td>
<td>Science Technology &amp; Society</td>
<td>1</td>
</tr>
<tr>
<td>CI 780S</td>
<td>Technology in the Classroom: Science</td>
<td>2</td>
</tr>
</tbody>
</table>

**Core IV - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 436S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 471S</td>
<td>Teaching Internship II: Secondary Level Sciences</td>
<td>10</td>
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</tbody>
</table>

**Licenses Exams**

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLT</td>
<td>Praxis II Science Content Knowledge Test</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 42

2. B- or better.

3. If preferred, this class can be taken with Core III.

**Additional College Requirements - counted as General Education**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or LING 315</td>
<td>Introduction to English Linguistics</td>
<td></td>
</tr>
<tr>
<td>or ANTH 352</td>
<td>Anthopological Linguistics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 9

**Electives**

Select 3 credit hours of electives (to complete 124 credit hours)

Total Credit Hours: 3

**Official Program Transition Point Requirements:**

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
Candidates completing this program are eligible to be certified to teach physics and general science — grades 6-12.

### BAED - Science (Middle)

General requirements for Bachelor's degree: 124 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

**BAED - Science (Middle)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>General Biology I ¹</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 395</td>
<td>Solar System Astronomy¹</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 102</td>
<td>Earth Science and the Environment</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>Introductory Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Science Investigations: Physics</td>
<td>5</td>
</tr>
<tr>
<td>CI 505</td>
<td>Science Technology &amp; Society</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
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<td>30</td>
</tr>
</tbody>
</table>

¹ General education course.

**Teacher Education - Middle and Secondary Majors (need a B- or better in all courses below)**

**Core I - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
</tr>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
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<td>6</td>
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</table>

**Core II - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction ³</td>
<td>3</td>
</tr>
<tr>
<td>CI 425S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 426S</td>
<td>Core II Practicum - Science</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td></td>
<td>9</td>
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</tbody>
</table>

**Core III - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 412S</td>
<td>Teaching Internship I: Middle Level Sciences</td>
<td>2</td>
</tr>
<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
<tr>
<td>CI 435S</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

² B- or better.

³ If preferred, this class can be taken with Core III.

**Additional College Requirements - counted as General Education**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Introduction to English Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>or LING 315</td>
<td>Introduction to English Linguistics or ANTH 352</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

**Electives**

Select 19 credit hours of electives (to complete 124 credit hour total) | 19

**Total Credit Hours** | 124

**Official Program Transition Point Requirements:**

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
d. Praxis II content test(s) passed, and
e. Licensure application.

Candidates completing this program are eligible to be certified to teach science — grades 5–8.

**BAED - Spanish (PreK-12)**

General requirements for Bachelor's degree: 126 minimum hours; overall GPA 2.500; major GPA 2.500.

**Requirements for a Major: 33 credit hours beyond the SPAN 112 level**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 220</td>
<td>Intermediate Spanish Grammar and Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 223</td>
<td>Selected Spanish Readings 1</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 300</td>
<td>Intermediate Spanish Readings</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 325</td>
<td>Intermediate Spanish Conversation</td>
<td>3</td>
</tr>
<tr>
<td>MCLL 351</td>
<td>Linguistics and Foreign Languages</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 505</td>
<td>Spanish Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 525</td>
<td>Advanced Spanish Conversation</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 526</td>
<td>Advanced Spanish Grammar and Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 531 or SPAN 621</td>
<td>Survey of Spanish Literature</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 626 or SPAN 627</td>
<td>Spanish Civilization</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 additional credit hours of upper-division Spanish</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 33

1. General Education course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession 2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Teacher Education**

**Core I - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods 2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 315</td>
<td>Core I Practicum 2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Core II - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction 3</td>
<td>3</td>
</tr>
<tr>
<td>CI 425E</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods 1 - English 2</td>
<td>2</td>
</tr>
<tr>
<td>CI 426E</td>
<td>Core II Practicum - English/Language Arts 2</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core III - Concurrent Enrollment - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCLL 411F</td>
<td>Preteaching Internship PreK-6 2</td>
<td>1</td>
</tr>
<tr>
<td>MCLL 413F</td>
<td>Preteaching Internship 6-12 2</td>
<td>1</td>
</tr>
<tr>
<td>MCLL 454F</td>
<td>ISAM: PreK-12 World Languages 2</td>
<td>3</td>
</tr>
<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas 2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Core IV - Teaching Internship - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCLL 466</td>
<td>Teaching Internship PreK-12 in World Languages 2</td>
<td>12</td>
</tr>
<tr>
<td>MCLL 455F</td>
<td>Teaching Internship Seminar in World Languages 2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Licensure Exams**

- PLT
- ACTFL Advisory Oral Proficiency Interview (OPI) - "Advanced Low" level or higher
- Praxis Content Knowledge Test

Total Credit Hours 40

2. B- or better.
3. If preferred, this class can be taken with Core III.

**Additional College Requirements - counted as General Education**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 6

**Electives**

Select 13 credit hours of electives (to complete program of 124 credit hours)

Total Credit Hours 13

**Official Program Transition Point Requirements:**

1. Admission into teacher education - completed application packet and meet all admission to teacher education requirements as specified in College of Education - Policies. (p. 87)

2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all methods, practicum and internship courses.
   c. 2.500 GPA (overall, and WSU), and
   d. Completed teacher intern application.

3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.

4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.

5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed
Candidates completing this program are eligible to be certified to teach Spanish — grades PreK–12.

Human Performance Studies
The mission of the department of human performance studies is to prepare students for careers in athletic training, exercise science and physical education as well as to provide the university community with physical activity experiences. Students are provided with quality instruction and practical experiences by faculty who engage in intellectual inquiry and service to the community and profession. The following degrees are offered: BA degrees in physical education, PreK–12, exercise science and athletic training. Each degree area provides students with a quality education leading to numerous career opportunities.

Athletic Training Program (ATP)
The mission of the Athletic Training Program (ATP) at WSU is to provide a comprehensive program of academic coursework and field experience that will educate athletic training students for entry-level positions in the profession of athletic training. The ATP strives to meet the standards, educational competencies and clinical proficiencies for athletic training education through professional service, research activities and curriculum design. The ATP abides by the policies and procedures as set forth by the Commission on Accreditation of Athletic Training Education (CAATE), National Athletic Trainers’ Association Education Council (NATAEC), Board of Certification (BOC) and the Kansas Board of Healing Arts.

Exercise Science
Wichita State’s exercise science program is for those interested in careers involving exercise physiology, health promotion, clinical exercise-related fields, rehabilitation, medicine, biology of exercise, research and academia or graduate education in health-related fields. The department also has a comprehensive human performance laboratory that is available for students completing exercise science coursework.

Physical Education: PreK–12
Wichita State’s PreK–12 physical education teacher preparation degree program offers a quality education for students desiring a career teaching physical education. The curriculum provides students with a scientific and practical background upon which to base teaching content and methods. The PreK–12 program addresses the importance of a developmentally appropriate curriculum based on the national physical education standards. Students are provided numerous practical experiences to interact with K-12 students in the public schools.

Physical Education Activity Program
The Physical Education Activity Program represents a variety of 1-credit-hour courses in areas including team activities, individual activities, combatives, fitness activities and aquatics. Activity courses in the service program may be repeated for credit. Students should consult their college requirements to ascertain whether the activity courses will count toward degree requirements.

Majors in Human Performance Studies
- BA in Athletic Training (p. 114)
- BA in Physical Education: PreK-12 (p. 116)

Minors in Human Performance Studies
- Exercise Science (p. 117)

Courses in Human Performance Studies
- Human Performance Studies (HPS) (p. 373)

BA in Athletic Training Program Design and Accreditation
The department of human performance studies (HPS) offers a four-year program of study leading to a Bachelor of Arts degree in athletic training. The Athletic Training Program (ATP) consists of a one-semester preprofessional phase and a three-and-a-half-year professional phase. Students begin their sequenced program in the fall of their first year enrolled at WSU. The program of study incorporates academic course requirements with clinical experiences to encompass the entry-level professional qualifications of the athletic trainer. The academic structure involves 80 hours of courses, laboratories and practicums to fulfill the NATA Athletic Training Educational Competencies. Students engage in areas of concentration for upper body and lower body injuries, sports that use protective equipment, and general medical conditions. The final year of the program incorporates a clinical internship through local affiliated sites. The ATP has been granted accreditation by the Commission on Accreditation of Athletic Training Education (CAATE).

BOC vs. NATA
The Board of Certification (BOC) is the certifying agency for the National Athletic Trainers’ Association (NATA). The mission of the BOC is to provide exceptional credentialing programs for health care professionals to assure the protection of the public. The National Athletic Trainers’ Association (NATA) is the national membership organization for the profession of athletic training. The mission of the NATA is to enhance the quality of health care provided by certified athletic trainers and to advance the athletic training profession. Athletic training students are eligible to sit for the BOC certification exam upon graduation from a CAATE accredited program.

Technical Standards
Wichita State University is committed to the principle that no qualified individual, on the basis of disability, be excluded from participation in or denied the benefits or services, programs or activities of the university, or be subjected to discrimination by the university as required by the Americans with Disabilities Act of 1990. A copy of the technical standards for admission into the ATP is available in the ATP program director’s office. The ATP adheres to the policies for academic accommodation as determined by the Office of Disability Services. The Office of Disability Services provides academic accommodations for students who experience physical or mental disabilities. Students are required to provide appropriate documentation to the director of disability services before classroom services are provided. Services are based on the student’s need for academic accommodation.

Transfer Students
Transfer students are considered on a case-by-case basis. Students wishing to transfer must have completed at least one year of athletic training experience at the college level, completed a care and prevention course or equivalent, a taping section or lab and have clinical hours endorsed by a supervising athletic trainer. In addition, the transfer student must have completed all admission requirements for the
preprofessional and professional phase of the program. Students should contact the ATP program director if they have any questions.

**Probation and Dismissal**

Students are placed on probation for the next semester if their cumulative WSU GPA falls below 2.500. Preprofessional students placed on probation jeopardize their admission to the professional phase. Students on probation will not be academically dismissed from the ATP until:

1. They accumulate 12 or more attempted hours after being placed on probation,
2. Fail to earn at least a 2.500 GPA semester average, and
3. Their cumulative or WSU grade point average remains below a 2.500.

Students dismissed for academic reasons may seek readmission to the ATP and the College of Education by appealing, in writing, for an exception to the regulations. Students should contact the ATP program director and the College of Education for specific procedures.

**Special Requirements and Costs**

Students are responsible for all application expenses, including the purchase of professional liability insurance in the minimum range of $1,000,000–$3,000,000, security background clearance and demonstrated proof of standard health insurance before beginning the professional phase of the ATP. Students enrolled in HPS 130, are required to pay a departmental cost-recovery fee for the use of consumable athletic training materials in order to meet the objectives of the course as outlined in the WSU Undergraduate Catalog. Students are required to provide their own transportation to each clinical site. Students should contact the ATP program director if they have any questions about these special requirements and costs.

**Clinical Affiliation and Education**

The ATEP has affiliation agreements with various health facilities in Wichita to assist with the clinical education of the athletic training student. The clinical affiliates include a variety of settings. Clinical education involves the rotation of specific experiences tailored to meet program standards and objectives. The athletic training student must complete the academic course(s) relating to these experiences before the clinical rotation assignment. The entire clinical rotation process is a three-year commitment. Students can contact the ATP program director for information on student responsibilities, expectations and policies for clinical education assignments.

**Admission**

A prospective student interested in pursuing the Bachelor of Arts degree in athletic training needs to request an application from the AT program director or the department of HPS. The applicant must meet all admission requirements by WSU.

1. Application to preprofessional program: An ATP application for the preprofessional program can be completed by visiting the athletic training website (http://www.wichita.edu/athletictraining), or it can be obtained from the AT program director. The student application file for the preprofessional program must be complete by March 1st and include:
   a. Letter of interest;
   b. Complete application;
   c. Three letters of recommendation; and
   d. Completion of WSU admission criteria.

2. Application to professional program: In order for the student to be selected into the professional program of the ATP, the student must complete the following criteria before formal admittance is granted. All professional program criteria must be completed by November 15th and include:
   a. Completed health examination;
   b. Immunization verification;
   c. Personal background check;
   d. Record of work or volunteer hours;
   e. Signed technical standards;
   f. Current CPR certification;
   g. Purchase of liability insurance;
   h. Personal interview with Athletic Training Advisory Committee and ATP faculty; and

   i. Completed core courses with a B average or better:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPS 114</td>
<td>Introduction to Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>HPS 317</td>
<td>CPR/AED/First Aid for the Professional Rescuer</td>
<td>2</td>
</tr>
<tr>
<td>HPS 130</td>
<td>Taping and Bandaging in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>HP 203</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
</tbody>
</table>

**Requirements**

Requirements for a Bachelor of Arts degree in athletic training are as follows:

**Foundation Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 100</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 101</td>
<td>College English I</td>
<td></td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fine Arts Elective**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine arts course</td>
<td></td>
<td>3</td>
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</tbody>
</table>

**Humanities**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>S/B introductory course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>S/B further study course</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Social and Behavioral Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
</tbody>
</table>

**Further study course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics and Natural Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>or HS 290</td>
<td>Foundational Human Anatomy and Physiology</td>
<td></td>
</tr>
</tbody>
</table>

**HPS and Athletic Training Core**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPS 114</td>
<td>Introduction to Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>HPS 130</td>
<td>Taping and Bandaging in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>HP 203</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>HPS 229</td>
<td>Applied Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HS 301</td>
<td>Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>HPS 313</td>
<td>Exercise &amp; Sport Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>
BA in Exercise Science

Graduation grade point average requirements for exercise science majors:

The candidate for a degree in exercise science must attain a 2.000 grade point average in each of the following categories:

- all college and university work attempted (cumulative grade point average);
- all work attempted at WSU (WSU grade point average); and
- all work in exercise science.

Students are not allowed credit toward graduation for D work in excess of one-quarter of their total hours.

Degree Requirements: a minimum of 124 total credit hours.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>HPS 113</td>
<td>Introduction to Exercise Science</td>
<td>3</td>
</tr>
<tr>
<td>HPS 229</td>
<td>Applied Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HPS 317</td>
<td>CPR/AED/First Aid for the Professional Rescuer</td>
<td>2</td>
</tr>
<tr>
<td>HPS 302</td>
<td>Administration in Exercise Science</td>
<td>3</td>
</tr>
<tr>
<td>HPS 328</td>
<td>Kinesiology - Biomechanics</td>
<td>3</td>
</tr>
<tr>
<td>HPS 313</td>
<td>Exercise &amp; Sport Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HPS 331</td>
<td>Care and Prevention of Athletic Injuries</td>
<td>3</td>
</tr>
<tr>
<td>HPS 440</td>
<td>Concepts in the Prescription of Exercise</td>
<td>3</td>
</tr>
<tr>
<td>HPS 460</td>
<td>Motor Learning</td>
<td>3</td>
</tr>
<tr>
<td>HPS 470</td>
<td>Fitness Practicum</td>
<td>3</td>
</tr>
<tr>
<td>HPS 490</td>
<td>Physiology of Exercise</td>
<td>3</td>
</tr>
<tr>
<td>HPS 495</td>
<td>Internship in Exercise Science</td>
<td>8</td>
</tr>
<tr>
<td>HPS 541</td>
<td>Strength Training and Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>HPS 762</td>
<td>Statistical Concepts in Human Performance Studies</td>
<td>3</td>
</tr>
<tr>
<td>CI 541</td>
<td>Desktop Publishing I</td>
<td>3</td>
</tr>
<tr>
<td>PC 105</td>
<td>Introduction to Computers and Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 59

BA in Physical Education: Prek-12

HPS 107A Swimming I 1
HPS 111 Introduction to Physical Education 3
HPS 202 Individual Sports 2
HPS 203 Adventure Sports 2
HPS 204 Movement Concepts 2
HPS 205 Team Sports 2
HPS 229 Applied Human Anatomy 3
HPS 317 CPR/AED/First Aid for the Professional Rescuer 2

Prerequisite for entrance into Teacher Education
CI 270 Introduction to the Education Profession 1 3

Courses to be taken with Core I

HPS 306 Water Safety Instructor 2
HPS 328 Kinesiology - Biomechanics 3
HPS 329 Health and Wellness Concepts for PreK-12 Teacher Education 2
HPS 331 Care and Prevention of Athletic Injuries 3
HPS 460 Motor Learning 3
HPS 490 Physiology of Exercise 3

Teacher Education Cores I, II and III

CESP 334 Introduction to Diversity: Human Growth and Development 2
CI 321 Introduction to Diversity: Cultural Issues 2
HPS 360  Adapted Physical Education 2-3  (recommended for PE majors)  or CI 320  Introduction to Diversity: Exceptionalities  

CI 311  Introduction to Diversity: Field Experience  1  

HPS 300  Rhythmic Activities in PreK-12 Physical Education  2  

HPS 310  Organization and Administration of Physical Education Program  3  

HPS 311  ISAM: Physical Education in Secondary Grades 6-12 3  

HPS 312  ISAM: Preteaching Internship: Physical Education-Secondary 1  

HPS 324  ISAM: Physical Education in Elementary Grades PreK-5 1  

HPS 325  ISAM: Preteaching Internship: Physical Education-Elementary 1  

HPS 334  Assessment and Technology for PreK-12 Physical Education  3  

HPS 400  ISAM: Health Education PreK-12  

HPS 401  ISAM: Preteaching Internship: Health Education PreK-12  

CI 317  Literacy Strategies in the Content Areas  2  

CESP 433  Learning Assessment and Evaluation Theory: Evidence-Based Instruction  3  

CI 427  Philosophy, History and Ethics of Education  3  

HPS 471  Teaching Internship - Physical Education - Secondary 1  

HPS 472  Teaching Internship - Physical Education - Elementary 1  

HPS 473  Teaching Internship Seminar - Physical Education 1  

Total Credit Hours 83-84

1 Must pass with a B- or better.

Grade Requirements: Overall GPA 2.500; major GPA 2.500

Licensure requirements include completion of the PRAXIS content knowledge test, the PLT, and the successful completion of the KPTP.

**Minor in Exercise Science**
The exercise science minor provides minimum knowledge for careers in the exercise industry. It consists of 15 credit hours including the following courses:

- HPS 229  Applied Human Anatomy 3
- HPS 313  Exercise & Sport Nutrition 3
- HPS 328  Kinesiology - Biomechanics 3
- HPS 440  Concepts in the Prescription of Exercise 3
- HPS 490  Physiology of Exercise 3

Total Credit Hours 15

At least 12 credit hours must be taken at WSU. A minimum GPA of 2.500 in the minor courses is required.

**Sport Management**
Wichita State’s Bachelor of Arts in Sport Management degree provides students with a quality curriculum including courses such as sport marketing, sport law, sport governance and sport facility management. Students pursuing the sport management degree program complete a one-semester internship requirement (or its equivalent). Graduates of this program work in a variety of sport settings including intercollegiate sports, minor league professional sports, major league professional sports, park and recreation departments, and in the health club/fitness industry.

The sport management program is accredited by the Commission on Sport Management Accreditation.

**Majors in Sport Management**
- BA in Sport Management (p. 117)

**Minors in Sport Management**
- Sport Management (p. 118)

**Courses in Sport Management**
- Sport Management (SMGT) (p. 445)

**BA in Sport Management**
Prospective students interested in pursuing the Bachelor of Arts in Sport Management degree must meet all admission requirements by the WSU College of Education. In addition, they must complete an orientation program embedded in SMGT 112.

General Requirements: Minimum of 121 total hours for graduation; GPA of 2.000 required.

**Required Major Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMGT 112</td>
<td>Introduction to Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 210</td>
<td>Practicum in Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 300</td>
<td>Technology in Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 426</td>
<td>Sport Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 428</td>
<td>Sport Finance</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 444</td>
<td>Human Resource in Management in Sport</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 446</td>
<td>Preinternship Seminar</td>
<td>1</td>
</tr>
<tr>
<td>SMGT 447A</td>
<td>Internship Sport Management</td>
<td>12</td>
</tr>
<tr>
<td>SMGT 461</td>
<td>Legal Aspects of Sport and Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 465</td>
<td>Psychology of Sport and Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 466</td>
<td>Marketing Sport and Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 475</td>
<td>Sport and Physical Activity in American Culture</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 511</td>
<td>Selling in the Sport Industry</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 520</td>
<td>Sport Tournament and Event Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 525</td>
<td>Sport Facility Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 545</td>
<td>Sport Governance &amp; Policy</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**
Students may satisfy elective requirements by selecting courses with the consent of the advisor and/or by pursuing a minor. Common minors include marketing, general business, communications and exercise science. Select a minimum of 24 credit hours.

Total Credit Hours 79

All students are required to take 45 credit hours of courses numbered 300 or above.

**Minor in Sport Management**

The sport management minor provides minimum knowledge for careers in the sport industry. It consists of 18 credit hours including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMGT 112</td>
<td>Introduction to Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>Select five of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMGT 426</td>
<td>Sport Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 428</td>
<td>Sport Finance</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 461</td>
<td>Legal Aspects of Sport and Physical Activity I</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 465</td>
<td>Psychology of Sport and Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 466</td>
<td>Marketing Sport and Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 475</td>
<td>Sport and Physical Activity in American Culture</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 520</td>
<td>Sport Tournament and Event Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 525</td>
<td>Sport Facility Management</td>
<td>3</td>
</tr>
<tr>
<td>SMGT 545</td>
<td>Sport Governance &amp; Policy</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

At least 12 credit hours must be taken at WSU. A minimum GPA of 2.500 in the minor courses is required.
Modern technological developments in engineering have brought about considerable change in the College of Engineering’s curriculum at Wichita State University. The curriculum provides graduates the skillset, mindset, and experience necessary to rapidly advance economic and technological prosperity, health, and well-being. Consequently, WSU graduates are increasingly attractive to employers and graduate programs throughout the United States.

The College of Engineering is organized into five degree-granting departments: aerospace, biomedical, electrical and computer science, industrial, systems and manufacturing, and mechanical. In addition, the College of Engineering offers a Bachelor of Science in engineering technology.

The programs in engineering are offered in daytime and evening classes, and the courses are the same whether they are taught in the day or at night.

**Admission**

All entering students with a declared interest in engineering will be admitted to the College of Engineering in program status. Engineering students must complete the following courses, each with a grade of C or better, within the first 48 credit hours:

1. ENGL 101/ENGL 100, ENGL 102 and COMM 111, and
2. MATH 242, or their equivalents.

Transfer students must present an earned GPA of 2.000 or higher on a 4.000 scale for all prior college work in order to be fully admitted into the College of Engineering. Transfer students with a GPA of less than 2.000 may petition for probationary admission.

**Probation**

Students are placed on academic probation if any of the following grade point averages is less than 2.000 and if they have attempted at least 6 credit hours at Wichita State University:

1. Cumulative grade point average of all college/university work,
2. WSU grade point average, and
3. Engineering major grade point average.

An attempted course indicates that the student has enrolled officially in the course and that the student may have completed the course or been granted an incomplete. Attempts include courses receiving the grades (to include plus/minus grades) A, B, C, D, F, Cr, NCr, Bg, NBg, S, U and I but exclude Au, CrE and W. Academic probation is not removed until all grade point averages are at least 2.000. Transfer students admitted on probation must complete at least 12 hours of credit work at Wichita State before probation may be removed.

Students on academic probation may not enroll for more than 12 credit hours in a 16-week term, 6 credit hours in an eight-week term, or 3 credit hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student’s department advisor with the approval of the student’s department chairperson.

**Academic Dismissal**

Students on academic probation will be dismissed at the end of a semester if they fail to earn a semester grade point average at or above 2.000, and have a cumulative, overall WSU, or engineering major grade point average below 2.000. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation. Students will remain on probation as long as their cumulative, overall WSU, or engineering major grade point average is below 2.000.

Dismissal from the college because of poor academic performance constitutes dismissal from the university. Dismissed students should immediately consult with their advisor to explore options and conditions for future readmission.

**Academic Advising and Enrollment**

Students in the College of Engineering are required to receive academic advising from their advisor or department chair before enrolling. Engineering students are strongly urged to register early for courses during published registration dates to avoid closed classes. Late registration or adding engineering courses will be allowed only during the first week of a regular semester or the first three days of a summer session.

Students in the College of Engineering may not enroll in more than 20 hours per semester during the academic year. Summer session enrollments are limited to a maximum of 5 credit hours for each four-week session or 10 credit hours during the eight-week session. Students who have completed at least 24 credit hours at WSU with a WSU grade point average of 3.000 or higher may petition their department chairperson for permission to enroll in excess hours.

Students who are employed full or part time should, in consultation with their academic advisor, reduce their enrollment to a level appropriate to their work load.

Only students admitted to the College of Engineering or the Graduate School will be allowed to enroll in engineering courses. The academic dean will consider petitions for exceptions to the preceding statement because of legitimate reasons for qualified nonengineering students enrolling in engineering courses.

**Transfer Credit**

Students wishing to receive transfer credits for engineering courses taken at other institutions prior to admission to WSU must submit transcripts, course descriptions and syllabi to the College of Engineering for evaluation.

Degree-bound WSU students should speak with an advisor before enrolling in courses at another institution.

**Undergraduate**

The Bachelor of Science degree programs in aerospace engineering, biomedical engineering, computer engineering, electrical engineering, industrial engineering, manufacturing engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The Bachelor of Science degree program in computer science is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org. A Bachelor of Science degree in engineering technology is accredited by the

**Graduate**

A Master of Science (MS) is offered in computer networking, computer science and aerospace, biomedical, electrical, industrial and mechanical engineering. A Master of Engineering Management (MEM) program is offered in the industrial, systems and manufacturing engineering department. A Doctor of Philosophy (PhD) also is offered by the aerospace, electrical and computer science, industrial, systems and manufacturing, and mechanical departments.

Typical fields of specialization include aerodynamics, fluid mechanics, propulsion, structures, solid mechanics, composites, dynamics and control; communication theory, computer networking, signal processing, software engineering, control theory, digital systems, energy and power systems; thermodynamics, heat transfer, engineering materials, engineering design and kinematics; and operations research, management science, manufacturing processes and human factors.

See the Wichita State University Graduate Catalog for more information about the graduate programs.

**Certificates**

The College of Engineering offers graduate certificates in advanced composite materials, foundations of six sigma and quality improvement, lean systems, and systems engineering and management. A certificate in enterprise systems and supply chain management is offered jointly with the Barton School of Business, and a graduate certificate in engineering education is offered jointly with the College of Education.

**Graduation Requirements**

All engineering students who are pursuing bachelor’s degrees must meet three sets of course requirements for graduation:

1. WSU general education requirements,
2. College of Engineering requirements, and
3. ABET requirements. Guidelines for these are given below:

**WSU General Education Requirements**

1. Foundation courses: All WSU students must complete three courses in communication skills: ENGL 101 or ENGL 100 (for non-native speakers), ENGL 102 and COMM 111, each with a grade of C or better and within their first 48 credit hours.
2. Four introductory courses in the disciplines, to include one course in fine arts, one course in humanities, and two courses in two different disciplines in social and behavioral sciences.
3. One advanced further study course in humanities or social and behavioral sciences (may not be taken in PHIL).
4. One issues and perspectives course: PHIL 354 for students majoring in computer engineering or computer science, or PHIL 385 for all other engineering majors.

All WSU students also must complete courses in the division of mathematics and natural sciences; however, because the engineering curriculum requires 32–35 credit hours of mathematics and natural sciences, engineering students automatically satisfy the requirements in this division.

Refer to the General Education Program (p. 55) for a description of the introductory courses, advanced further study courses, and advanced issues and perspectives courses.

**College of Engineering Requirements**

1. PHIL 385, is a required course for engineering students, while PHIL 354 is required for students in computer engineering and computer science.
2. Mathematics and natural sciences: 32–35 credit hours of mathematics and natural sciences must be completed, as prescribed by each department.
3. Engineering core requirements:

```latex
\begin{tabular}{|l|c|}
\hline
Course & Credit Hours \\
\hline
AE 223 & Statics 3 \\
EE 282 & Circuits I 4 \\
IME 255 & Engineering Economy 3 \\
ME 398 & Thermodynamics I 3 \\
\hline
\end{tabular}
```

These are courses that all engineering students must complete, regardless of major. Computer science students are required to take:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IME 255</td>
<td>Engineering Economy 3</td>
</tr>
<tr>
<td>PHIL 325</td>
<td>Formal Logic 3</td>
</tr>
</tbody>
</table>

4. Department requirements: Each department has specific courses that must be completed. These courses and their prerequisites are in the departmental sections of the catalog and are listed on the departmental check sheets.

5. Technical electives: Additional courses required, but not specified, by the department. Each should be chosen in consultation with a departmental advisor.

6. In response to the recommendation of the National Academy of Engineering report on the future needs for engineering graduates, the College of Engineering implemented the Engineer of 2020 program. To fulfill the requirements for an engineering Bachelor of Science degree at WSU, each student will complete the program requirements including at least three of the following six activities: undergraduate research, cooperative education or internship, global learning or study abroad, service learning, leadership and multidisciplinary education. This program will make the educational experience more meaningful to the student and the student more desirable to local and national industries. More details about the program can be found on the College of Engineering website.

**Inter-College Double Major**

An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 38).

**Requirements**

ABET (http://www.abet.org) expects the curricular content of an engineering program to include the equivalent of at least three years of study in the areas of mathematics, basic sciences, humanities and social sciences, and engineering topics. The coursework must include at least:

1. One year combination of college level mathematics and basic sciences (some with experimental experience),
2. One and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to the student’s field of study, and
3. A general education component that complements the technical content of the curriculum.
Basic sciences are defined as biological, chemical and physical sciences. They include both general chemistry and calculus-based general physics at appropriate levels, with at least a two-semester sequence of study in either area. The courses in humanities and social sciences must provide both breadth and depth and not be limited to a selection of unrelated introductory courses. Engineering topics include subjects in the engineering sciences and engineering design. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other. Engineering design is the process of devising a system, component or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics and the engineering sciences are applied to convert resources optimally to meet these stated needs.

All engineering students follow about the same general curriculum for the first two years. All engineering and computer science programs of study are designed to meet ABET criteria as well as satisfy WSU general education requirements, and all courses should be selected with the assistance of a College of Engineering advisor. The recommended sequence of courses for engineering students in all departments is outlined later in this section. Each sequence has been planned so that students can complete the program to meet all requirements in the minimum time.

Students must file an application for degree card in the student records office two semesters preceding their final semester.

**Graduation grade point average requirements**: The candidate for a degree must attain a 2.000 grade point average in each of the following categories:

1. All college and university work attempted (cumulative grade point average);
2. All work attempted at WSU (WSU grade point average); and
3. All work in the student’s major, which includes technical electives.

Students are not allowed credit toward graduation for $D$ grade work in excess of one-quarter of their total hours.

**Cooperative Education Program**

The College of Engineering offers a cooperative education program in conjunction with the university Cooperative Education Internship Program described in this catalog.

The co-op plan is a voluntary program in which the student works part time (parallel program) or alternates paid preprofessional work periods with classroom periods during the junior and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>F S Su</td>
<td>F S Su</td>
<td>F S</td>
</tr>
<tr>
<td>Plan A</td>
<td>W C W</td>
<td>C W C</td>
<td>C C</td>
</tr>
<tr>
<td>Plan B</td>
<td>C W C</td>
<td>W C W</td>
<td>C C</td>
</tr>
</tbody>
</table>

C Indicates in college W Indicates at work

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B. Other plans can be developed in cooperation with the coordinator.

To be eligible for the co-op program, a student must have completed 24 credit hours and must demonstrate by academic performance during the freshman year the potential to complete the degree program satisfactorily. Generally this means the earning of a grade point average of 2.750 or higher. Also the student’s character and personality must be acceptable to the cooperating employer. Transfer students with the above qualifications should contact the cooperative education coordinator at the beginning of their first semester at WSU. To continue in the program, a student must maintain a satisfactory academic standing.

Students interested in participating in the program should contact the College of Engineering co-op coordinator who will provide the necessary application information. Upon acceptance into the program, the coordinator will assist the student in arranging interviews with cooperating industries.

**Courses in Engineering - General**

- Engineering (ENGR) (p. 336)
- WSU General, First-Year Seminar (WSUE) (p. 456)

**Aerospace Engineering**

The aerospace engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

To uphold the university and college missions, the aerospace engineering faculty, in consultation with its constituents, established the following program educational objectives:

1. Within a few years after graduation, program alumni are dependable, productive professionals using learned engineering principles to successfully satisfy employer needs in aerospace engineering or related fields in Wichita and the global community.
2. Within a few years after graduation, program alumni successfully complete advanced degrees in aerospace engineering or related fields.

Aerospace engineering students participate in an academic program of study in technical areas such as aerodynamics, performance, propulsion, flight mechanics and structures. After developing a background of skills in these technical areas, senior students complete a two course sequence in aerospace design.

The aerospace engineering curriculum also gives students the opportunity to develop a comprehensive foundation in mathematics, physics, general engineering, digital computations, written and oral communication, and humanities and social sciences.

Students have access to an excellent array of laboratory facilities including: an astronautics lab; four wind tunnels; a water tunnel; a flight simulation lab; a structural testing lab; a small-aircraft prototype lab; a propulsion lab; and a controls lab. These facilities and those shared with the National Institute of Aviation Research are among the finest found in academic institutions.

The aircraft industries in Wichita include Airbus, Bombardier Aerospace, Spirit AeroSystems, and Textron Aviation (including Beechcraft and Cessna). The presence of these companies has a strong positive influence on WSU’s aerospace engineering program.

** Majors in Aerospace Engineering**

- BS in Aerospace Engineering (p. 121)

**Courses in Aerospace Engineering**

- Aerospace Engineering (AE) (p. 264)

**BS in Aerospace Engineering**
Sequence of Courses
The undergraduate program requires the completion of 135 credit hours for graduation, minus advanced placement credit. Specific degree requirements are given below:

Foundation Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101/100</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 385</td>
<td>Engineering Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Fine arts/humanities &amp; social/behavioral sciences courses</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics/Natural Sciences

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 243</td>
<td>Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 315</td>
<td>University Physics Lab I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>Natural sciences elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Engineering Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 223</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>EE 282</td>
<td>Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>BME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>ME 398</td>
<td>Thermodynamics I</td>
<td>3</td>
</tr>
</tbody>
</table>

Major Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 222</td>
<td>Engineering Digital Computation</td>
<td>3</td>
</tr>
<tr>
<td>BME 222L</td>
<td>Graphics Lab</td>
<td>1</td>
</tr>
<tr>
<td>ME 250</td>
<td>Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>AE 324</td>
<td>Fundamentals of Atmospheric Flight</td>
<td>3</td>
</tr>
<tr>
<td>AE 333</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>AE 373</td>
<td>Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>AE 415</td>
<td>Introduction to Space Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>AE 424</td>
<td>Aerodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>AE 502</td>
<td>Aerospace Propulsion I</td>
<td>3</td>
</tr>
<tr>
<td>AE 512</td>
<td>Experimental Methods in Aerospace</td>
<td>3</td>
</tr>
<tr>
<td>AE 514</td>
<td>Flight Dynamics and Control</td>
<td>3</td>
</tr>
<tr>
<td>AE 524</td>
<td>Aerodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>AE 525</td>
<td>Flight Structures I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; AE 625</td>
<td>Flight Structures II</td>
<td>6</td>
</tr>
<tr>
<td>AE 528</td>
<td>Aerospace Design I</td>
<td>8</td>
</tr>
<tr>
<td>&amp; AE 628</td>
<td>Aerospace Design II</td>
<td>8</td>
</tr>
<tr>
<td>AE 607</td>
<td>Flight Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>Technical electives</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 135

1 Refer to graduation requirements at the beginning of this section for details.
2 Must be chosen with advisor’s approval or from a departmentally approved list.

Biomedical Engineering

The biomedical engineering program is intended for students who want to pursue careers where engineering interfaces with the physical and biological sciences. Biomedical engineering integrates physical, chemical, mathematical sciences and engineering principles for the study of biology, medicine, behavior or health. Biomedical engineering advances fundamental concepts, and develops materials, processes, implants, devices and informatics approaches for the prevention, diagnosis and treatment of disease, for patient rehabilitation and for improving health. Biomedical engineers develop devices and procedures that solve medical and health-related problems by combining their knowledge of biology and medicine with engineering principles and practices. Many do research, along with life scientists, chemists and medical scientists, to develop and evaluate systems and products such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems. Some specialties include biomaterials, biomechanics, medical imaging, rehabilitation engineering and orthopedic engineering. The biomedical engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

Biomedical Engineering Program Mission
The mission of the biomedical engineering program is to provide students a comprehensive education, including integration of the life sciences and engineering principles, to prepare the students to address health needs at the local, national and global levels.

Program Educational Objectives

The educational objectives of the biomedical engineering program are driven by WSU’s mission to be an essential educational, cultural and economic driver for Kansas and the greater public good, as well as the biomedical engineering program mission to address health needs. Specifically, biomedical engineering program alumni, within a few years of receiving their baccalaureate degree, will be successful professionals as evidenced by having:

1. Addressed problems at the interface of engineering, biology and medicine;
2. Pursued professional development, including further study in graduate or professional schools; and
3. Served in leadership roles in addressing societal needs at the local, national and global levels.

Majors in Biomedical Engineering

- BS in Biomedical Engineering (p. 122)

Courses in Biomedical Engineering

- Biomedical Engineering (BME) (p. 288)

1 Note: For a course to be used as a prerequisite to BME courses, it must have been passed with a grade of C or better (generating 2,000 grade points or better).

BS in Biomedical Engineering Sequence of Courses

The biomedical engineering program requires the completion of 133 credit hours for graduation. Specific degree requirements are given below. Students select 12 credit hours of engineering technical electives, and 3 credit hours of open technical electives selected from a wide range of courses. Contact the biomedical engineering department for a list of applicable engineering and open technical electives.

Premed Students

Curriculum differences for premed students in the biomedical engineering program consist of the following:

1. BIOL 211 is required for premed students;
2. 1-credit-hour labs, PHYS 315 and PHYS 316, must be taken with the 4 credit-hour lecture courses of PHYS 313 and PHYS 314, respectively;

3. CHEM 531 and CHEM 532 are required for biomedical engineering students in the premed curriculum, and will satisfy the biomedical engineering curriculum organic chemistry requirement.

Biomedical engineering students who are in the premedicine curriculum are encouraged to also meet frequently with the WSU premed advisors to learn about other premed requirements. WSU premed advisors are located in Fairmount College of Liberal Arts and Sciences Advising Center, 115 Grace Wilkie Hall (316) 978-3700.

**Requirements**

**Foundation Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 100</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 385</td>
<td>Engineering Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fine arts/humanities & social/behavioral sciences courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242 &amp; MATH 243</td>
<td>Calculus I and Calculus II</td>
<td>10</td>
</tr>
<tr>
<td>IME 254</td>
<td>Engineering Probability and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 420</td>
<td>Molecular Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211 &amp; CHEM 212</td>
<td>General Chemistry I and General Chemistry II</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 332 or CHEM 333</td>
<td>Organic Chemistry II</td>
<td>3-5</td>
</tr>
<tr>
<td>CHEM 661</td>
<td>Introductory Biochemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

**Engineering Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 223</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>EE 282</td>
<td>Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>ME 398</td>
<td>Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
</tbody>
</table>

**Major Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 335</td>
<td>Biomedical Computer Applications</td>
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</tr>
<tr>
<td>BME 452</td>
<td>Biomechanics</td>
<td>3</td>
</tr>
<tr>
<td>BME 462</td>
<td>Introduction to Biofluids</td>
<td>3</td>
</tr>
<tr>
<td>BME 477</td>
<td>Introduction to Biomaterials</td>
<td>3</td>
</tr>
<tr>
<td>BME 480</td>
<td>Bioinstrumentation</td>
<td>3</td>
</tr>
<tr>
<td>BME 482</td>
<td>Design of Biodevices</td>
<td>3</td>
</tr>
<tr>
<td>BME 585</td>
<td>Capstone Design I</td>
<td>3</td>
</tr>
<tr>
<td>BME 595</td>
<td>Capstone Design II</td>
<td>3</td>
</tr>
<tr>
<td>ME 251</td>
<td>Materials Engineering Laboratory</td>
<td>1</td>
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</tbody>
</table>

**Technical Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering technical electives</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Open technical electives</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours**

133-135

1. Refer to graduation requirements at the beginning of this section for details

2. Contact the biomedical engineering department for list of applicable technical elective courses.

**Electrical Engineering and Computer Science**

Students in the electrical engineering and computer science department have three degree programs from which to choose, electrical engineering, computer engineering or computer science. The electrical and computer engineering programs are accredited by the Engineering Accreditation Commission of ABET, [http://www.abet.org](http://www.abet.org). The Bachelor of Science degree program in computer science is accredited by the Computing Accreditation Commission of ABET, [http://www.abet.org](http://www.abet.org).

All programs require a total of 128 credit hours minus hours from advanced placement credit. The programs have a minimum of 65 credit hours in common. The common hours are made up of:

- communication skills (9 credit hours)
- math and science courses (29 credit hours)
- general education courses (12 credit hours)
- engineering core courses (3 credit hours)
- major courses (12 credit hours).

Additional courses include computer software and digital design courses and courses stressing the laws governing the individual behavior of electrical systems as well as their behavior when included as parts of more complex electrical systems. The programs are structured to assure that electrical engineering students are familiar with computers and computer hardware and computer engineers and scientists have a background in electrical engineering principles.

All programs require courses that cover fundamentals common to engineering degree programs at WSU.

Electrical engineering, computer engineering and computer science students should have a strong interest in mathematics and science. As part of the curriculum, senior-level students are required to take a two-semester senior project sequence. This project gives the student the opportunity to apply skills acquired during their coursework to real-world problems.

**Electrical Engineering**

The objectives of the electrical engineering program are as follows:

1. The alumni, in the first several years after receiving their baccalaureate degree, will be productive and successful in the professional practice of electrical engineering as evidenced by:
   a. Job satisfaction and contributions toward the success of one’s employers;
   b. Effective participation and leadership on engineering teams;
   c. Being effective in identifying and solving real-world problems;
   d. Being effective at handling increased responsibilities;
   e. Receipt of job-related awards, promotions/raises, and professional accomplishments.

2. The alumni, in the first several years after receiving their baccalaureate degree, will be successful in pursuing continuing education as evidenced by:
   a. Effective progression toward an advanced postundergraduate degree or professional licensure/certification;
   b. Participation in professional societies, professional conferences and meetings;
c. Participation in life-long learning by adapting to new
technologies, tools and methodologies in electrical engineering,
and responding to the challenges of a changing environment;
d. Scholarly accomplishments (e.g., publications, presentations);
e. Professional self-study.

The electrical engineering degree has a sufficient number of technical
electives to allow the student to develop skills in specialized areas
such as communication and signal processing, control systems, electric
power systems, electronics and digital systems.

**Computer Engineering**
The objectives of the computer engineering program are as follows:

1. The alumni, in the first several years after receiving their
   baccalaureate degree, will be productive and successful in the
   professional practice of computer engineering as evidenced by:
   a. Job satisfaction and contributions toward the success of one’s
      employers;
   b. Effective participation and leadership on engineering teams;
   c. Being effective in identifying and solving real-world problems;
   d. Being effective at handling increased responsibilities;
   e. Receipt of job-related awards, promotions/raises, and
      professional accomplishments.

2. The alumni, in the first several years after receiving their
   baccalaureate degree, will be successful in pursuing continuing
   education as evidenced by:
   a. Effective progression toward an advanced postundergraduate
      degree or professional licensure/certification;
   b. Participation in professional societies, professional conferences
      and meetings;
   c. Participation in life-long learning by adapting to new
      technologies, tools and methodologies in computer engineering,
      and responding to the challenges of a changing environment;
   d. Scholarly accomplishments (e.g., publications, presentations);
   e. Professional self-study.

The computer engineering degree is a more specialized degree with
more required courses and fewer electives.

**Computer Science**
The objectives of the computer science program are as follows:

1. The alumni, in the first several years after receiving their
   baccalaureate degree, will be productive and successful in the
   professional practice of computing as evidenced by:
   a. Job satisfaction and contributions toward the success of one’s
      employers;
   b. Effective participation and leadership on computing/engineering
      teams;
   c. Being effective in identifying and solving real-world problems;
   d. Being effective at handling increased responsibilities;
   e. Receipt of job-related awards, promotions/raises, and
      professional accomplishments.

2. The alumni, in the first several years after receiving their
   baccalaureate degree, will be successful in pursuing continuing
   education as evidenced by:
   a. Effective progression toward an advanced postundergraduate
      degree or professional certification;
   b. Participation in professional societies, professional conferences
      and meetings;
   c. Participation in life-long learning by adapting to new
      technologies, tools and methodologies in computing, and
      responding to the challenges of a changing environment;
   d. Scholarly accomplishments (e.g., publications, presentations);
   e. Professional self-study.

The computer science degree offers courses that emphasize core
computer science technologies and their applications.

**Majors in Electrical Engineering and
Computer Science**

- BS in Electrical Engineering (p. 125)
- BS in Computer Engineering (p. 124)
- BS in Computer Science (p. 125)

**Minors in Electrical Engineering and
Computer Science**

- Computer Science (p. 126)

**Courses in Electrical Engineering and
Computer Science**

- Computer Science (CS) (p. 301)\(^1\)
- Electrical Engineering (EE) (p. 334)\(^2\)

\(^1\) For a computer science course to be used as a prerequisite, it must
have been passed with a C- or better.

\(^2\) For a course to be used as a prerequisite, it must have been passed
with a C- or better.

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**BS in Computer Engineering**

**Foundation Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 100</td>
<td>English Composition</td>
<td></td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 354</td>
<td>Ethics and Computers</td>
<td>3</td>
</tr>
<tr>
<td>Select 15 hours</td>
<td>fine arts/humanities &amp; social/behavioral sciences</td>
<td>15</td>
</tr>
</tbody>
</table>

**Mathematical/Natural Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>10</td>
</tr>
<tr>
<td>&amp; MATH 243</td>
<td>and Calculus II</td>
<td></td>
</tr>
<tr>
<td>MATH 321</td>
<td>Discrete Structures I</td>
<td>3</td>
</tr>
<tr>
<td>or CS 321</td>
<td>Discrete Structures I</td>
<td></td>
</tr>
<tr>
<td>MATH 511</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>IME 254</td>
<td>Engineering Probability and Statistics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Engineering Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 223</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>EE 282</td>
<td>Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>ME 398</td>
<td>Thermodynamics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Major Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 194</td>
<td>Introduction to Digital Design</td>
<td>4</td>
</tr>
</tbody>
</table>
### CS 211
Introduction to Programming 4

### CS 238
Assembly Language Programming 3

### CS 300
Data Structures 4

### CS 394
Introduction to Computer Architecture 3

### CS 411
Object-Oriented Programming 3

### CS 464
Computer Networks 3

### CS 540
Operating Systems 3

### CS 560
Design and Analysis of Algorithms 3

### CS 580
Introduction to Software Engineering 3

### CS 665
Introduction to Database Systems 3

### EE 284
Circuits II 3

### EE 492
Electronic Circuits I 4

### EE 585
Electrical Design Project I 4

### EE 595
Electrical Design Project II 4

#### Technical Electives
Select 11 credit hours which must be chosen with advisor’s approval from a departmentally approved list. At least 6 of the 11 credit hours must be from the EECS department. Up to 2 credit hours of co-op can be used as nondepartmental technical electives 11

**Total Credit Hours** 128

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### BS in Computer Science

#### Foundation Courses

| ENGL 101 | College English I | 3 |
| or ENGL 100 | English Composition | |
| ENGL 102 | College English II | 3 |
| COMM 111 | Public Speaking | 3 |
| PHIL 125 | Introductory Logic | 3 |
| PHIL 354 | Ethics and Computers | 3 |

Select 12 credit hours of other fine arts/humanities & social/behavioral sciences courses 12

#### Mathematics/Natural Sciences

| MATH 242 & MATH 243 | Calculus I and II | 10 |
| MATH 321 & MATH 322 | Discrete Structures I and II | 6 |
| PHYS 313 | Physics for Scientists I | 4 |
| PHYS 314 | Physics for Scientists II | 4 |
| CHEM 211 | General Chemistry I | 5 |
| IME 254 | Engineering Probability and Statistics I | 3 |

#### Engineering Core Courses

| IME 255 | Engineering Economy | 3 |
| PHIL 325 | Formal Logic | 3 |

#### Major Courses

| CS 194 | Introduction to Digital Design | 4 |
| CS 211 | Introduction to Programming | 4 |
| CS 238 | Assembly Language Programming | 3 |
| CS 300 | Data Structures | 4 |
| CS 394 | Introduction to Computer Architecture | 3 |
| CS 410 | Programming Paradigms | 3 |
| CS 411 | Object-Oriented Programming | 3 |
| CS 464 | Computer Networks | 3 |
| CS 510 | Operating Systems | 3 |
| CS 540 | Design and Analysis of Algorithms | 3 |
| CS 580 | Introduction to Software Engineering | 3 |
| CS 665 | Introduction to Database Systems | 3 |
| EE 284 | Circuits II | 3 |
| EE 383 | Signals and Systems | 3 |
| EE 463 | Applied Engineering Electromagnetics | 3 |
| EE 488 | Electric Machines and Transformers | 4 |
| EE 492 | Electronic Circuits I | 4 |
| EE 493 | Electronic Circuits II | 4 |
| or EE 688 | Power Electronics | |
| EE 586 | Introduction to Communication Systems | 4 |

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### BS in Electrical Engineering

#### Foundation Courses

| ENGL 101 | College English I | 3 |
| or ENGL 100 | English Composition | |
| ENGL 102 | College English II | 3 |
| COMM 111 | Public Speaking | 3 |
| PHIL 385 | Engineering Ethics | 3 |

Select 15 credit hours of fine arts/humanities & social/behavioral sciences courses 15

#### Mathematics/Natural Sciences

| MATH 242 | Calculus I | 5 |
| MATH 243 | Calculus II | 5 |
| MATH 344 | Calculus III | 3 |
| MATH 511 | Linear Algebra | 3 |
| MATH 555 | Differential Equations I | 3 |
| PHYS 313 | Physics for Scientists I | 4 |
| PHYS 314 | Physics for Scientists II | 4 |
| CHEM 211 | General Chemistry I | 5 |
| IME 254 | Engineering Probability and Statistics I | 3 |

#### Engineering Core Courses

| AE 223 | Statics | 3 |
| EE 282 | Circuits I | 4 |
| IME 255 | Engineering Economy | 3 |
| ME 398 | Thermodynamics I | 3 |

#### Major Courses

| CS 194 | Introduction to Digital Design | 4 |
| CS 211 | Introduction to Programming | 4 |
| EE 284 | Circuits II | 3 |
| EE 383 | Signals and Systems | 3 |
| EE 463 | Applied Engineering Electromagnetics | 3 |
| EE 488 | Electric Machines and Transformers | 4 |
| EE 492 | Electronic Circuits I | 4 |
| EE 493 | Electronic Circuits II | 4 |
| or EE 688 | Power Electronics | |
| EE 586 | Introduction to Communication Systems | 4 |
Program, the graduates would have:

**Within a few years after graduating from the engineering technology Program Educational Objectives**

The Bachelor of Science in Engineering Technology (BSET) program at Wichita State University is a hands-on program based on engineering technology fundamentals, engineering principles, instrumentation, mathematics, science and practical design principles needed to equip students for employment or further education. The focus is on current engineering technology issues and applications used in product design, testing, installation and maintenance to prepare students for careers in engineering technology with a broad background in engineering technology with a focus on one of four concentrations: civil engineering technology, cybersecurity, engineering technology management or mechatronics technology.

For further program information, please visit our website (http://www.wichita.edu/engtech), or contact:

Deepak Gupta
Director of Engineering Technology
College of Engineering
1845 Fairmount Street
Wichita, KS 67260-0044
Phone: (316) 978-7758
Email: Deepak.Gupta@wichita.edu

**Minor in Computer Science**

The minor provides a valuable addition to other majors and can help a student demonstrate ability in the computer science discipline. Students must complete the following computer science courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 211</td>
<td>Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>CS 300</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>CS 411</td>
<td>Object-Oriented Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one 400-level or higher elective of at least 3 credit hours

Total Credit Hours 14

1 Refer to graduation requirements at the beginning of this section for details.

**Engineering Technology**

The Bachelor of Science in Engineering Technology (BSET) program at Wichita State University is a hands-on program based on engineering technology fundamentals, engineering principles, instrumentation, mathematics, science and practical design principles needed to equip students for employment or further education. The focus is on current engineering technology issues and applications used in product design, testing, installation and maintenance to prepare students for careers in manufacturing, cybersecurity, construction, health care, education and technical services or sales.

The BSET curriculum offers four specialized program concentrations:

- civil engineering technology;
- cybersecurity;
- engineering technology management,1 and
  - traditional option
  - hybrid option
- mechatronics technology.

1 In addition to the traditional option (face-to-face), it is also available as an online/hybrid option for coursework in the last two years.

**Program Educational Objectives**

Within a few years after graduating from the engineering technology program, the graduates would have:

1. Identified, analyzed and solved broadly-defined engineering technology problems in mechatronics, technology management or environmental sustainability.
2. Engaged in professional development activities through training, certification or advanced degree in engineering technology or related fields.
3. Demonstrated the commitment to address professional and ethical responsibilities including a respect for diversity.

**Sequence of Courses**

The engineering technology undergraduate program requires a minimum completion of 128 credit hours for graduation minus advanced placement credit. Technical elective courses enable a student to graduate with a broad background in engineering technology with a focus in one of four concentrations: civil engineering technology, cybersecurity, engineering technology management or mechatronics technology.

**Majors in Engineering Technology**

- BSET in Engineering Technology - Concentration in Civil Engineering Technology (p. 126)
- BSET in Engineering Technology - Concentration in Cybersecurity (p. 127)
- BSET in Engineering Technology - Concentration in Engineering Technology Management (p. 128)
- BSET in Engineering Technology - Concentration in Mechatronics Technology (p. 128)

**Minors in, or of special interest to, Engineering Technology Students**

- General Business (p. 84)
- Management (p. 85)
- Computer Science (p. 126)

**Courses in Engineering Technology**

- Engineering Technology (ENGT) (p. 336)

**BSET in Engineering Technology - Concentration in Civil Engineering Technology**

All courses with an ENGT prefix require that the prerequisite courses (if applicable) are passed with a C- or better grade (1.700/4.000 grade point average).

**Foundation & General Ed. Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 100</td>
<td>English Composition</td>
<td></td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 385</td>
<td>Engineering Ethics</td>
<td>3</td>
</tr>
<tr>
<td>or PHIL 354</td>
<td>Ethics and Computers</td>
<td></td>
</tr>
<tr>
<td>Fine arts, social/behavioral sciences &amp; humanities</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics/Natural Sciences**
Note: Students under the mechatronics concentration will take ENGT 313 to satisfy prerequisite requirements for ENGT 348.

**BSET in Engineering Technology - Concentration in Cybersecurity**

All courses with an ENGT prefix require that the prerequisite courses (if applicable) are passed with a C- or better grade (1.700/4.000 grade point average).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foundation &amp; General Ed. Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 100</td>
<td>College English</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>College English</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 385</td>
<td>Engineering Ethics</td>
<td>3</td>
</tr>
<tr>
<td>or PHIL 354</td>
<td>Ethics and Computers</td>
<td></td>
</tr>
<tr>
<td>Fine arts, social/behavioral sciences &amp; humanities</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td><strong>Mathematics/Natural Sciences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>or PHYS 214</td>
<td>General College Physics II</td>
<td></td>
</tr>
<tr>
<td><strong>Mathematics/Natural Sciences - (p. 120), #6.</strong></td>
<td></td>
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</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Engineering Technology Core</strong></td>
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<td></td>
</tr>
<tr>
<td>CS 211</td>
<td>Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>or MIS 310</td>
<td>Fundamentals of Business Application Development</td>
<td></td>
</tr>
<tr>
<td>ENGT 301</td>
<td>Fundamentals of Engineering Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 312</td>
<td>Applied Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 354</td>
<td>Statistical Process Control</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 401</td>
<td>Senior Project I</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 402</td>
<td>Senior Project II</td>
<td>3</td>
</tr>
<tr>
<td>IME 222</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>IME 222L</td>
<td>Graphics Lab</td>
<td>1</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>IME 258</td>
<td>Manufacturing Methods and Materials I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Engineering Technology Core</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS 211</td>
<td>Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>or MIS 310</td>
<td>Fundamentals of Business Application Development</td>
<td></td>
</tr>
<tr>
<td>ENGT 301</td>
<td>Fundamentals of Engineering Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 312</td>
<td>Applied Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 354</td>
<td>Statistical Process Control</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 401</td>
<td>Senior Project I</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 402</td>
<td>Senior Project II</td>
<td>3</td>
</tr>
<tr>
<td>IME 222</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>IME 222L</td>
<td>Graphics Lab</td>
<td>1</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>IME 258</td>
<td>Manufacturing Methods and Materials I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Engineer of 2020 program**

Completion of the Engineer of 2020 program

| Total Credit Hours | 79 |

1. Recommend courses: ECON 201, PSY 111 or SOC 111.
2. All engineering technology students must complete these courses, regardless of engineering technology concentration.
3. Students taking MIS 310 will take an additional credit hour toward approved technical electives to satisfy the total hour requirements.
4. Details outlined under College of Engineering Requirements (p. 120), #6.

Note: Students under the mechatronics concentration will take ENGT 313 to satisfy prerequisite requirements for ENGT 348.

**Required Courses for the Concentration**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 210</td>
<td>Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 220</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 431</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>ECON 232</td>
<td>Statistical Software Applications for Business</td>
<td>1</td>
</tr>
</tbody>
</table>
### BSET in Engineering Technology - Concentration in Engineering Technology Management

All courses with an ENGT prefix require that the prerequisite courses (if applicable) are passed with a C- or better grade (1.700/4.000 grade point average).

#### Code | Title | Credit Hours
--- | --- | ---
| ENGT 501 | Cyber Operations | 4 |
| ENGT 601 | Digital Forensics | 3 |
| ENGT 602 | Cyber Physical Systems | 4 |
| ENGT 611 | Cyber Risk Management | 3 |
| ENGT 612 | Secure Web Development | 3 |
| MIS 600 | Database Management Systems | 3 |
| MIS 605 | Systems Analysis and Design | 3 |
| MIS 611 | Topics in Computer Networking | 3 |
| MIS 696 | Management of the IS Function | 3 |

#### Technical Electives
- Select 9 credit hours of technical electives  
  - Total Credit Hours: 48

1. BADM 160 is a prerequisite for ACCT 210. It will be counted as a technical elective. In addition, ECON 202 is recommended as another technical elective course and will be used to satisfy the advanced standing requirement for MIS courses. Students under this concentration are required to take MIS 310 instead of CS 211. Students are also required to take MATH 243 instead of MATH 252. The effective number of hours for technical elective courses under this concentration is 9 hours because of the requirement to take MIS 310 and MATH 243.

#### MIS Minor
- Students interested in the MIS minor must take MIS 325 and MIS 395. One of the two will also be counted as a technical elective toward this concentration. At least 9 credit hours of the MIS courses (MIS 310, MIS 325, MIS 395, MIS 600, MIS 605 and MIS 611) must be taken at WSU with a minor GPA of 2.250 or better.

### BSET in Engineering Technology - Concentration in Mechatronics Technology

All courses with an ENGT prefix require that the prerequisite courses (if applicable) are passed with a C- or better grade (1.700/4.000 grade point average).

#### Code | Title | Credit Hours
--- | --- | ---
| ENGT 501 | Cyber Operations | 4 |
| ENGT 601 | Digital Forensics | 3 |
| ENGT 602 | Cyber Physical Systems | 4 |
| ENGT 611 | Cyber Risk Management | 3 |
| ENGT 612 | Secure Web Development | 3 |
| MIS 600 | Database Management Systems | 3 |
| MIS 605 | Systems Analysis and Design | 3 |
| MIS 611 | Topics in Computer Networking | 3 |
| MIS 696 | Management of the IS Function | 3 |

#### Technical Electives
- Select 9 credit hours of technical electives  
  - Total Credit Hours: 48

1. BADM 160 is a prerequisite for ACCT 210. It will be counted as a technical elective. In addition, ECON 202 is recommended as another technical elective course and will be used to satisfy the advanced standing requirement for MIS courses. Students under this concentration are required to take MIS 310 instead of CS 211. Students are also required to take MATH 243 instead of MATH 252. The effective number of hours for technical elective courses under this concentration is 9 hours because of the requirement to take MIS 310 and MATH 243.

- Recommend courses: ECON 201, PSY 111 or SOC 111.
- All engineering technology students must complete these courses, regardless of engineering technology concentration.
- Students taking MIS 310 will take an additional credit hour toward approved technical electives to satisfy the total hour requirements.
- Details outlined under College of Engineering Requirements (p. 120), #6.

**Note:** Students under the mechatronics concentration will take ENGT 313 to satisfy prerequisite requirements for ENGT 348.

#### Required Courses for Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 210</td>
<td>Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 431</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>DS 350</td>
<td>Introduction to Production and Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>ECON 232</td>
<td>Statistical Software Applications for Business</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 501</td>
<td>The Engineer as Leader</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 441</td>
<td>Analysis of Decision Processes in Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 664</td>
<td>Engineering Project Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM 466</td>
<td>Fundamentals of Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>IB 333</td>
<td>International Business</td>
<td>3</td>
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<tr>
<td>MGMT 360</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 300</td>
<td>Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Technical Electives
- Select 18 credit hours of technical electives  
  - Total Credit Hours: 49

**Note:** BADM 160 is a prerequisite for ACCT 210. It will be counted as a technical elective for engineering technology management students.

### BSET in Engineering Technology - Concentration in Mechatronics Technology

All courses with an ENGT prefix require that the prerequisite courses (if applicable) are passed with a C- or better grade (1.700/4.000 grade point average).
Students under the mechatronics concentration will take ENGT 313 to satisfy prerequisite requirements for ENGT 348.

Recommended Courses for Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENGT 310</td>
<td>Fundamentals of Engineering Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 312</td>
<td>Applied Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 354</td>
<td>Statistical Process Control</td>
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<td>Senior Project I</td>
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<td>Senior Project II</td>
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</tr>
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<td>IME 222</td>
<td>Engineering Graphics</td>
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</tr>
<tr>
<td>IME 222L</td>
<td>Graphics Lab</td>
<td>1</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>IME 258</td>
<td>Manufacturing Methods and Materials I</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Students under the mechatronics concentration will take ENGT 313 to satisfy prerequisite requirements for ENGT 348.

**Computer Science Minor (ENGT - MT Students)**

The CS minor provides a valuable addition to the mechatronics technology major. Please see the Electrical Engineering and Computer Science section for minor requirements (p. 126).

**General Business Minor (ETMgt students)**

A minor in general business is available to any student who is not pursuing a degree in the Barton School of Business. Please see the Business College catalog for detailed minor requirements (p. 84).

**Management Minor (ETMgt students)**

A minor in management is available to any student whose major field or area of emphasis is outside of management. Please see the Business College section of the catalog for detailed minor requirements (p. 85).

**Industrial and Manufacturing Engineering**

The industrial and manufacturing engineering (IME) department at WSU takes responsibility for instruction and research in design, analysis, and operation of manufacturing and other integrated systems of people, material, equipment and capital. The department offers curricula and educational experience designed and continuously improved through the involvement and contribution of its constituents: students and alumni, potential employers of program graduates and faculty.

The IME department offers two undergraduate degree programs, one in industrial engineering (BSIE) and another in manufacturing engineering (BSMfgE). The industrial engineering and manufacturing engineering degree programs are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

The department also offers three graduate degree programs: Master of Engineering Management (MEM), MS in industrial engineering, and PhD in industrial engineering. Both the MSIE and PhD programs allow concentrations in engineering systems, ergonomics/human factors engineering and manufacturing systems engineering. The MEM program is geared toward helping engineers/technologists develop planning, decision-making and managerial skills while receiving advanced technical knowledge.

The department also offers graduate certificate programs in the following three areas: foundations of six sigma and quality improvement, lean systems, and systems engineering and management.

Modern, well-equipped laboratories are available to supplement classroom theory in ergonomics, manufacturing engineering and computer analysis. The department’s laboratory facilities include Cessna Manufacturing Processes Lab, Graphics Lab, Metrology Lab, Reliability Lab, Ergonomics Lab, Rapid Prototyping Lab and Open Computing Lab. Students in the academic programs offered by
the industrial and manufacturing engineering department get ample opportunity to work on real-life problems in local industries as part of course requirements.

**Bachelor of Science Degree in Industrial Engineering**

Industrial engineers (IEs) apply scientific knowledge to solve problems in manufacturing and other industries, businesses and institutions, focusing on productivity improvement through better use of human resources, financial resources, natural resources, and man-made structures and equipment. IEs apply a full range of analytical, simulation and experimentation tools to problems in designing, planning, implementing and operating systems. These problems are found in a wide variety of service organizations (such as banks, hospitals, social services, and government agencies), project-based firms (such as construction and consulting), and product-based firms (such as processing, manufacturing and electronics). The focus of industrial engineering is systems integration and improvement.

**Program Educational Objectives**

The educational objectives of the industrial engineering program are driven by WSU’s mission as an urban university. Industrial engineering graduates are expected, within three to five years after graduation, to meet the following Program Educational Objectives (PEOs):

- **PEO1**: Be employed in jobs related to designing, modeling, analyzing and managing modern complex systems, implementing and improving systems in manufacturing sectors at local, regional, national and global levels.
- **PEO2**: Have engaged in life-long learning, such as graduate studies and research, certification from professional organizations, Fundamentals of Engineering certification, or active participation in professional societies/activities.
- **PEO3**: Demonstrate professional success as evidenced by, among other things, increased job responsibilities and leadership role at the place of employment and in greater society.

**Bachelor of Science Degree in Manufacturing Engineering**

The manufacturing engineering program prepares students to engineer products as well as their production, in an integrated manner. The goal of design and manufacturing activities is the cost-effective conversion of raw materials and intermediate products into higher value products through the use of various design, processing, assembly, automation and mass-production techniques. Students in this program learn to appreciate and use the relationships between design, materials selection, processing, productivity, quality and cost to enhance profitability. The strength of this program is its curriculum in three areas—materials and processes, product engineering and assembly, and manufacturing quality and productivity—with an emphasis on aviation in course materials, projects and a capstone design project. Graduates of this program can apply their broad and comprehensive skills in a wide spectrum of industries.

**Program Educational Objectives**

The educational objectives of the manufacturing engineering program are driven by WSU’s mission as an urban university. Manufacturing engineering graduates are expected, within three to five years after graduation, to meet the following Program Educational Objectives (PEOs):

- **PEO1**: Be employed in jobs related to designing, modeling, analyzing and managing modern complex systems, implementing and improving systems in manufacturing sectors at local, regional, national and global levels.
- **PEO2**: Have engaged in life-long learning, such as graduate studies and research, certification from professional organizations, Fundamentals of Engineering certification, or active participation in professional societies/activities.
- **PEO3**: Demonstrate professional success as evidenced by, among other things, increased job responsibilities and leadership role at the place of employment and in greater society.

**Major Subjects**

- **Manufacturing Engineering**
  - BS in Manufacturing Engineering (p. 131)

**Minor Subject**

- **Manufacturing Engineering**
  - Manufacturing Engineering (IME) (p. 377)

**BS in Industrial Engineering**

**Sequence of Courses**

The BS in industrial engineering program requires the completion of 128 credit hours for graduation, minus hours commensurate with advanced placement credit. Students may select 12 credit hours of technical electives to emphasize the study of engineering systems, ergonomics or manufacturing engineering. This allows students to specialize in a specific area of industrial engineering. Students’ programs are determined by their own interests in consultation with their faculty advisors. All the prerequisite courses must have a grade that generates 2,000 or more credit points per credit hour. Specific requirements for the industrial engineering program are given in the accompanying table.

<table>
<thead>
<tr>
<th>Foundation Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 or ENGL 100</td>
<td>College English I 3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II 3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking 3</td>
</tr>
<tr>
<td>PHIL 385</td>
<td>Engineering Ethics 3</td>
</tr>
<tr>
<td>Fine arts, social/behavioral sciences and humanities courses</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics/Natural Sciences</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242</td>
<td>Calculus I 5</td>
</tr>
<tr>
<td>MATH 243</td>
<td>Calculus II 5</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Calculus III 3</td>
</tr>
<tr>
<td>MATH 511</td>
<td>Linear Algebra 3</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I 4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists II 4</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I 5</td>
</tr>
<tr>
<td>IME 254</td>
<td>Engineering Probability and Statistics I 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engineering Core Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 223</td>
<td>Statics 3</td>
</tr>
<tr>
<td>EE 282</td>
<td>Circuits I 4</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy 3</td>
</tr>
<tr>
<td>ME 398</td>
<td>Thermodynamics I 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 211</td>
<td>Introduction to Programming 3-4</td>
</tr>
</tbody>
</table>
or MIS 310  
Fundamentals of Business Application Development  
ME 250  
Materials Engineering  3  
IME 222  
Engineering Graphics  2  
IME 222L  
Graphics Lab  1  
IME 258  
Manufacturing Methods and Materials I  3  
IME 452  
Work Systems  3  
IME 524  
Engineering Probability and Statistics II  3  
IME 549  
Industrial Ergonomics  3  
IME 550  
Operations Research  3  
IME 553  
Production Systems  3  
IME 554  
Statistical Quality Control  3  
IME 556  
Information Systems  3  
IME 563  
Facilities Planning and Design  3  
IME 565  
Systems Simulation  3  
IME 590 & IME 690  
Industrial Engineering Design I and Industrial Engineering Design II  6  

Technical Electives  
Technical Electives  2  
12  
Total Credit Hours  129-130

1 Refer to graduation requirements at the beginning of this section for details.  
2 At least 6 credit hours must be from the IME department and the rest from a departmentally approved list.

BS in Manufacturing Engineering Sequence of Courses

The BS in Manufacturing Engineering (BSEMF) program requires the completion of 134 credit hours for graduation, minus hours commensurate with advanced placement credit. Students may select 12 credit hours of technical electives to emphasize the study of advanced engineering concepts and topics in other engineering disciplines that impact design and processing. Selection of appropriate courses allows students to tailor their studies to fit their individual interests and needs. Students’ programs of study are determined in consultation with their faculty advisors.

Specific requirements for the manufacturing engineering program are given below.

Foundation Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 or ENGL 100</td>
<td>College English I or English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 385</td>
<td>Engineering Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Other fine arts/humanities &amp; social/behavioral sciences courses</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics/Natural Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 243</td>
<td>Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
</tbody>
</table>

ME 250 & ME 251  
Materials Engineering and Materials Engineering Laboratory  
IME 222  
Engineering Graphics  2  
IME 222L  
Graphics Lab  1  
IME 250 & ME 251  
Materials Engineering Laboratory  
IME 258  
Manufacturing Methods and Materials I  3  
IME 558  
Manufacturing Methods and Materials II  4  
ME 672  
Manufacturing of Composites  3  
or IME 676  
Aircraft Manufacturing and Assembly

Technical Electives

Technical Electives  12  
Total Credit Hours  134

1 Refer to graduation requirements at the beginning of this section for details.

Minor in Manufacturing Engineering

A minor in manufacturing engineering consists of 23 hours including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>IME 222</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>IME 222L</td>
<td>Graphics Lab</td>
<td>1</td>
</tr>
<tr>
<td>ME 250 &amp; ME 251</td>
<td>Materials Engineering Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>IME 258</td>
<td>Manufacturing Methods and Materials I</td>
<td>3</td>
</tr>
<tr>
<td>IME 558</td>
<td>Manufacturing Methods and Materials II</td>
<td>4</td>
</tr>
<tr>
<td>ME 672</td>
<td>Manufacturing of Composites</td>
<td>3</td>
</tr>
</tbody>
</table>
or IME 676 | Aircraft Manufacturing and Assembly | 3      |
Mechanical Engineering

Mechanical engineering is one of the oldest and broadest engineering fields. Mechanical engineers are vital team members in virtually any industrial activity ranging from concept to design, and analysis to manufacturing, from aircraft and automotive to consumer products and building equipment. In these jobs, mechanical engineers design products, machines and develop processes for manufacturing. They analyze, test and develop devices, systems and processes to attain the best performance and durability within cost and time constraints. Examples of specific mechanical engineering jobs include:

- design, development and manufacturing of automotive engines and vehicle systems;
- design, development and manufacturing of gas turbine and other aircraft engines;
- design and construction of electrical power plant energy conversion and generating systems;
- design, development and manufacturing of consumer products, ranging from appliances such as refrigerators, washers and electric drills, to the manufacturing systems for producing facial tissue and processed foods and packaging of these items;
- design and specification of heating, air conditioning and ventilating systems used in aircraft, automobiles and buildings;
- analysis of the complex flow of gases and fluids such as air flow in aircraft inlet ducts and fluid flow in hydraulic and pumping systems;
- study of heat flow, ranging from boilers and automotive radiators to heat management problems in orbiting spacecraft; and
- study of globalization, moral, ethical, economic and business issues related to mechanical engineering;
- design and analysis of robotic systems.

Students in the mechanical engineering program are prepared specifically for these job possibilities, and are also empowered to continue their education, i.e., graduate school. This is accomplished through a broad course of study that covers not only the technical aspects required, but the ethical, professional, communication, economic and business skills needed to be a successful practicing engineer. The program includes components in mathematics and natural sciences, written and oral communication skills, humanities and social sciences, a core of engineering science subjects, and a specified set of required technical courses covering the basic areas of mechanical engineering. In addition, students select elective courses that allow them to develop additional specialized knowledge in engineering such as robotics, manufacturing, entrepreneurship, biomechanics, materials structure and behavior, heat transfer and energy conversion. Modern laboratories and a wide variety of computer facilities provide students with hands-on experience in experimental work and computer-aided design and engineering. The undergraduate program in mechanical engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

Minors in Mechanical Engineering

- Mechanical Engineering (p. 132)

Courses in Mechanical Engineering

- Mechanical Engineering (ME) (p. 391)

BS in Mechanical Engineering

Educational Objectives

Graduates of the Bachelor of Science degree in mechanical engineering are expected to meet the following objectives within a few years of graduation:

- Educate students to be successful mechanical engineers with emphasis on sustainability and globalization.
- Prepare students to pursue life-long learning.
- Prepare students for real-world problems through the program’s emphasis on experiential learning and industry-based projects in a diverse and innovative work environment.

Dual/Accelerated Bachelor’s to Master’s Degree

The dual/accelerated bachelor’s to master’s degree (ABMS) is designed to offer outstanding students the opportunity for advancing their careers by pursuing the bachelor’s and master’s in a parallel program and accelerated time frame. The ABMS also provides more focused advising, preparing the student for graduate study during their sophomore and junior years. The ABMS program develops a close working relationship between the student and a graduate advisor early in the student’s academic career. Eligibility requires ME majors to be within 30–45 credit hours of graduating and have a WSU GPA of 3.250 or better.

Mechanical Engineering Honors Track

Admission Requirements

1. Students must be admitted to the Honors College;
2. Students must be within 60 hours of degree completion;
3. Students must have an overall GPA of at least 3.500 and a GPA of 3.500 in all engineering courses; and
4. Students must complete a letter of application to the mechanical engineering chairperson including the following:
   a. Transcript;
   b. Resume; and
   c. One-page essay on academic and career plans including an undergraduate research idea.

Sequence of Courses

The program requires the completion of 134 credit hours for graduation, minus hours commensurate with advanced placement credit. Specific degree requirements are given below. All the prerequisite courses must have a grade that generates 2.000 or more credit points per credit hour.

Foundation Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
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</tr>
<tr>
<td>or ENGL 100</td>
<td>English Composition</td>
<td></td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
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<td>PHIL 385</td>
<td>Engineering Ethics</td>
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<tr>
<td>Other</td>
<td>arts/humanities &amp; social/behavioral sciences courses</td>
<td>15</td>
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Mathematics/Natural Sciences

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
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<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credits</td>
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<tr>
<td>MATH 243</td>
<td>Calculus II</td>
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<tr>
<td>MATH 344</td>
<td>Calculus III</td>
<td>3</td>
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<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
<td>3</td>
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<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 315</td>
<td>University Physics Lab I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
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<td></td>
<td><strong>Natural Sciences Elective</strong></td>
<td>3</td>
</tr>
<tr>
<td>AE 223</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>EE 282</td>
<td>Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>IME 255</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>ME 398</td>
<td>Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Engineering Core Courses</strong></td>
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<tr>
<td>AE 333</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ME 335</td>
<td>Dynamics for Mechanical Engineers</td>
<td>3</td>
</tr>
<tr>
<td>IME 222</td>
<td>Engineering Graphics</td>
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<td>IME 222L</td>
<td>Graphics Lab</td>
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<td>ME 250</td>
<td>Materials Engineering</td>
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<td>ME 251</td>
<td>Materials Engineering Laboratory</td>
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<tr>
<td>ME 325</td>
<td>Numerical Methods for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ME 339</td>
<td>Design of Machinery</td>
<td>3</td>
</tr>
<tr>
<td>ME 439</td>
<td>Mechanical Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>ME 521</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ME 522</td>
<td>Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>ME 533</td>
<td>Mechanical Engineering Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>ME 633</td>
<td>Mechanical Engineering Systems Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>ME 659</td>
<td>Mechanical Control Systems</td>
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<tr>
<td>ME 662</td>
<td>Senior Capstone Design</td>
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<td></td>
<td><strong>Mechanical Engineering Elective</strong></td>
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<tr>
<td></td>
<td><strong>Mechanical Design Elective</strong></td>
<td>3</td>
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<tr>
<td></td>
<td><strong>Thermal Design Elective</strong></td>
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</tr>
<tr>
<td></td>
<td><strong>Thermal/Fluids Science Electives</strong></td>
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<td><strong>Technical Electives</strong></td>
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</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td>134</td>
</tr>
</tbody>
</table>

1 Refer to graduation requirements at the beginning of this section for details.

2 Must be chosen with advisor’s approval.

**Mechanical Engineering Honors Track**

**Completion Requirements**

1. Formal admission into the mechanical engineering departmental honors track;

2. Maintain a minimum overall GPA of 3.500 and a minimum GPA of 3.500 in engineering courses; and

3. One of the following two options:
   a. Complete any of the ME 600- or 700-level elective courses with a grade of B or better; or
   b. For students with research as part of their professional interests—enroll in ME 678, and complete an undergraduate research project under faculty guidance, resulting in an honors report and presentation of a technical paper highlighting the student’s research in a local technical venue such as GRASP (Undergraduate Research and Scholarly Projects), or a relevant ASME technical conference or equivalent.

**Minor in Mechanical Engineering**

A minor in mechanical engineering consists of the following courses (as well as any prerequisites required by these courses):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 339</td>
<td>Design of Machinery</td>
<td>3</td>
</tr>
<tr>
<td>ME 398</td>
<td>Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>ME 439</td>
<td>Mechanical Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>ME 521</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ME 522</td>
<td>Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td>15</td>
</tr>
</tbody>
</table>
College of Fine Arts

Rodney Miller, dean
112 Jardine Hall • (316) WSU-3389
http://wichita.edu/finearts
Wendy Hanes, assistant dean

The College of Fine Arts is responsible for instruction, scholarly inquiry, performance, teacher education (excepting dance) and applied study in music, dance, theatre and visual arts. The School of Art, Design and Creative Industries, the School of Music and the School of Performing Arts (dance, theatre and music theatre) offer both general arts study and professional training programs at the undergraduate level; professional degrees are offered at the graduate level.

Students are presented with a complete spectrum of choices according to their interest in professional activities, teaching careers, graduate study or acquiring an appreciation of the arts. They have the opportunity to explore various art forms as well as to develop the ability to respond to changes and challenges within the world of the arts. The college strives to develop and use new artistic techniques, current historical research and recent technical innovations to achieve these ends.

The School of Music is an accredited member of the National Association of Schools of Music, the dance program is accredited by the National Association of Schools of Dance and the School of Art, Design and Creative Industries is accredited by the National Association of Schools of Art and Design. All of these programs adhere to requirements for entrance and graduation that accord with the associations’ published criteria.

Admission
All entering freshmen who declare a major within a discipline in the College of Fine Arts, or who enter as a general undecided student in a fine arts discipline, will be enrolled in and advised by the school that houses the discipline (art, design and creative industries; music; performing arts — dance, music theatre, and theatre). All students must maintain a grade point average of 2.000 or above to remain in good standing (see Academic Probation and Dismissal Standards (p. 36)).

Transfer students must present an earned GPA of 2.000 or higher for all prior college work in order to be fully admitted into one of the schools within the College of Fine Arts. Transfer students with a GPA of at least 1.700 but less than 2.000 may petition for probationary admission.

Probation and Dismissal
Students are expected to make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the university.

Students are required to maintain a cumulative and overall WSU grade point average of at least 2.000. Students enrolled in either the music education or art education programs must meet specific curriculum and GPA requirements prior to acceptance into student teaching; consult the Wichita State University Graduate Catalog.

Students who do not achieve or maintain the required 2.000 grade point average will be placed (or continued) on probation at the conclusion of each semester in which their cumulative or overall WSU grade point average falls below 2.000 and they have attempted at least 6 credit hours at Wichita State University. Students on probation are limited to a maximum of 12 credit hours per semester while on probation. Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average at or above the minimum required, and have a cumulative or overall WSU grade point average also below the minimum required. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Transfer students admitted on probation must complete at least 12 credit hours with a minimum grade point average of 2.000 on work at Wichita State before probation may be lifted.

Students who have been dismissed for poor scholarship may be readmitted by permission of the relevant school Curriculum and Policy Committee in the College of Fine Arts and by the university’s Committee on Admissions and Exceptions.

Graduation Requirements
Students must meet the WSU graduation requirements including a minimum of 45 hours of upper-division courses, plus the college requirements described with each program.

General Education Requirements
The College of Fine Arts conforms to the policy set forth by the division of academic affairs at Wichita State University. Some College of Fine Arts programs incorporate specific general education courses, which are required. Students should refer to the General Education Program (p. 55) requirements as well as their specific program check sheet.

Inter-College Double Major
An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 38).

Undergraduate
The College of Fine Arts offers four undergraduate degrees: Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Music (BM), and Bachelor of Music Education (BME). Graduation requirements for each degree are listed in the descriptions of the appropriate school programs.

Graduate
The Graduate School offers a program leading to the Master of Fine Arts (MFA) with emphases in ceramics, painting, printmaking and sculpture; a Master of Music Education (MME) with emphases in elementary music, instrumental music, choral music and music in special education; and a Master of Music (MM) with emphases in chamber music, history-literature, instrumental conducting, opera performance, performance, piano pedagogy and composition.

For information concerning requirements for entrance and curricula, consult the Wichita State University Graduate Catalog.

Certificates
The School of Performing Arts offers two undergraduate certificates: stage management and directing.

Special Academic Area Cooperative Education
The College of Fine Arts participates in the university cooperative education internship program. The program is designed to provide
Bachelor of Fine Arts (BFA) in graphic design is a professional degree offering students studies in graphic design. The school offers minors in art and design, art history, and graphic design to students pursuing majors outside the school. All degree programs are described in detail in the following section.

Advising
The School of Art, Design and Creative Industries requires faculty advising of all its students each semester prior to enrollment. Students are advised on the basis of the program (student progress check sheet) in effect on the date they are admitted into a particular degree program (BA or BFA) rather than the date they enter the university.

Art Foundation Studies
The art foundation studies curriculum prepares students with broad technical, conceptual and visual literacy skills that are basic to all areas of art and design. The curriculum is required of all art and design majors, although students interested in the Bachelor of Arts in art, art history emphasis take a slightly narrowed set of courses. Please see the appropriate program section of the catalog for more details on the specific courses required for each degree.

Prior to completing ARTF 202, all art and design students are designated Art/Pre-Art & Design majors.

Upon completion of ARTF 202, students declare a degree path with major emphasis and are eligible for appropriate upper-division coursework. Changing major codes within art and design after completing ARTF 202 requires approval by the art and design faculty in the new major area.

Transfer Students
Upon acceptance to Wichita State, students must:

1. Arrange a meeting with the art and design student records coordinator, at (316) 978-7701;

Transfer portfolios assist the department in matching the art courses a transfer student has already taken with WSU courses to ensure a smooth transition to the School of Art, Design and Creative Industries.

Deadlines for each semester are as follows: fall, September 1; spring, January 23. Transfer portfolios must be submitted by January 23 to be applied in time for advising. In addition, transfer portfolios submitted by this date will automatically be considered for scholarships (those received after January 23 will have to apply for scholarships on their own the following year). All transfer portfolios are submitted online at http://wsufinearts.slideroom.com. This online application portal will compile applicants’ portfolios, saving partial submissions to allow for return to the portfolio as often as necessary until the application is completed.

Transfer portfolios and applications received after the semester deadline will not be reviewed until the following semester. In such cases students may still be admitted to the School of Art, Design and Creative Industries, but with proposed transfer credits subject to the next portfolio review.

Attendance
The undergraduate art student is expected to attend all scheduled classes and examinations. At the discretion of the faculty member, the student may be failed in a course, or given a lowered grade, based on absences.
In high enrollment classes, a student who misses the first two class meetings may be asked to drop the course. In cases of extended absence for serious illness or other unavoidable reasons the student should notify the director of the School of Art, Design and Creative Industries.

Special Needs
Students with special needs are requested to consult with their professor in his or her office during the first week of class. Students are required to provide appropriate documentation to the director of disability services before classroom services are provided. A special need may involve seating arrangements, note taking, tape recording, examinations, etc. For more information contact the Office of Disability Services at (316) 978-3309.

Minimum Grade Requirements
Art and design students must receive a grade of C (2.00 credit points) or better in all art and design courses applied toward their degree requirements. This policy also applies to transfer credits in art and design being applied toward degree requirements.

Fees
As part of university fees, the College of Fine Arts charges students a fee per credit hour for certain materials, supplies and services that must be provided for the class rather than purchased individually. More information about fees can be found in the Financial Information section of this catalog.

Student Artwork
The School of Art, Design and Creative Industries reserves the right to keep artwork submitted for course credit. In practice, this right is exercised sparingly, but in certain studio areas the selection of one piece by each graduating student contributes to an important instructional collection that is of great value to other students. The faculty also reserves the right to temporarily withhold artwork for exhibition. Students are encouraged to exhibit work in the school as a significant part of the educational experience. At the same time, the school and the university cannot insure student artwork for exhibition purposes or take responsibility for its loss or damage under any circumstances. At the end of each semester, students are required to remove all personal supplies and artwork from classrooms, laboratories, lockers and studios.

Graduation Audit
Students should have a graduation audit prior to the final two semesters before the student’s intended completion date. Appointments can be scheduled with an advisor in the School of Art, Design and Creative Industries. Especially if students have transfer credits, they should keep careful track of their general education and degree requirements to avoid unexpected problems surfacing as they approach their expected date of graduation.

Majors in Art, Design and Creative Industries
- BA in Art - Art Emphasis (p. 137)
- BA in Art - Art History Emphasis (p. 138)
- BFA in Art - Art Education Emphasis (p. 139)
- BFA in Art - Studio Art: Applied Drawing Concentration (p. 141)
- BFA in Art - Studio Art: Ceramics Media Concentration (p. 142)
- BFA in Art - Studio Art: Community & Social Practices Concentration (p. 143)

- BFA in Art - Studio Art: Electronic Media Concentration (p. 144)
- BFA in Art - Studio Art: Painting Concentration (p. 145)
- BFA in Art - Studio Art: Photo Media Concentration (p. 146)
- BFA in Art - Studio Art: Print Media Concentration (p. 147)
- BFA in Art - Studio Art: Sculpture Concentration (p. 148)
- BFA in Graphic Design (p. 149)

Minors in Art, Design and Creative Industries
- Art, Design and Creative Industries (p. 150)
- Art History (p. 150)
- Graphic Design (p. 150)

Courses in the School of Art, Design and Creative Industries
- Art Education (ARTE) (p. 272)
- Art Foundation (ARTF) (p. 274)
- Art History (ARTH) (p. 274)
- Graphic Design (ARTG) (p. 356)
- Studio Art (ARTS) (p. 278)

BA in Art - Art Emphasis
The Bachelor of Arts (BA) in art degree with an art emphasis is designed for students who want to combine a broad training in art and design with additional areas of study. After completing the art foundation studies curriculum, each student gains experience in 2-D, 3-D and design areas, followed by focused work in a single area, or work in a variety of courses from multiple areas as per the student’s goals. The degree requires a minor in an area outside ADCI along with elective courses, selected with the assistance of an advisor, that can be from within ADCI or from other areas of the university.

A minimum total of 124 hours is required for the BA in art — art emphasis and includes 52 credit hours of art and art history courses listed below. In addition to the university scholastic, residence and general education requirements, candidates for the degree must also complete a minor in a discipline other than art and design. The requirements for minors are set by each department. Hours completed for a minor cannot be used to satisfy requirements for two or more minors. Hours completed for the minor may include coursework that satisfies general education requirements.

General Education
| Foundation Courses | 12 |
| Fine Arts | 3 |
| Humanities | 6 |
| Social and Behavioral Sciences | 6 |
| Natural Sciences and Mathematics | 6 |
| Advanced Further Study and I&P | 9 |

Art Foundation Studies Curriculum
| ARTF 102 Introduction to Art and Design | 3 |
| ARTF 136 Foundation 2-D Design | 3 |
| ARTF 145 Foundation Drawing | 3 |
| ARTF 189 Foundation 3-D Design | 3 |
| ARTF 202 Mid-Program Review | 1 |
| ARTH 125 Intro to Visual & Material Culture (two different courses) | 6 |
ARTh 300-level, any combination of courses totaling 6 hours; not more than three credits of ARTh 390_level

ARTh 500-level, 1 course

**Art Distribution Requirements**
Select one of the following 2-D courses:

- ARTS 232 Introduction to Photography
- ARTS 240 Introduction to Life Drawing
- ARTS 245 Digital Studio
- ARTS 252 Introduction to Painting Media
- ARTS 261 Introduction to Printmaking

Select one of the following 3-D courses:

- ARTS 270 Introduction to Ceramics
- ARTS 282 Introduction to Sculpture and Extended Media
- ARTS 283 Digital 3-D Tools in Sculpture

Select one of the following design courses:

- ARTG 216 Typography I
- ARTG 234 Introduction to Graphic Design
- ARTG 235 Graphic Design Concepts
- ARTG 238 Graphic Materials and Processes

**Art Emphasis Requirements**
Any ART/E/G/S 200+ 6
ANY ART/E/G/S 300+ (not more than 6 credit hours of ARTS 390_ or 375_) 9

**Minor in a discipline other than art and design**
Select a minor from an area outside ADCI, as determined by Undergraduate Catalog requirements 15-18

**ADCI or University Electives**
With an advisor, select any additional coursework in art or other discipline that complements the student’s plan of study; credits variable as necessary to fulfill degree requirements. 12-15

Total Credit Hours 121-127

1 Must be completed prior to enrolling in ARTF 202.

**Note:** 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BA in Art - Art History Emphasis**
The Bachelor of Arts (BA) in art degree with an art history emphasis provides a thorough grounding in the liberal arts, provides students with the opportunity for real-life experience through partnerships with local arts organizations, and prepares them for their professional pursuits or graduate studies in art history, museum studies, conservation and art criticism. The program emphasizes thematic knowledge of the major concepts structuring art history across chronological and geographical boundaries, a broad understanding of modern and contemporary art, and exposure to both new/emerging media and also non-Western cultures. This broad, thematic knowledge is augmented by study in greater depth and precision of contemporary art history and art theory. Active research and the writing of analytical and critical texts is a component of courses at all levels. Students also gain a functional knowledge of the creative process through studio, graphic design, foundations or education courses.

A minimum total of 124 hours is required for the BA in art — art history emphasis and includes the 40 credit hours of art and art history courses listed below. In addition to the university scholastic, residence and general education requirements, candidates for the degree must complete the 40 hours of art and art history courses with a minimum grade point average of 2.500 and demonstrate, through coursework, proficiency in at least one non-English language to support research through the reading of primary source materials. The language requirement is normally fulfilled in French or German, but other languages may be substituted with the approval of art history faculty. Grades below C (2.000) in ARTE, ARTG, ARTH, or ARTS courses may not be applied toward degree requirements. Students gain formal admission to the degree program through the preparation of a plan of study in Mid-Program Review (ARTF 202), a course that provides structured advising about career options and degree requirements. Art history majors are also advised to complete a minor or second major in a related area of the humanities or social sciences.

**General Education**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ARTF 102</td>
<td>Introduction to Art and Design</td>
</tr>
<tr>
<td>ARTF 202</td>
<td>Mid-Program Review</td>
</tr>
</tbody>
</table>

**Art and Design Curriculum**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
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<tbody>
<tr>
<td>ARTH 125</td>
<td>Introduction to Visual and Material Culture courses covering different material</td>
</tr>
<tr>
<td>ARTH 387</td>
<td>Theories of Art History and Culture (An upper-division course in the theory of art can be substituted for this requirement)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 390</td>
<td>QuickFire Topics</td>
</tr>
<tr>
<td>ARTS 375</td>
<td>Special Topics in Ceramics</td>
</tr>
</tbody>
</table>

**Electives**

Electives include the language requirement and courses selected from any university program, including art and design, which fulfill the plan of study. Classes in the following disciplines may not be used to meet the electives requirement: HPS, IE, KSS, LASI, RE.

Total Credit Hours 124

1 Transfer students with 60 hours and art and design requirement deficiencies must complete course deficiencies no later than two semesters following entry.

2 ARTH 125_ and ARTHS 390_ courses are alphanumeric, with the letter designating a particular theme or topic for the course. Students are required to take two sections of ARTH 125_, each with a different theme and therefore a different alphanumeric course number, and three different sections of ARTHS 390_.

1
Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BFA in Art - Art Education Emphasis**
The Bachelor of Fine Arts (BFA) in art degree with an art education emphasis is designed for students who want to prepare for a career in teaching the visual arts in grades prekindergarten through the 12th grade. The art teacher must develop competencies in general studies, professional education and a range of studio art skills. Students must select a specialization in studio art or graphic design coursework. The professional education component is dealt with in a practical context, relating educational theories and strategies to the student’s day-by-day artistic experiences. Art teacher candidates are provided opportunities for various types of teaching and directed observation through the period of undergraduate art education study. There is a four-semester sequence of field work beginning with one-hour per week for a semester and ending with an academic year of internship. During the internship year, the first semester is spent in a 12-week assignment with a single class period for a daily experience. The second semester is an all-day experience.

There are five transition points for all teacher candidates. The first point is admission that begins with the fourth or fifth semester of completed coursework. The fifth and final point is program completion and licensure recommendation. After art teacher candidates successfully complete the program, they are recommended by the College of Education to the Kansas State Department of Education for their initial art teaching license.

Requirements for admission to teacher education are identified in the College of Education section of this catalog. Please refer to it for detailed information. The following four requirements must be satisfied to begin the core sequence of coursework in the teacher education program:

1. A 2.750 GPA or higher within the 35 credit hours of general education coursework, which may include up to 10 hours of ARTF courses;
2. A C- or higher grade in the four general education foundation courses:
   - ENGL 101 College English I 3
   - ENGL 102 College English II 3
   - COMM 111 Public Speaking 3
   - MATH 111 College Algebra 3
   - Or other higher-level mathematics course
3. Satisfactory completion of STAT 370; and
4. Completion of PSY 111, or its equivalent.

A passing score on one of the national tests listed in the next section is required.

Other admission requirements also apply such as completion of ARTF 202 and application to the ARTE program. Once candidates have been admitted to the program, a grade of B- or better in each of the ARTE ISAM curriculum planning courses, ARTE 310, ARTE 410 and ARTE 414, is required to continue in the program.

**Standardized Test Requirement**
A prospective art teacher candidate must have satisfactory scores on one of the following four standardized tests: ACT, CAAP, SAT and CORE (registration website (http://registerblast.com/wsu)). For additional information see the Assessment Resource Center website (http://arc.missouri.edu). Minimum scores required on these national tests are listed in the College of Education section. The basic skills test, used to fulfill teacher education program admission requirements must have been taken within 10 years from the date of the candidate’s application to the teacher education program. Application packets are available at the Education Support Services office, 107 Corbin, and website (http://wichita.edu/education/ess).

**Degree Requirements**
In addition to meeting the university’s scholastic, residence and general education requirements for graduation, candidates for the BFA must complete the art foundation studies curriculum (13 credit hours), art history (12 credit hours), art specialization (9 credit hours), art education emphasis (18 credit hours), and professional education courses (16 credit hours). Courses within the art education curriculum fulfill both the university general education requirements for graduation and preparation for Kansas licensure for teaching art in the elementary and secondary levels.

**General Education**

<table>
<thead>
<tr>
<th>Foundation Courses</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>MATH 111 or MATH 112</td>
<td>College Algebra</td>
</tr>
<tr>
<td></td>
<td>Precalculus Mathematics</td>
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</tbody>
</table>

**Fine Arts**
- 3

**Humanities**
- 6

**Social and Behavioral Sciences** (includes PSY 111)
- 6

**Natural Sciences and Mathematics** (includes STAT 370)
- 6

**Advanced Further Study and I&P**
- 9

**Professional Education Sequence**

<table>
<thead>
<tr>
<th>CI 270</th>
<th>Introduction to the Education Profession (with a grade of B- or better)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 311</td>
<td>Introduction to Diversity: Field Experience</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
</tr>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
</tr>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
</tr>
</tbody>
</table>

**Art Foundation Curriculum**

<table>
<thead>
<tr>
<th>ARTF 102</th>
<th>Introduction to Art and Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 136</td>
<td>Foundation 2-D Design</td>
</tr>
<tr>
<td>ARTF 145</td>
<td>Foundation Drawing</td>
</tr>
<tr>
<td>ARTF 189</td>
<td>Foundation 3-D Design</td>
</tr>
<tr>
<td>ARTF 202</td>
<td>Mid-Program Review</td>
</tr>
<tr>
<td>ARTH 125_</td>
<td>Select two different ARTH 125, Intro to Visual &amp; Material Culture courses</td>
</tr>
<tr>
<td>ARTH 347</td>
<td>Themes in Contemporary Art and Design I</td>
</tr>
</tbody>
</table>

*Note: Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).*
ARTH 300+  Select any 3 credit hours of ARTH at or above the 300 level  3

Art Education Program Studies
Select one of the following:  1

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTG 110</td>
<td>Vector Applications</td>
</tr>
<tr>
<td>ARTG 111</td>
<td>Pixel-Based Applications</td>
</tr>
<tr>
<td>ARTG 112</td>
<td>Layout Applications</td>
</tr>
<tr>
<td>ARTS 232</td>
<td>Introduction to Photography 3</td>
</tr>
<tr>
<td>ARTS 240</td>
<td>Introduction to Life Drawing 3</td>
</tr>
<tr>
<td>ARTS 252</td>
<td>Introduction to Painting Media</td>
</tr>
<tr>
<td>ARTS 270</td>
<td>Introduction to Ceramics 3</td>
</tr>
<tr>
<td>ARTE 302</td>
<td>Jewelry Design/Construction 3</td>
</tr>
<tr>
<td>ARTE 303</td>
<td>Stimulating Creative Behavior 3</td>
</tr>
<tr>
<td>ARTE 313</td>
<td>Fiber Exploration 3</td>
</tr>
<tr>
<td>ARTE 314</td>
<td>Aesthetic Inquiry 3</td>
</tr>
<tr>
<td>ARTE 515</td>
<td>Developing Visual Materials for Art Education 3</td>
</tr>
</tbody>
</table>

Art Specialization
Select three courses numbering 300 or above from one area not listed above: ceramics, painting/drawing, printmaking, sculpture, graphic design, photography or art history  9

Art Education Emphasis 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTE 310</td>
<td>ISAM: Elementary Art Education and Literacy 3</td>
</tr>
<tr>
<td>ARTE 410</td>
<td>ISAM: Preteaching Internship: Middle 3</td>
</tr>
<tr>
<td>ARTE 414</td>
<td>ISAM: Secondary Art Education 3</td>
</tr>
<tr>
<td>ARTE 459</td>
<td>Teaching Internship: Elementary Art 4</td>
</tr>
<tr>
<td>ARTE 462</td>
<td>Teaching Internship: Secondary Art 4</td>
</tr>
<tr>
<td>ARTE 517</td>
<td>Teaching Internship Seminar: Art 1</td>
</tr>
</tbody>
</table>

Total Credit Hours 138

1 The art foundation studies requirements must be completed by the time students have completed 60 credit hours, or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

2 A grade of B- or better is required in each course below.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

Teaching Internship
To begin the teaching internship year, a grade of B- or better must be earned in CI 270, ARTE 310 and ARTE 414 prior to enrolling in ARTE 410.

The 12-week preteaching internship course experience (in ARTE 410) occurs in the fall semester in a middle school. The art teacher candidate attends one class period on a daily basis as a part of the requirements for the ARTE 410 course. The candidate plans, teaches and assesses a practice KPTP (KS Performance Teaching Portfolio) based on a 10-day original unit of study presented to the class in the assigned middle school.

Students then apply, by midterm of the semester enrolled in ARTE 410, for placement in the spring teaching internship (Core III). Placement in teaching internship (Core III) requires a health certificate declaring freedom from TB.

Beginning teaching internship (Core III) requires:

1. B- or higher in ARTE 410
2. Senior standing
3. Minimum 2,500 in art courses
4. Minimum 2,500 overall grade point average
5. Recommendation by the art education faculty following a formal interview
6. Passing the second transition point, which includes a selection of embedded assessments identified in the standards for art teacher preparation and the required coursework in C&I and in the School of Art, Design and Creative Industries.

The following spring semester, with acceptance and placement in teaching internship (Core III), the art teacher candidate enrolls in ARTE 459, ARTE 462 and ARTE 517, and is assigned to work with a high school art teacher all day for eight weeks, then assigned to work with an elementary art teacher all day for seven weeks. A grade of B- or higher is required in each of the teaching internship (Core III) courses (ARTE 459, ARTE 462 and ARTE 517). The assignments for the three schools during ARTE 410 and teaching internship (Core III) are made in consultation with the art teacher candidate.

Policies to follow during the teaching internship are identified in the Teaching Internship Handbook, distributed by the curriculum and instruction department, for cooperating teachers, teacher candidates, and university supervisors.

Embedded Assessments
Embedded assessments are included within coursework in the major during the last four semesters. These competencies reflect national standards as well as meet the KSDE (Kansas State Department of Education) required competencies for art teacher preparation. There are seven competencies.

The teacher of art:

1. Demonstrates a strong scholarly foundation in art education and has a clear concept of how art links students to the broad experiences of life.
2. Demonstrates knowledge, competency and teaching ability in the content of art, including aesthetics, art history, art criticism and studio performance.
3. Has the ability to create an environment where individuals, art content and inquiry are held in high regard, and where students can actively learn and create.
4. Selects and adapts a variety of appropriate resources, materials and technologies in order to design a curriculum which enables students to learn, make and respond to art.
5. Demonstrates knowledge of collaborative and promotional strategies for working with colleagues, families and community groups to achieve common goals for enriching the art program, enhancing students’ learning and improving schools.
6. Understands the purposes, principles and design of assessments, as well as the importance of regular monitoring, analysis and evaluation for assessing student and program improvement.
Degree Requirements
A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

General Education
Foundation Courses 12
Fine Arts 3
Humanities 6
Social and Behavioral Sciences 6
Natural Sciences and Mathematics 6
Advanced Further Study and I&P 9

Foundation Curriculum 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 102</td>
<td>Introduction to Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 136</td>
<td>Foundation 2-D Design</td>
<td>3</td>
</tr>
</tbody>
</table>

7. Demonstrates knowledge of professional art organizations, continues professional development and shows responsibility to the field of art.

Licensure
It is possible to graduate with a degree but fail to meet requirements necessary for licensure recommendation. Art teacher candidates assume responsibility for knowing, and fully understanding, their program assessment plan and transition point requirements, which must be met successfully prior to licensure recommendation. Application for teacher licensure in Kansas requires completion of the Principles of Learning and Teaching (PLT) examination and the Praxis content examination, as established by the Kansas State Department of Education in order to qualify for the initial license. A fingerprint test administered by the police department is required. Candidates must be free of any felony conviction. A grade of B- or higher in each of the teaching internship (Core III) courses (ARTE 459, ARTE 462 and ARTE 517) is necessary to receive a recommendation for the teaching license.

BFA in Art - Studio Art: Applied Drawing Concentration
The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students’ perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The applied drawing concentration offers intensive studio work within courses designed to develop a wide range of technical and conceptual skills, including traditional media, mixed media and digital media. The concentration requires a foundation in fundamental aspects of drawing media and rendering, and allows students to pursue applied or fine art drawing approaches.

Applied Drawing Introductory Studies

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 195</td>
<td>Studio Tools Workshop</td>
<td>1</td>
</tr>
<tr>
<td>ARTS 240</td>
<td>Introduction to Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 245</td>
<td>Digital Studio</td>
<td>3</td>
</tr>
</tbody>
</table>

Select four courses from the following: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 211</td>
<td>Introduction to Community</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&amp; Social Practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ARTS 232</td>
<td>Introduction to Photography</td>
</tr>
<tr>
<td></td>
<td>ARTS 252</td>
<td>Introduction to Painting</td>
</tr>
<tr>
<td></td>
<td>Media</td>
<td></td>
</tr>
<tr>
<td>ARTS 261</td>
<td>Introduction to Printmaking</td>
<td></td>
</tr>
<tr>
<td>ARTS 270</td>
<td>Introduction to Ceramics</td>
<td></td>
</tr>
<tr>
<td>ARTS 282</td>
<td>Introduction to Sculpture and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extended Media</td>
<td></td>
</tr>
<tr>
<td>ARTS 283</td>
<td>Digital 3-D Tools in</td>
<td></td>
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<tr>
<td></td>
<td>Sculpture</td>
<td></td>
</tr>
<tr>
<td>ARTG 216</td>
<td>Typography I</td>
<td></td>
</tr>
<tr>
<td>ARTG 234</td>
<td>Introduction to Graphic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
<td></td>
</tr>
<tr>
<td>ARTG 238</td>
<td>Graphic Materials and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Processes</td>
<td></td>
</tr>
</tbody>
</table>

Applied Drawing Program Studies

Select one course in ARTE/ARTG/ARTS 200- or 300-level (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_): 3

Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_, ARTS 391_, ARTS 590_, ARTS 591_, ARTS 591_): 6

Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_, ARTS 591_): 6

Select one of the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 395_</td>
<td>SlowBurn Topics - 1st</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester</td>
<td></td>
</tr>
<tr>
<td>ARTS 590_</td>
<td>SlowBurn Topics - 1st</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester</td>
<td></td>
</tr>
<tr>
<td>ARTS 481N</td>
<td>Cooperative Education:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internship</td>
<td></td>
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</tbody>
</table>

Select one of the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 396_</td>
<td>SlowBurn Topics - 2nd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester</td>
<td></td>
</tr>
<tr>
<td>ARTS 591_</td>
<td>SlowBurn Topics - 2nd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester</td>
<td></td>
</tr>
<tr>
<td>ARTS 481N</td>
<td>Cooperative Education:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internship</td>
<td></td>
</tr>
</tbody>
</table>

Select three 1 credit hour courses from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH/ARTS 390_</td>
<td>QuickFire Topics</td>
<td></td>
</tr>
<tr>
<td>ARTS 375_</td>
<td>Special Topics in Ceramics</td>
<td></td>
</tr>
</tbody>
</table>

Applied Drawing Concentration

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 326</td>
<td>The Moving Image</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 347</td>
<td>Mixed Media in Drawing</td>
<td></td>
</tr>
<tr>
<td>ARTS 341</td>
<td>Life Drawing Studio</td>
<td></td>
</tr>
<tr>
<td>ARTS 345</td>
<td>Intermediate Drawing</td>
<td></td>
</tr>
<tr>
<td>ARTS 545</td>
<td>Advanced Drawing Studio</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 547</td>
<td>Drawing Senior Project</td>
<td>1</td>
</tr>
</tbody>
</table>
A minimum total of 126 hours is required for the BFA in studio art. The curriculum includes 84 credit hours of art and art history courses (listed below). A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

### General Education
- Foundation Courses: 12 hours
- Fine Arts: 3 hours
- Humanities: 6 hours
- Social and Behavioral Sciences: 6 hours
- Natural Sciences and Mathematics: 6 hours
- Advanced Further Study and I&P: 9 hours

### Foundation Curriculum
- ARTF 102: Introduction to Art and Design 3 hours
- ARTF 136: Foundation 2-D Design 3 hours
- ARTF 145: Foundation Drawing 3 hours
- ARTF 189: Foundation 3-D Design 3 hours
- ARTF 202: Mid-Program Review 1 hour

### Art History
Select two different ARTH 125_ courses 6 hours
- ARTH 347: Themes in Contemporary Art and Design I 3 hours
Select 3 credit hours in ARTH 300 + (300-level or above) 3 hours

### Ceramics Media Introductory Studies
- ARTS 195: Studio Tools Workshop 1 hour
- ARTS 240: Introduction to Life Drawing 3 hours
- ARTS 245: Digital Studio 3 hours
- ARTS 270: Introduction to Ceramics 3 hours
Select three of the following courses: 9 hours
- ARTS 211: Introduction to Community & Social Practice
- ARTS 232: Introduction to Photography
- ARTS 252: Introduction to Painting Media
- ARTS 261: Introduction to Printmaking
- ARTS 282: Introduction to Sculpture and Extended Media
- ARTS 283: Digital 3-D Tools in Sculpture
- ARTG 216: Typography I
- ARTG 234: Introduction to Graphic Design
- ARTG 235: Graphic Design Concepts
- ARTG 238: Graphic Materials and Processes

### Ceramics Media Program Studies
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_) 3 hours
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_) 6 hours
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_) 6 hours
Select one of the following: 3 hours
- ARTH 395_: SlowBurn Topics - 1st Semester
- ARTS 590_: SlowBurn Topics - 1st Semester
- ARTS 481N: Cooperative Education: Internship
Select one of the following: 3 hours
- ARTH 396_: SlowBurn Topics - 2nd Semester
- ARTS 591_: SlowBurn Topics - 2nd Semester
- ARTS 481N: Cooperative Education: Internship
Select three 1 credit hour courses from the following: 3 hours
- ARTH/ARTS 390_: QuickFire Topics
- ARTS 375_: Special Topics in Ceramics

### Ceramics Media Concentration
Select two of the following: 6 hours
- ARTS 370: Studio Pottery
- ARTS 372: Sculptural Ceramics
- ARTS 374: Atmospheric Firing
- ARTS 376: Ceramic Design/Mold-Making for Ceramics
- ARTS 373: Intermediate Ceramics Studio III
- ARTS 570: Advanced Ceramics
- ARTS 577: Ceramics Senior Project

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1 Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).
The art foundation curriculum requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BFA in Art - Studio Art: Community & Social Practices Concentration**

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students’ perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express awareness of the visual arts in society through art history and criticism, and their own careers and/or creative possibilities in the 21st century art world.

The community and social practices concentration offers studio courses from a student’s choice in media along with coursework exploring the multiple ways art functions within and relates to different communities, cultures and constituent audiences. Secondary curricular interests include arts administration, arts education, psychology, social work and art therapy.

**Degree Requirements**

A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

### General Education

<table>
<thead>
<tr>
<th>Program</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Courses</td>
<td>12</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Further Study and I&amp;P</td>
<td>9</td>
</tr>
</tbody>
</table>

### Foundation Curriculum 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 102</td>
<td>Introduction to Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 136</td>
<td>Foundation 2-D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 145</td>
<td>Foundation Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 189</td>
<td>Foundation 3-D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 202</td>
<td>Mid-Program Review</td>
<td>1</td>
</tr>
</tbody>
</table>

### Art History

Select two different ARTH 125_ courses: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 347</td>
<td>Themes in Contemporary Art and Design I</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 credit hours in ARTH 300 + (300-level or above)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Community & Social Practices Introductory Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 195</td>
<td>Studio Tools Workshop</td>
<td>1</td>
</tr>
<tr>
<td>ARTS 240</td>
<td>Introduction to Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 245</td>
<td>Digital Studio</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 211</td>
<td>Introduction to Community &amp; Social Practice</td>
<td>3</td>
</tr>
<tr>
<td>Select three courses from the following:</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>ARTS 232</td>
<td>Introduction to Photography</td>
<td></td>
</tr>
<tr>
<td>ARTS 252</td>
<td>Introduction to Painting Media</td>
<td></td>
</tr>
<tr>
<td>ARTS 261</td>
<td>Introduction to Printmaking</td>
<td></td>
</tr>
<tr>
<td>ARTS 270</td>
<td>Introduction to Ceramics</td>
<td></td>
</tr>
<tr>
<td>ARTS 282</td>
<td>Introduction to Sculpture and Extended Media</td>
<td></td>
</tr>
<tr>
<td>ARTS 283</td>
<td>Digital 3-D Tools in Sculpture</td>
<td></td>
</tr>
<tr>
<td>ARTG 216</td>
<td>Typography I</td>
<td></td>
</tr>
<tr>
<td>ARTG 234</td>
<td>Introduction to Graphic Design</td>
<td></td>
</tr>
<tr>
<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
<td></td>
</tr>
<tr>
<td>ARTG 238</td>
<td>Graphic Materials and Processes</td>
<td></td>
</tr>
</tbody>
</table>

### Community & Social Practices Program Studies

Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_) | 3 |

Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_) | 6 |

Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_) | 6 |

Select one of the following: | 3 |
| ARTH 395_ | SlowBurn Topics - 1st Semester                  |
| ARTS 590_ | SlowBurn Topics - 1st Semester                  |
| ARTS 481N | Cooperative Education: Internship              |

Select one of the following: | 3 |
| ARTH 396_ | SlowBurn Topics - 2nd Semester                  |
| ARTS 591_ | SlowBurn Topics - 2nd Semester                  |
| ARTS 481N | Cooperative Education: Internship              |

Select three 1 credit hour courses from the following: | 3 |
| ARTH/ARTS 390_ | QuickFire Topics                  |
| ARTS 375_ | Special Topics in Ceramics               |

### Community & Social Practices Concentration

Select one of the following: | 3 |
| ARTE 302 | Jewelry Design/Construction                |
| ARTE 303 | Stimulating Creative Behavior             |
| ARTE 311 | Art Education Curriculum in Elementary School |
| ARTE 313 | Fiber Exploration                         |
| ARTH 540C | Concepts in Creative Industries: Audiences and Outreach |
| ARTS 324 | Art and Social Media                      |
| ARTS 312 | Community Arts Engagement                 |
A minimum GPA of 2.000 is required within the major. A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

**Degree Requirements**

A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

**General Education**

<table>
<thead>
<tr>
<th>Foundation Courses</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts</td>
<td>3</td>
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<tr>
<td>Humanities</td>
<td>6</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>6</td>
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<tr>
<td>Natural Sciences and Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Further Study and I&amp;P</td>
<td>9</td>
</tr>
</tbody>
</table>

**Foundation Curriculum**

| ARTF 102 | Introduction to Art and Design | 3 |
| ARTF 136 | Foundation 2-D Design | 3 |
| ARTF 145 | Foundation Drawing | 3 |
| ARTF 189 | Foundation 3-D Design | 3 |
| ARTS 481N | Cooperative Education: Internship | 3 |

**Electronic Media Concentration**

| ARTH 395 | SlowBurn Topics - 1st Semester | 3 |
| ARTS 590 | SlowBurn Topics - 2nd Semester | 3 |
| ARTS 481N | Cooperative Education: Internship | 3 |

**Electronic Media Introductory Studies**

| ARTS 195 | Studio Tools Workshop | 1 |
| ARTS 240 | Introduction to Life Drawing | 3 |
| ARTS 245 | Digital Studio | 3 |
| Select four courses from the following: | 12 |
| ARTS 211 | Introduction to Community & Social Practice | |
| ARTS 232 | Introduction to Photography | |
| ARTS 252 | Introduction to Painting Media | |
| ARTS 261 | Introduction to Printmaking | |
| ARTS 282 | Introduction to Sculpture and Extended Media | |
| ARTS 283 | Digital 3-D Tools in Sculpture | |
| ARTG 216 | Typography I | |
| ARTG 234 | Introduction to Graphic Design | |
| ARTG 235 | Graphic Design Concepts | |
| ARTG 238 | Graphic Materials and Processes | |

**Electronic Media Program Studies**

| Select one course in ARTE/ARTG/ARTS 200-level or 300-level | 3 |
| Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_) | 6 |
| Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_) | 6 |
| Select one of the following: | 3 |
| ARTH 395 | SlowBurn Topics - 1st Semester | |
| ARTS 590 | SlowBurn Topics - 2nd Semester | |
| ARTS 481N | Cooperative Education: Internship | |
| Select one of the following: | 3 |
| ARTH 396 | SlowBurn Topics - 2nd Semester | |
| ARTS 591 | SlowBurn Topics - 2nd Semester | |
| ARTS 481N | Cooperative Education: Internship | |
| Select three 1 credit hour courses from the following: | 3 |
| ARTH/ARTS 330 | QuickFire Topics | |
| ARTS 375 | Special Topics in Ceramics | |

**Mid-Program Review**

| ARTS 322 | Video, Sound & Performance | 3 |
| ARTS 324 | Art and Social Media | 3 |
| ARTS 326 | The Moving Image | 3 |
| ARTS 525 | Advanced Electronic Media | 3 |
| ARTS 527 | Electronic Media Senior Project | 1 |
| ARTS 599 | Senior Exhibition | 3 |

Total Credit Hours 126
The art foundation curriculum requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BFA in Art - Studio Art: Painting Concentration**

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students’ perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The painting concentration offers intensive studio work within courses designed to develop a wide range of technical and conceptual skills, including traditional media, mixed media, digital media, and painting’s influence and expression in contemporary visual culture. This approach requires a foundation in the fundamental aspects of painting media, as well as an understanding of the historical and social context in which painting is encountered.

**Degree Requirements**

A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

**General Education**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Foundation Courses</td>
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<td>Humanities</td>
<td>6</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>6</td>
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<tr>
<td>Natural Sciences and Mathematics</td>
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<tr>
<td>Advanced Further Study and I&amp;P</td>
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**Foundation Curriculum**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>ARTF 102</td>
<td>Introduction to Art and Design</td>
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<tr>
<td>ARTF 136</td>
<td>Foundation 2-D Design</td>
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<td>ARTF 145</td>
<td>Foundation Drawing</td>
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<td>ARTF 189</td>
<td>Foundation 3-D Design</td>
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<tr>
<td>ARTF 202</td>
<td>Mid-Program Review</td>
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**Art History**

Select two different ARTH 125_ courses

<table>
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<td>ARTH 347</td>
<td>Themes in Contemporary Art and Design I</td>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ARTH 300 (+300-level or above)</td>
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## Painting Introductory Studies

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>ARTS 195</td>
<td>Studio Tools Workshop</td>
<td>1</td>
</tr>
<tr>
<td>ARTS 240</td>
<td>Introduction to Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 245</td>
<td>Digital Studio</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 252</td>
<td>Introduction to Painting Media</td>
<td>3</td>
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Select three courses from the following:

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ARTS 211</td>
<td>Introduction to Community &amp; Social Practice</td>
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</tr>
<tr>
<td>ARTS 232</td>
<td>Introduction to Photography</td>
<td>3</td>
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<td>ARTS 261</td>
<td>Introduction to Printmaking</td>
<td>3</td>
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<tr>
<td>ARTS 270</td>
<td>Introduction to Ceramics</td>
<td>3</td>
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<tr>
<td>ARTS 282</td>
<td>Introduction to Sculpture and Extended Media</td>
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</tr>
<tr>
<td>ARTS 283</td>
<td>Digital 3-D Tools in Sculpture</td>
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<tr>
<td>ARTG 216</td>
<td>Typography I</td>
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<td>ARTG 234</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
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<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
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</tr>
<tr>
<td>ARTG 238</td>
<td>Graphic Materials and Processes</td>
<td>3</td>
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</tbody>
</table>

## Painting Program Studies

Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)

Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_)

Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 390_, ARTS 391_)

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ARTH 395_</td>
<td>SlowBurn Topics - 1st Semester</td>
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</tr>
<tr>
<td>ARTS 590_</td>
<td>SlowBurn Topics - 1st Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 481N</td>
<td>Cooperative Education: Internship</td>
<td>9</td>
</tr>
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</table>

Select one of the following:

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 396_</td>
<td>SlowBurn Topics - 2nd Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 591_</td>
<td>SlowBurn Topics - 2nd Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 481N</td>
<td>Cooperative Education: Internship</td>
<td>9</td>
</tr>
</tbody>
</table>

Select three 1 credit hour courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ARTH/ARTS 390_</td>
<td>QuickFire Topics</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 375_</td>
<td>Special Topics in Ceramics</td>
<td>3</td>
</tr>
</tbody>
</table>

## Painting Concentration

Select one course in ARTS 300+ 300-level or above (excludes ARTS 375_ and ARTS 390_)

Select two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 354</td>
<td>Painting Materials &amp; Processes</td>
<td>6</td>
</tr>
<tr>
<td>ARTS 356</td>
<td>Painting with Narrative &amp; Sequence</td>
<td>6</td>
</tr>
<tr>
<td>ARTS 358</td>
<td>Painting in the Expanded Field</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 554</td>
<td>Advanced Painting</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 557</td>
<td>Painting Senior Project</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 599</td>
<td>Senior Exhibition</td>
<td>3</td>
</tr>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Credit Hours</td>
<td>126</td>
<td></td>
</tr>
</tbody>
</table>
The art foundation curriculum requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

BFA in Art - Studio Art: Photo Media Concentration

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students’ perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The photo media concentration offers coursework in both analog and digital methods, including B&W darkroom printing, 19th century processes, studio lighting, large format shooting and printing, advanced digital manipulation, appropriation, and crossover with time-based media. A foundation in the fundamental aspects of photography is required, as well as an understanding of the historical and social context in which photography is encountered.

Degree Requirements

A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

General Education

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<th>Foundation Courses</th>
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<tbody>
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<td>Fine Arts</td>
<td>3</td>
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<td>6</td>
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<td>Social and Behavioral Sciences</td>
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</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Further Study and I&amp;P</td>
<td>9</td>
</tr>
</tbody>
</table>

Foundation Curriculum

| ARTF 102 | Introduction to Art and Design | 3 |
| ARTF 136 | Foundation 2-D Design | 3 |
| ARTF 145 | Foundation Drawing | 3 |
| ARTF 189 | Foundation 3-D Design | 3 |
| ARTF 202 | Mid-Program Review | 1 |

Art History

Select two different ARTH 125_ courses | 6 |
| ARTH 347 | Themes in Contemporary Art and Design I | 3 |

Photo Media Introductory Studies

| ARTS 195 | Studio Tools Workshop | 1 |
| ARTS 240 | Introduction to Life Drawing | 3 |
| ARTS 245 | Digital Studio | 3 |
| ARTS 232 | Introduction to Photography | 3 |

Select three courses from the following: | 9 |
| ARTS 211 | Introduction to Community & Social Practice |
| ARTS 232 | Introduction to Photography |
| ARTS 252 | Introduction to Painting Media |
| ARTS 261 | Introduction to Printmaking |
| ARTS 282 | Introduction to Sculpture and Extended Media |
| ARTS 283 | Digital 3-D Tools in Sculpture |
| ARTG 216 | Typography I |
| ARTG 234 | Introduction to Graphic Design |
| ARTG 235 | Graphic Design Concepts |
| ARTG 238 | Graphic Materials and Processes |

Photo Media Program Studies

Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_): | 3 |
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_): | 6 |
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_): | 6 |

Select one of the following: | 3 |
| ARTH 395_ | SlowBurn Topics - 1st Semester |
| ARTS 590_ | SlowBurn Topics - 1st Semester |
| ARTS 481N | Cooperative Education: Internship |

Select one of the following: | 3 |
| ARTH 396_ | SlowBurn Topics - 2nd Semester |
| ARTS 591_ | SlowBurn Topics - 2nd Semester |
| ARTS 481N | Cooperative Education: Internship |

Select three 1 credit hour courses from the following: | 3 |
| ARTH/ARTS 390_ | QuickFire Topics |
| ARTS 375_ | Special Topics in Ceramics |

Photo Media Concentration

Select two of the following: | 6 |
| ARTS 330 | Analog Photographic Techniques |
| ARTS 331 | Digital Photographic Techniques |
| ARTS 334 | Photo Media Topics |
| ARTS 335 | Contemporary Photography Studio |
| ARTS 535 | Advanced Photo Media |
| ARTS 537 | Photo Media Senior Project |
| ARTS 599 | Senior Exhibition |

Total Credit Hours | 126
The art foundation curriculum requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BFA in Art - Studio Art: Print Media Concentration**
The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express ideas through artworks via historical and contemporary aesthetic and technical models, along with developing a substantial vision for their own careers and/or creative possibilities in the 21st century art world.

The print media concentration offers a broad range of studio experiences in the varied media of printmaking through coursework using intaglio, lithography, relief, serigraphy and digital processes. The program provides a wide exposure to traditional and contemporary techniques.

**Degree Requirements**
A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

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<tr>
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<tr>
<th>Foundation Curriculum</th>
<th>ARTF 102 Introduction to Art and Design</th>
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<tr>
<td>ARTF 136 Foundation 2-D Design</td>
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<tr>
<td>ARTF 145 Foundation Drawing</td>
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<tr>
<td>ARTF 189 Foundation 3-D Design</td>
<td>3</td>
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<tr>
<td>ARTF 202 Mid-Program Review</td>
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<tr>
<th>Art History</th>
<th>Select two different ARTH 125_ courses</th>
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<tbody>
<tr>
<td>ARTH 347 Themes in Contemporary Art and Design I</td>
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| Select 3 credit hours in ARTH 300 + (300-level or above) | 3 |

<table>
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<tr>
<th>Print Media Introductory Studies</th>
<th>ARTS 195 Studio Tools Workshop</th>
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<tbody>
<tr>
<td>ARTS 240 Introduction to Life Drawing</td>
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<tr>
<td>ARTS 245 Digital Studio</td>
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<tr>
<td>ARTS 261 Introduction to Printmaking</td>
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</table>

Select three courses from the following:

| ARTS 211 Introduction to Community & Social Practice | 9 |
| ARTS 232 Introduction to Photography | |
| ARTS 252 Introduction to Painting Media | |
| ARTS 270 Introduction to Ceramics | |
| ARTS 282 Introduction to Sculpture and Extended Media | |
| ARTS 283 Digital 3-D Tools in Sculpture | |
| ARTG 216 Typography I | |
| ARTG 234 Introduction to Graphic Design | |
| ARTG 235 Graphic Design Concepts | |
| ARTG 238 Graphic Materials and Processes | |

**Print Media Program Studies**
Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_) | 3 |
Select two courses in ARTE/ARTG/ARTS 300-level (excludes ARTS 375_, ARTS 390_) | 6 |
Select two courses in ARTE/ARTG/ARTS 300-level or above (excludes ARTS 375_, ARTS 390_, ARTS 590_, ARTS 591_) | 6 |
Select one of the following: | 3 |
| ARTH 395_ SlowBurn Topics - 1st Semester | |
| ARTS 590_ SlowBurn Topics - 1st Semester | |
| ARTS 481N Cooperative Education: Internship | |

Select one of the following: | 3 |
| ARTH 396_ SlowBurn Topics - 2nd Semester | |
| ARTS 591_ SlowBurn Topics - 2nd Semester | |
| ARTS 481N Cooperative Education: Internship | |

Select three 1 credit hour courses from the following: | 3 |
| ARTH/ARTS 390_ QuickFire Topics | |
| ARTS 375_ Special Topics in Ceramics | |

**Print Media Concentration**
Select three of the following: | 9 |
| ARTS 360 Intaglio | |
| ARTS 361 Lithography | |
| ARTS 366 Silkscreen | |
| ARTS 367 Relief | |
| ARTS 369 Intermediate Printmaking Studio | |
| ARTS 560 Advanced Printmaking | 3 |
| ARTS 567 Printmaking Senior Project | 1 |
| ARTS 599 Senior Exhibition | 3 |

**Total Credit Hours** | 126
The art foundation curriculum requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BFA in Art - Studio Art: Sculpture Concentration**

The Bachelor of Fine Arts (BFA) in art — studio art emphasis develops students' perceptual skills, technical making skills, creativity, and ability to think critically and independently. Students are encouraged to explore ideas between fine and applied arts methodologies and gain experiences in developing and applying skills and creativity outside the classroom. Instruction in use of art materials and specific art processes enables students to create original work reflecting their evolving vision. The degree program also facilitates broad cultural awareness of the visual arts in society through art history and criticism, the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express the expectation of travel, and applied, real-world experiences required within the curriculum. Graduating majors are able to clearly express their own careers and/or creative possibilities in the 21st century art world.

The sculpture concentration offers a varied and rich learning experience in a broadly defined interpretation of three-dimensional media. The sculpture studios in Henrion Gym, where modeling, fabricating, carving, casting, nontraditional and contemporary techniques take place, continually expose students to diverse sculpture-making processes. The focus of the sculpture concentration is to provide students with instruction in technical and creative problem solving to promote experimentation and technical proficiency in developing a personal artistic vision relevant to current art practice.

**Degree Requirements**

A minimum total of 126 hours is required for the BFA in studio art and includes 84 credit hours of art and art history courses (listed below). Students must also meet the university’s scholastic, residence and general education requirements for graduation.

A grade of C (2.000) or better is required in all major courses. A minimum GPA of 2.000 is required within the major.

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<table>
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<tr>
<th>Category</th>
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</tr>
<tr>
<td>Advanced Further Study and I&amp;P</td>
<td>9</td>
</tr>
</tbody>
</table>

**Foundation Curriculum**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 102</td>
<td>Introduction to Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 136</td>
<td>Foundation 2-D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 145</td>
<td>Foundation Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 189</td>
<td>Foundation 3-D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 202</td>
<td>Mid-Program Review</td>
<td>1</td>
</tr>
</tbody>
</table>

**Art History**

Select two different ARTH 125_ courses 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 232</td>
<td>Introduction to Photography</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 252</td>
<td>Introduction to Painting Media</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 261</td>
<td>Introduction to Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 270</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 283</td>
<td>Digital 3-D Tools in Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 216</td>
<td>Typography I</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 234</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 238</td>
<td>Graphic Materials and Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

**Introductory Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 195</td>
<td>Studio Tools Workshop</td>
<td>1</td>
</tr>
<tr>
<td>ARTS 240</td>
<td>Introduction to Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 245</td>
<td>Digital Studio</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 282</td>
<td>Introduction to Sculpture and Extended Media</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 211</td>
<td>Introduction to Community &amp; Social Practice</td>
<td>9</td>
</tr>
<tr>
<td>ARTS 232</td>
<td>Introduction to Photography</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 252</td>
<td>Introduction to Painting Media</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 261</td>
<td>Introduction to Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 270</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 283</td>
<td>Digital 3-D Tools in Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 216</td>
<td>Typography I</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 234</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 238</td>
<td>Graphic Materials and Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Studies**

Select one course in ARTE/ARTG/ARTS 200-level or 300-level (excludes ARTS 375_, ARTS 390_)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 395_</td>
<td>SlowBurn Topics - 1st Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 590_</td>
<td>SlowBurn Topics - 1st Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 481N</td>
<td>Cooperative Education: Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 396_</td>
<td>SlowBurn Topics - 2nd Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 591_</td>
<td>SlowBurn Topics - 2nd Semester</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 481N</td>
<td>Cooperative Education: Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three 1 credit hour courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH/ARTS 390_</td>
<td>QuickFire Topics</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 375_</td>
<td>Special Topics in Ceramics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 380</td>
<td>Intermediate Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 381</td>
<td>Materials, Techniques and Extended Media in Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 383</td>
<td>Time as Media in Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 580</td>
<td>Advanced Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 587</td>
<td>Sculpture Senior Project</td>
<td>1</td>
</tr>
<tr>
<td>ARTS 599</td>
<td>Senior Exhibition</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours**

126
The art foundation curriculum requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following entry.

Note: 45+ upper-division hours are required for graduation. Model programs of study are available in the School of Art, Design and Creative Industries office and online (http://wichita.edu/adci).

**BFA in Graphic Design**

The Bachelor of Fine Arts (BFA) in graphic design is the professional degree for students intending to enter the field of visual communication and design. The program provides courses in typography, illustration, photography, book design, advertising, package design, computer graphics and design theory.

The study of graphic design develops the ability to solve communication problems within a cultural, aesthetic, technical, ethical and economic context. Designers create visual messages that serve many needs including advertising, packaging, publishing, identity and branding, websites and television graphics. These solutions require creativity and lateral thinking, as well as the technical, verbal and written skills to solve specific client problems in their communications.

Graphic design has its roots in a variety of disciplines, including sociology, linguistics, art and design history, and technology. The field has traditionally been linked to commerce and the ability of merchants and institutions to communicate with specific audiences. It is also related to philosophical, literary, architectural and artistic movements.

Throughout their course of study, graphic design majors assemble a professional portfolio of work to present to potential employers. Career options include advertising agencies, art studios, corporate art departments and freelance work.

The art foundation studies program and the preparatory coursework in the graphic design program enable design majors to meet criteria for application into the degree after the mid-program review. A limited number of students are accepted into the program based on portfolio review during ARTF 202. Students admitted into the program are required to complete the graphic design emphasis coursework during the four consecutive semesters of their junior and senior years. They are also required to enroll in ARTG 354 each of those semesters for a total of four credits.

In addition to the university’s scholastic, residence and general education requirements, candidates for the BFA in graphic design must complete:

- art foundation studies curriculum (13 credit hours),
- art history (12 credit hours),
- introductory graphic design (15 credit hours),
- graphic design program studies (28 credit hours), and
- graphic design electives (15 credit hours).

**Degree Requirements**

A minimum total of 125 credit hours is required for the BFA in graphic design and includes 67 credit hours of art and art history courses listed below. Students must also meet the university’s scholastic, residence and general education requirements for graduation.

<table>
<thead>
<tr>
<th>Foundation Courses</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Further Study and I&amp;P</td>
<td>9</td>
</tr>
</tbody>
</table>

**Art Foundation Curriculum**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 102</td>
<td>Introduction to Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 136</td>
<td>Foundation 2-D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 145</td>
<td>Foundation Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 189</td>
<td>Foundation 3-D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTF 202</td>
<td>Mid-Program Review</td>
<td>1</td>
</tr>
</tbody>
</table>

**Art History**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 125</td>
<td>Introduction to Visual and Material Culture (Select two different ARTH 125_, courses for a total of 6 credit hours)</td>
<td>6</td>
</tr>
<tr>
<td>ARTH 300+</td>
<td>Select two courses in ARTH at or above the 300 level</td>
<td>6</td>
</tr>
</tbody>
</table>

**Introductory Graphic Design**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTG 110</td>
<td>Vector Applications</td>
<td>1</td>
</tr>
<tr>
<td>ARTG 111</td>
<td>Pixel-Based Applications</td>
<td>1</td>
</tr>
<tr>
<td>ARTG 112</td>
<td>Layout Applications</td>
<td>1</td>
</tr>
<tr>
<td>ARTG 216</td>
<td>Typography I</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 234</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 238</td>
<td>Graphic Materials and Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

**Graphic Design Program Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTG 316</td>
<td>Typography II</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 334</td>
<td>Exploration of Graphic Design Media</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 335</td>
<td>Sequential Media</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 337</td>
<td>Drawing for Visual Communication</td>
<td>3</td>
</tr>
<tr>
<td>Take 4 semesters of the following:</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>ARTG 354</td>
<td>Professional Practices in Graphic Design</td>
<td></td>
</tr>
<tr>
<td>ARTG 434</td>
<td>Graphic Design Campaigns</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 435</td>
<td>Graphic Design Capstone</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 490</td>
<td>Graphic Design Applications</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 491</td>
<td>Interactive Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Graphic design electives should be chosen with the approval of a graphic design advisor. In addition to any graphic design courses, students may also choose electives from other courses offered in the School of Art, Design and Creative Industries including studio arts, art education and art history. Students may also choose classes from other programs within the university including communication, business, entrepreneurship, marketing and theatre.

Total Credit Hours 125

1 The art foundation studies requirements must be completed by the time students have completed 60 credit hours or prior to entry to classes where individual courses serve as prerequisites. Transfer students with 60 credit hours and art foundation requirement deficiencies must complete course deficiencies no later than two semesters following declaration of ADCI major.
The School of Music, which includes program areas of music education, musicology-composition, keyboard, strings, voice and winds/percussion, offers courses and curricula designed to train and educate students who are planning careers in music. In addition, the school’s offerings allow students to gain an understanding of music as a humanistic study. Recitals by students, faculty and guests are augmented by the overall community programs in the fine arts.

Students in the School of Music enjoy the use of extensive facilities in the Duerksen Fine Arts Center and Wiedemann Hall; these include the Lewis and Selma Miller Concert Hall and the recital/concert auditorium in Wiedemann Hall, which was constructed in 1986 to house the first Marcussen organ in North America.

### Policies
#### Proficiency Examinations
Students eligible for university enrollment may enter a music degree program. However, majors in music must demonstrate performance ability on a minimum of one instrument or in voice. After their initial registration, students have their proficiency judged by their major professor; thereafter, they must perform for a faculty jury each semester to determine their proficiency level and progress. Semester proficiency cards, on which progress is recorded, are maintained for each student.

All music majors must pass a piano proficiency examination. Entering students majoring in music whose background indicates they are competent in piano may pass the requirement by special examination. Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. Transfer students who submit proof of the completion of a comparable piano proficiency examination by official transcript or letter from their former institutions are exempted from this requirement.

All proficiency examinations must be passed before a student is allowed to student teach.

#### Applied Music
Individual instruction is given in instruments and voice to develop musicianship, performance skills and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

Applied students other than music majors must enroll in the appropriate nonmajor category (see Schedule of Courses). This will provide a 30-minute lesson per week.

Enrollments of 1 credit hour are provided to music majors studying secondary instruments. These receive a 30-minute lesson each week and require a minimum of five hours of practice per week.

Enrollments of 2 credit hours are provided to majors and special music students. These receive either:

1. A 30-minute private lesson (minimum) each week and a one-hour master class each week or
2. A one-hour lesson per week or other equivalent arrangement at the option of the instructor.

Students are required to practice a minimum of 10 hours each week.

Enrollments of 4 credit hours are provided to performance majors (juniors and above) and special music students. These receive two 30-minute lessons each week (minimum) and a one-hour master class each week, or other equivalent arrangement at the option of the instructor. Students are required to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they are taught on the university campus by approved music
faculty. Students wishing to drop an applied lesson registration must inform the instructor in person and secure his or her signature on the drop form before approval may be given by the college office.

Applied music students may enroll in the following classifications:

- Freshmen and sophomores:
  - MUSA 112_ Applied Music Instruction for Nonmajors
  - MUSA 231_ Applied Music, Majors
  - MUSA 232_ Applied Music, Majors

- Juniors and seniors:
  - MUSA 112_ Applied Music Instruction for Nonmajors
  - MUSA 431_ Applied Music, Majors
  - MUSA 432_ Applied Music, Majors
  - MUSA 434_ Applied Music, Majors

- Graduate students:
  - MUSA 712_ Applied Music Instruction for Nonmajors
  - MUSA 731_ Applied Music, Majors
  - MUSA 732_ Applied Music, Majors
  - MUSA 734_ Applied Music, Majors

1 Performance majors or designated students only may enroll in MUSA 434 or MUSA 734.

These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve an acceptable level of performance proficiency, which is determined by the faculty according to each student’s degree program. In addition, students may be required to pass an examination on materials in their chief performing medium.

**Recitals**

All music majors are required to enroll in four semesters of MUSP 105, and attend a minimum of 14 specified recitals and concerts sponsored by the School of Music each of the semesters. For majors other than BA, performance of the senior recital fulfills a fifth semester recital requirement; they must be enrolled in Recital during that semester (MUSP 400 for BME and BM majors; MUSP 450 or MUSP 451 for accompanying majors). Senior recital is not required for the BA in music.

All music majors are required to declare a chief performance medium. BM and BME majors are required to present either a public or a jury recital prior to graduation. The decision as to whether the performance will be jury or public is made by an examining committee. Students present to the examining committee a projected senior recital program and the examining committee determines:

1. The suitability of the projected program,
2. The capability of the student to perform the program publicly, or
3. The advisability of performing the senior recital before a faculty jury in lieu of a public recital.

Further recital specifications are found under graduation requirements for Bachelor of Music in composition.

No music major may prepare or perform the senior recital without the guidance of a School of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, music majors must continue to enroll (2 credit hour minimum) in their major instrument through the preparation for and the performance of the recital. The required number of credit hours must be earned in applied instruction even though there may be credits to complete after the senior recital has been performed.

1 See BME degree requirements for specific recital requirements in those degree plans.

**Majors in the School of Music**

- Bachelor of Music (p. 151)
  - BM in Composition (p. 151)
  - BM in Instrumental Performance - Jazz Studies Emphasis (p. 152)
  - BM in Instrumental Performance - Piano Emphasis (p. 152)
  - BM in Performance - Piano Emphasis (p. 153)
  - BM in Performance - Vocal Emphasis (p. 154)

- Bachelor of Music Education (p. 155)
  - BME - Instrumental (p. 155)
  - BME - Keyboard (p. 156)
  - BME - Vocal (p. 157)
  - Bachelor of Special Music Education (p. 157)

- Bachelor of Arts in Music (p. 158)

**Minors in Music**

- Music (p. 158)

**Courses in the School of Music**

- Music Applied (MUSA) (p. 398)
- Music Education (MUSE) (p. 407)
- Music Performance (MUSP) (p. 410)
- Musicology-Composition (MUSC) (p. 414)

**Bachelor of Music Requirements**

Students receiving the Bachelor of Music (BM) choose either a performing medium (piano, organ, voice, strings, wind or percussion) or composition as their major area of emphasis.

The general graduation requirements of the university must be met as described in the general education program (p. 55). In addition, certain music requirements must be met for the different degree emphases in the School of Music.

All students must earn 45+ hours of credit in upper-division courses.

**BM in Composition**

**Applied Music**

Select one of the following options: 20

- Option A:
  - Chief performing medium (piano, organ) - 16 credit hours
  - Other performing medium - 4 credit hours

- Option B:
  - Chief performing medium (non keybd.) 8 credit hours
  - Keyboard performing medium - 8 credit hours
  - Other performing media - 4 credit hours

**General Music**

- MUSC 127 Theory I
- MUSC 128 Theory II
- & MUSC 130 and Aural Skills I
- & MUSC 130 and Aural Skills II
- MUSC 129 and Aural Skills I
- MUSC 128 and Aural Skills II
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 227 &amp; MUSC 229</td>
<td>Theory III and Aural Skills III</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 228 &amp; MUSC 230</td>
<td>Theory IV and Aural Skills IV</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 259</td>
<td>Introduction to Music Composition</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 260</td>
<td>Beginning Music Composition</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 523</td>
<td>Form And Analysis</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 531</td>
<td>Introduction to Electronic Music</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 560</td>
<td>Applied Composition</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 561</td>
<td>18th Century Counterpoint</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 641</td>
<td>Orchestration</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 660</td>
<td>Applied Composition</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 671</td>
<td>Chromatic Harmony</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 672</td>
<td>Contemporary Techniques</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 113</td>
<td>Introduction to Music Literature</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 334</td>
<td>History of Music I</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 335</td>
<td>History of Music II</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 162</td>
<td>World Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSP 307</td>
<td>Instrumental Conducting</td>
<td>2</td>
</tr>
<tr>
<td>or MUSP 308</td>
<td>Choral Conducting</td>
<td></td>
</tr>
<tr>
<td>MUSP 651</td>
<td>Advanced Conducting and Score Reading</td>
<td>2</td>
</tr>
<tr>
<td>or MUSP 691</td>
<td>Advanced Choral Conducting</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>Ensembles</td>
<td>8-10</td>
</tr>
<tr>
<td>MUSP 105</td>
<td>Recital Attendance (four smstrs.)</td>
<td>0</td>
</tr>
<tr>
<td>Senior Recital</td>
<td>Senior Recital</td>
<td>1</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>81-83</td>
</tr>
</tbody>
</table>

1. See degree check sheets for specified ensembles.
2. Ensembles are counted by semester.

Composition majors are required to present for public performance a selection of their compositions representing large and small forms, totaling a minimum of 20 minutes. Students must submit completed scores representing a majority of the program to an examining committee the semester prior to that of the proposed recital; the examining committee shall determine the acceptability of the program. The composition or compositions must be submitted in a minimum of two copies done manually in ink or by laser printing using an approved music typesetting computer program. These copies must represent a high quality of manuscript technique or music typesetting. In addition, students may elect to present a second recital in their chief performing medium with the permission of their applied music instructor and achievement of junior proficiency in that instrument.

Note: All music majors must pass a piano proficiency examination.

**BM in Performance - Instrumental Emphasis**

**Applied Music**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSA 232_</td>
<td>Applied Music Instruction (classical)</td>
<td>8</td>
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<tr>
<td>MUSA 252_</td>
<td>Applied Music-Jazz</td>
<td>4</td>
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<tr>
<td>MUSA 454</td>
<td>Applied Lessons Jazz Performance</td>
<td>16</td>
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<tr>
<td>MUSA 113P &amp; MUSA 116P</td>
<td>Piano Class Level I - Music Majors and Piano Class Level IV - Music Majors</td>
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<tr>
<td>MUSA 313J</td>
<td>Basic Jazz Piano</td>
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**General Music**

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<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<tr>
<td>MUSC 120</td>
<td>Jazz Improv Level 1</td>
<td>2</td>
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<tr>
<td>MUSC 121</td>
<td>Jazz Improv Level 2</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 127 &amp; MUSC 129</td>
<td>Theory I and Aural Skills I</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 128 &amp; MUSC 130</td>
<td>Theory II and Aural Skills II</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 240 &amp; MUSC 241</td>
<td>Jazz Music Theory 3 and Jazz Aural Skills 3</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 242 &amp; MUSC 243</td>
<td>Jazz Music Theory 4 and Jazz Aural Skills 4</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 345</td>
<td>Jazz Arranging</td>
<td>2</td>
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<tr>
<td>MUSC 523</td>
<td>Form And Analysis</td>
<td>2</td>
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<tr>
<td>MUSC 113</td>
<td>Introduction to Music Literature</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 334</td>
<td>History of Music I</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 335</td>
<td>History of Music II</td>
<td>3</td>
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<tr>
<td>MUSC 162</td>
<td>World Music</td>
<td>3</td>
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<tr>
<td>MUSP 307</td>
<td>Instrumental Conducting</td>
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<tr>
<td>Electives</td>
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<td>Pedagogy</td>
<td>MUSE 511</td>
<td>2</td>
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<td>Ensembles</td>
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<tr>
<td>Recital</td>
<td>Recital Attendance (specified number of recitals per semester for four smstrs.)</td>
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<tr>
<td>MUSP 300</td>
<td>Junior Recital</td>
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<tr>
<td>MUSP 400</td>
<td>Senior Recital</td>
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<tr>
<td>Total Credit Hours</td>
<td></td>
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</table>

1. As directed by jazz faculty until upper-level proficiency is demonstrated via jury (may continue with additional 232 courses with permission).
2. Piano proficiency is a prerequisite for Basic Jazz Piano.
3. See degree check sheets for specified ensembles.
4. Ensembles are counted by semester.

**Note:** All music majors must pass a piano proficiency examination.
MUSC 127 & MUSC 129

Theory I and Aural Skills I 4

MUSC 128 & MUSC 130

Theory II and Aural Skills II 4

MUSC 227 & MUSC 229

Theory III and Aural Skills III 4

MUSC 228 & MUSC 230

Theory IV and Aural Skills IV 4

MUSC 523

Form And Analysis 2

MUSC 561

18th Century Counterpoint 2

MUSC 641

Orchestration 2

History and Literature of Music

MUSC 113

Introduction to Music Literature 3

MUSC 334

History of Music I 3

MUSC 335

History of Music II 3

Select one of the following: 3

3 credit hours of upper-division electives in music history or literature

MUSC 162

World Music

Conducting

MUSP 307

Instrumental Conducting 2

MUSP 651

Advanced Conducting and Score Reading 2

Ensembles

Ensembles 1, 2 10

Electives

Music courses 2

Pedagogy

Select one of the following: 2

MUSP 620

String Pedagogy: Violin and Viola

MUSP 680

Woodwind Pedagogy

MUSP 681

Brass Pedagogy

MUSP 682

Percussion Pedagogy

MUSP 790

Special Topics in Music (for all other instrumental BM majors)

Senior Recital

MUSP 400

Senior Recital 1

Recital Attendance

MUSP 105

Recital Attendance (specified number of recitals per semester for four semstr.) 0

Total Credit Hours 81

1 See degree check sheets for specified ensembles.

2 Ensembles are counted by semester.

Note: All music majors must pass a piano proficiency examination.

BM in Performance - Keyboard Emphasis

All Programs

Applied Music

Chief performing medium (see specific major) 4

Second performing medium 4

General Music

MUSC 127 & MUSC 129

Theory I and Aural Skills I 4

MUSC 128 & MUSC 130

Theory II and Aural Skills II 4

MUSC 227 & MUSC 229

Theory III and Aural Skills III 4

MUSC 228 & MUSC 230

Theory IV and Aural Skills IV 4

MUSC 523

Form And Analysis 2

MUSC 561

18th Century Counterpoint 2

MUSC 641

Orchestration 2

History and Literature of Music

MUSC 113

Introduction to Music Literature 3

MUSC 334

History of Music I 3

MUSC 335

History of Music II 3

Conducting

MUSP 307

Instrumental Conducting 2

or MUSP 308

Choral Conducting

Ensembles

See specific major 1, 2

Recital Attendance

MUSP 105

Recital Attendance (specified number of recitals per semester for four semstr.) 0

Total Credit Hours 37

1 See degree check sheets for specified ensembles.

2 Ensembles are counted by semester.

Specific Keyboard Program Requirements

Piano Performance Emphasis

Applied Piano 24

Second performing medium 4

MUSP 250

Applied Piano Concerto 4

& MUSP 251

and Applied Piano Concerto

MUSP 207

Piano Repertoire 6

& MUSP 407

and Piano Repertoire

MUSP 580

Piano Pedagogy 2

MUSC 782

Piano Literature I 4

& MUSC 783

and Piano Literature II

Ensembles - Four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying or an ensemble each semester they hold a scholarship 1, 2

MUSP 300

Junior Recital (piano) 1

MUSP 400

Senior Recital (piano) 1

Total Credit Hours 54

1 See degree check sheets for specified ensembles.

2 Ensembles are counted by semester.

Piano Accompanying Emphasis

Applied Piano 16

Second performing medium 4

MUSP 223

Applied Piano Accompanying 4

& MUSP 224

and Applied Piano Accompanying

MUSP 423

Applied Piano Accompanying 8

& MUSP 424

and Applied Piano Accompanying

MUSP 121

Italian Diction 1

MUSP 122

English Diction 1

MUSP 221

German Diction 1

MUSP 222

French Diction 1
MUSP 207 Piano Repertoire 4
&MUSP 407 and Piano Repertoire
MUSP 580 Piano Pedagogy 2
MUSC 726 Voice Literature 3
MUSC 685 String Literature & Materials 2
Ensembles - Four semesters of accompanying required for all Bachelor of Music piano majors and 4 hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying or an ensemble each semester they hold a scholarship \(^1, 2\)
MUSP 300 Junior Recital (piano) 1
MUSP 450 Accompanying Recital 2
&MUSP 451 and Accompanying Recital (Senior) 2
Total Credit Hours 58

1 See degree check sheets for specified ensembles.
2 Ensembles are counted by semester.

**Piano Pedagogy Emphasis**
Applied Piano 24
Second performing medium 4
MUSP 207 Piano Repertoire 6
&MUSP 407 and Piano Repertoire
MUSP 580 Piano Pedagogy 2
MUSP 581 Piano Teaching Materials 2
MUSC 782 Piano Literature I 4
&MUSC 783 and Piano Literature II 4
MUSP 790 Special Topics in Music (designated) 4
Ensembles - Four semesters of accompanying and 4 hours of appropriate ensemble required for all Bachelor of Music piano majors. Keyboard scholarship recipients are required to enroll in accompanying or an ensemble each semester they hold a scholarship \(^1, 2\)
MUSP 400 Senior Recital (piano) 1
Total Credit Hours 55

1 See degree check sheets for specified ensembles.
2 Ensembles are counted by semester.

**Organ Emphasis**
Applied Organ 30
MUSC 587 Organ Literature & Design I 2
MUSC 588 Organ Literature & Design II 2
MUSP 596 Organ Pedagogy 2
MUSP 599 Organ Keyboard Skills, Service Playing and Accompanying 2
Ensembles (four semesters each, large ensemble/accompanying) \(^1, 2\) 8
MUSP 300 Junior Recital 1
MUSP 400 Senior Recital 1
Electives 6
General Music 22
General Education 42
Total Credit Hours 118

1 See degree check sheets for specified ensembles.
2 Ensembles are counted by semester.

**Note:** All music majors must pass a piano proficiency examination.

**BM in Performance - Vocal Emphasis**
Applied Music
Voice 24
Piano (two semesters) - Study in another instrument may be substituted if student meets piano proficiency requirement

**General Music**
MUSC 127 Theory I 4
&MUSC 129 and Aural Skills I 4
MUSC 128 Theory II 4
&MUSC 130 and Aural Skills II 4
MUSC 227 Theory III 4
&MUSC 229 and Aural Skills III 4
MUSC 228 Theory IV 4
&MUSC 230 and Aural Skills IV 4

**History and Literature of Music**
MUSC 113 Introduction to Music Literature 3
MUSC 334 History of Music I 3
MUSC 335 History of Music II 3

**Performance Studies**
MUSP 211E Opera Lab 1
or MUSP 411E Opera Lab 1
MUSP 308 Choral Conducting 2

**Literature and Diction**
MUSP 121 Italian Diction 1
MUSP 122 English Diction 1
MUSP 222 German Diction 1
MUSP 625 Voice Pedagogy 2
MUSC 726 Voice Literature 3

**Ensembles**
Ensembles \(^1, 2\) 10

**Electives**
Select 3 credit hours from the following: 3
MUSP 211E Opera Lab 3
MUSP 411E Opera Lab 3
MUSP 340 Voice Coaching 1
MUSC 623 Opera Literature 2
MUSC 624 Oratorio and Cantata Literature 2
DANC 227 Mime/Physical Theatre 1 3
DANC 210 Ballet 1 3
THEA 243 Acting I 3
THEA 254 Stage Makeup 3
MUSP 105 Recital Attendance (specified number of recitals per semester for four semstr.) 0

**Recitals**
MUSP 300 Junior Recital 1
MUSP 400 Senior Recital 1

**Foreign Language**
ITAL 111 Elementary Italian I 5
Select 5 credit hours from the following: 5
ITAL 112 Elementary Italian II
FREN 111 and/or FREN 112
GERM 111 and/or GERM 112

Total Credit Hours 88

1 See degree check sheets for specified ensembles.
2 Ensembles are counted by semester.
3 If not taken in performance studies.

**Piano Proficiency**
Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. All music majors must pass the piano proficiency examination before graduation and BME students must have it completed before the student teaching semester.

**Bachelor of Music Education Requirements**

Students receiving the Bachelor of Music Education (BME) must meet the state requirements for licensure. Students may select from three options within this degree:

1. Instrumental emphasis offered to satisfy the needs of students whose chief performing medium is instrumental or keyboard and who plan to enter the field of instrumental music teaching in the public schools.

2. Vocal emphasis offered to satisfy the needs of students whose chief performing medium is voice, and who plan to enter the field of vocal and general music teaching in the public schools.

3. Keyboard emphasis offered to satisfy the needs of students whose chief performing medium is keyboard and who plan to enter the field of vocal, instrumental or general music in the public schools.

4. Special music education emphasis offered to satisfy the needs of students, either vocal or instrumental specialists, who plan to enter the field of music education for special education children in the public schools.

**Student Teaching**

Admission into the student teaching semester requires:

- a minimum cumulative grade point average of 2.500;
- a minimum grade point average of 2.500 in music courses;
- senior standing (90 credit hours — 200 credit points);
- a grade of C or better in:

  ENGL 101  College English I (or its equivalent)  3
  ENGL 102  College English II  3
  COMM 111  Public Speaking  3
  MATH 111  College Algebra  3

- completion of prerequisites in educational psychology;
- foundations of education and music education methods;
- successful completion of the piano proficiency exam and all other music requirements (including senior recital);
- successful completion of a physical examination; and
- a recommendation by the music education area.

Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.

All students must have an application on file with the music education area and receive its approval. Students must file applications with the director of music education.

**Graduation Requirements**

The following program fulfills both the university requirements for graduation and the Kansas licensure requirement and must be taken by all Bachelor of Music Education candidates. In completing the BME program, the student must meet the general education program requirements of the university given in the Requirements for Graduation (p. 37) section of the Undergraduate Catalog.
**BME - Keyboard**

**Music Requirements**

**Applied Music**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>MUSC 127 &amp; MUSC 129</td>
<td>Theory I and Aural Skills I</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 128 &amp; MUSC 130</td>
<td>Theory II and Aural Skills II</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 227 &amp; MUSC 229</td>
<td>Theory III and Aural Skills III</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 228 &amp; MUSC 230A</td>
<td>Theory IV and Aural Skills IV: Music Education</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 523</td>
<td>Form And Analysis</td>
<td>2</td>
</tr>
<tr>
<td>MUSC 641</td>
<td>Orchestration</td>
<td>2</td>
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</table>

**History & Literature of Music:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>MUSC 113</td>
<td>Introduction to Music Literature</td>
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<tr>
<td>MUSC 334</td>
<td>History of Music I</td>
<td>3</td>
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<td>MUSC 335</td>
<td>History of Music II</td>
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**Core I**

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<th>Title</th>
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<tr>
<td>MUSE 171</td>
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<td>MUSE 271</td>
<td>Introduction to Music Education</td>
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**Core II**

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<th>Title</th>
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<tbody>
<tr>
<td>MUSE 303</td>
<td>Elementary and General Music Methods</td>
<td>2</td>
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<tr>
<td>MUSE 305</td>
<td>Pre Student Teaching</td>
<td>1</td>
</tr>
<tr>
<td>MUSE 323</td>
<td>Fundamentals of Vocal Music for Secondary Schools</td>
<td>2</td>
</tr>
<tr>
<td>or MUSE 324</td>
<td>Fundamentals of Instrumental Music for Secondary Schools</td>
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**Core III**

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<thead>
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<th>Title</th>
<th>Credit</th>
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<tr>
<td>MUSE 405</td>
<td>Teaching Internship Seminar</td>
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<tr>
<td>MUSE 451</td>
<td>Teaching Internship Elementary School: Music</td>
<td>4-6</td>
</tr>
<tr>
<td>MUSE 469</td>
<td>Teaching Internship Secondary Music</td>
<td>4-6</td>
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**Additional Requirements**

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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<tr>
<td>MUSE 241</td>
<td>String Rehearsal Methods</td>
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<tr>
<td>MUSE 242</td>
<td>Wind and Percussion Rehearsal Methods</td>
<td>1</td>
</tr>
<tr>
<td>or MUSE 342</td>
<td>Survey of Choral Techniques and Literature</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credit Hours**

94-100

---

1. Students must be enrolled in applied music during the semester of their senior recital.
2. See degree check sheets for specified ensembles.

---

**MUSE 305** Pre Student Teaching 1

**Core III**

**MUSE 405** Teaching Internship Seminar 1

**MUSE 451** Teaching Internship Elementary School: Music 4-6

**MUSE 469** Teaching Internship Secondary Music 4-6

**Additional Requirements**

**MUSE 238** Wind and Percussion Methods I - Woodwind Emphasis 1

**MUSE 239** Wind & Percussion Methods II- Brass Emphasis 1

**MUSE 240 & MUSE 243** Wind and Percussion Methods III - Percussion Emphasis and Wind and Percussion Methods Lab - Rehearsal Emphasis 2

**MUSE 241** String Rehearsal Methods 1

**MUSE 342** Survey of Choral Techniques and Literature 2

**MUSE 686** or MUSE 620 Marching Band Techniques 2

**Total Credit Hours** 97-101

1. Students must be enrolled in applied music during the semester of their senior recital.
2. See degree check sheets for specified ensembles.
3. Ensembles are counted by semester.

**Note:** All music majors must pass a piano proficiency examination.
3 Ensembles are counted by semester.

Note: All music majors must pass a piano proficiency examination.

**BME - Vocal**

**Music Requirements**

**Applied Music**

- primary medium: 14
- secondary medium: 2

**General Music**

**Theory:**

- MUSC 127 & MUSC 129: Theory I and Aural Skills I
- MUSC 128 & MUSC 130: Theory II and Aural Skills II
- MUSC 227 & MUSC 229: Theory III and Aural Skills III
- MUSC 228 & MUSC 230A: Theory IV and Aural Skills IV: Music Education
- MUSC 523: Form and Analysis
- MUSC 641: Orchestration

**History & Literature of Music:**

- MUSC 113: Introduction to Music Literature
- MUSC 334: History of Music I
- MUSC 335: History of Music II

**Conducting:**

- MUSP 308: Choral Conducting
- MUSP 691: Advanced Choral Conducting

**Ensemble:**

- MUSP 105: Recital Attendance (two semesters)

**Senior Recital:**

- MUSP 400: Senior Recital

**Music Education Requirements**

**Introduction**

- MUSE 171: Orientation to Music Education
- MUSE 271: Introduction to Music Education

**Core I**

- CESP 334: Introduction to Diversity: Human Growth and Development

**Core II**

- CESP 433: Learning Assessment and Evaluation Theory: Evidence-Based Instruction
- MUSE 303: Elementary and General Music Methods
- MUSE 323: Fundamentals of Vocal Music for Secondary Schools

**Additional Requirements for Piano Majors:**

- MUSP 207 & MUSP 407: Piano Repertoire
- MUSP 580 or MUSP 581: Piano Pedagogy

**Ensembles**

- MUSE 305: Pre Student Teaching
- MUSE 405: Teaching Internship Seminar
- MUSE 451: Teaching Internship: Elementary School: Music Education
- MUSE 469: Teaching Internship: Secondary Music Education

**Total Credit Hours:** 90-96

1 Students must be enrolled in applied music during the semester of their senior recital.

2 See degree check sheets for specified ensembles.

3 Ensembles are counted by semester.

**Piano Proficiency**

Students who have not satisfied all piano proficiency requirements must enroll in class piano until they meet those requirements. All music majors must pass the piano proficiency examination before graduation and BME students must have it completed before the student teaching semester.

**Bachelor of Special Music Education**

**Music Requirements**

**Applied Music**

- primary medium: 14
- secondary medium: 2

**General Music**

**Theory:**

- MUSC 127 & MUSC 129: Theory I and Aural Skills I
- MUSC 128 & MUSC 130: Theory II and Aural Skills II
- MUSC 227 & MUSC 229: Theory III and Aural Skills III
- MUSC 228 & MUSC 230A: Theory IV and Aural Skills IV: Music Education
- MUSC 523: Form and Analysis
- MUSC 641: Orchestration

**History & Literature of Music:**

- MUSC 113: Introduction to Music Literature
- MUSC 334: History of Music I
- MUSC 335: History of Music II

**Conducting:**

- MUSP 307 or MUSP 308: Instrumental Conducting
- MUSP 651: Advanced Conducting and Score Reading

**Additional Requirements for Piano Majors:**

- MUSP 207 & MUSP 407: Piano Repertoire
- MUSP 580 or MUSP 581: Piano Pedagogy

**Ensembles**
### Bachelor of Arts in Music

**Ensembles** 2, 3  
**Recital Attendance**  
MUSP 105 Recital Attendance (two semesters) 0

**Senior Recital**  
MUSP 400 Senior Recital 1

**Music Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSE 171</td>
<td>Orientation to Music Education</td>
<td>1</td>
</tr>
<tr>
<td>MUSE 271</td>
<td>Introduction to Music Education</td>
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**Core I**

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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
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<tr>
<td>CI 311</td>
<td>Introduction to Diversity: Field Experience</td>
<td>1</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
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<tr>
<td>MUSE 611</td>
<td>Music for Special Education</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 617</td>
<td>Literacy Strategies for Content Areas: Music</td>
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**Core II**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>MUSE 303</td>
<td>Elementary and General Music Methods</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 305</td>
<td>Pre Student Teaching</td>
<td>1</td>
</tr>
<tr>
<td>MUSE 309</td>
<td>Survey of Music for Special Education</td>
<td>3</td>
</tr>
<tr>
<td>MUSE 323</td>
<td>Fundamentals of Vocal Music for Secondary Schools</td>
<td>2</td>
</tr>
<tr>
<td>or MUSE 324</td>
<td>Fundamentals of Instrumental Music for Secondary Schools</td>
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**Core III**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MUSE 405</td>
<td>Teaching Internship Seminar</td>
<td>1</td>
</tr>
<tr>
<td>MUSE 451</td>
<td>Teaching Internship Elementary School: Music</td>
<td>4-6</td>
</tr>
<tr>
<td>MUSE 452</td>
<td>Teaching Internship Special Music Education</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 469</td>
<td>Teaching Internship Secondary Music</td>
<td>4-6</td>
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### Additional Requirements

**Instrumental Majors:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MUSE 238</td>
<td>Wind and Percussion Methods I - Woodwind Emphasis</td>
<td>1</td>
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<tr>
<td>MUSE 239</td>
<td>Wind &amp; Percussion Methods II - Brass Emphasis</td>
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<tr>
<td>MUSE 240</td>
<td>Wind and Percussion Methods III - Percussion Emphasis and Wind and Percussion Methods Lab - Rehearsal Emphasis</td>
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</tr>
<tr>
<td>MUSE 241</td>
<td>String Rehearsal Methods</td>
<td>1</td>
</tr>
<tr>
<td>MUSE 342</td>
<td>Survey of Choral Techniques and Literature</td>
<td>2</td>
</tr>
<tr>
<td>MUSE 686</td>
<td>Marching Band Techniques</td>
<td>2</td>
</tr>
<tr>
<td>MUSP 620</td>
<td>String Pedagogy: Violin and Viola</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 106-118

1. Students must be enrolled in applied music during the semester of their senior recital.
2. See degree check sheets for specified ensembles.
3. Ensembles are counted by semester.

**Note:** All music majors must pass a piano proficiency examination.

### Bachelor of Arts in Music

Students who wish to earn a Bachelor of Arts (BA) in music are required to complete courses in Fairmount College of Liberal Arts and the College of Fine Arts as indicated in the music degree check sheets and to elect 54 music hours as specified in the following areas and course listings.

Candidates for the degree must also complete a minor in a discipline other than music, or proficiency in a foreign language at a level equivalent to 5 credit hours beyond the 112 course.

**Group I: Music Literature and History**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 113</td>
<td>Introduction to Music Literature</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 334</td>
<td>History of Music I</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 335</td>
<td>History of Music II</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

3 credit hours of upper division in Music History or Literature

**Group II: Music Theory**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 127 &amp; MUSC 129</td>
<td>Theory I and Aural Skills I</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 128 &amp; MUSC 130</td>
<td>Theory II and Aural Skills II</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 227 &amp; MUSC 229</td>
<td>Theory III and Aural Skills III</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 228 &amp; MUSC 230</td>
<td>Theory IV and Aural Skills IV</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 523</td>
<td>Form And Analysis</td>
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</tbody>
</table>

**Group III: Applied Music**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 127 &amp; MUSC 129</td>
<td>Applied Music</td>
<td>8</td>
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</tbody>
</table>

**Group IV: Ensembles**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 113</td>
<td>Introduction to Music Literature</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 334</td>
<td>History of Music I</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 335</td>
<td>History of Music II</td>
<td>3</td>
</tr>
</tbody>
</table>

Select from the areas of music literature, music theory, applied music, conducting and ensembles

**Group V: Upper Division Electives**

9

**Group VI: Recital Attendance**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSP 105</td>
<td>Recital Attendance (four semesters)</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 54

1. See degree check sheets for specified ensembles.
2. Ensembles are counted by semester.

**Note:** All music majors must pass a piano proficiency examination.

### Minor in Music

A minor in music is available to any student whose major field or area of emphasis is outside the School of Music. A music minor consists of 20 credit hours as indicated:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 127 &amp; MUSC 129</td>
<td>Theory I and Aural Skills I</td>
<td>4</td>
</tr>
<tr>
<td>MUSC 128 &amp; MUSC 130</td>
<td>Theory II and Aural Skills II</td>
<td>4</td>
</tr>
</tbody>
</table>
The Bachelor of Fine Arts (BFA) in dance is a degree in dance with emphasis on dance technique and related studies, and a complimentary course of study chosen from a wide variety of fields in consultation with the student’s academic advisor. These can include, but are not limited to fields such as business, entrepreneurship, exercise science, women’s studies, or other areas of interest. Dance BA major course offerings include study in modern, ballet and jazz techniques; dance history and dance kinesiology. Additional classes are offered in methods of teaching, choreography, music for dance, music theatre dance, tap, mime, ballroom and other special forms.

The Bachelor of Arts (BA) in dance is a degree in dance with emphasis on dance technique and related studies, and a complimentary course of study chosen from a wide variety of fields in consultation with the student’s academic advisor. These can include, but are not limited to fields such as business, entrepreneurship, exercise science, women’s studies, or other areas of interest. Dance BA major course offerings include study in modern, ballet and jazz techniques; dance history and dance kinesiology. Additional classes are offered in methods of teaching, choreography, music for dance, music theatre dance, tap, mime, ballroom and other special forms.

The Wichita Contemporary Dance Theatre, the resident faculty-student performance company, presents at least two fully produced concerts annually and acts to produce guest residencies with internationally recognized dance artists, lecture demonstrations for area schools, master classes, an annual undergraduate choreography concert, informal showings and senior choreography concerts. Membership is by audition only.

Students who intend to pursue dance as a major must contact the academic coordinator of dance upon entrance for assignment to an academic advisor. Students pursuing a minor in dance are encouraged to consult with the dance faculty for assistance with a course of study.

Courses in Dance
• Dance (DANC) (p. 327)

BA in Dance
Dance BA majors must complete 36 hours of dance technique in modern, ballet and jazz (12 credit hours each technique) and a minimum graduation proficiency of level two in all techniques. Technique classes are repeatable for credit. Dance BA students are encouraged to take concurrent technique classes in a least two disciplines each semester.

All Dance BA majors may audition to perform in Wichita Contemporary Dance Theatre and dance program productions each semester.

As part of the required Senior Project (DANC 580) capstone course, all BA majors present a final project, determined in consultation with their major advisor and the director of dance. Students are also required to be enrolled in an appropriate level technique class, have senior standing, submit a paper, which includes a written analysis and description of the theoretical framework and development, an analysis of the final project, and conclusions. These materials are submitted to the major advisor for approval. Following approval by the major advisor, students are scheduled for an oral defense of their work before the dance major faculty.

For all dance BFA and BA majors and dance minors, advancement in technique is not automatic and is possible only with faculty consent and approval. Students will be placed at the technical level the dance faculty deem appropriate for individual growth and development. Students with a developed skill in one dance technique should not expect that ability to translate into the same level of skill in other dance techniques. The dance faculty works with each student to create the best fit between student goals and interests and faculty appraisal of each student’s needs.
Dance BFA majors must have a minimum entrance proficiency of level two in all technique disciplines, and must complete two semesters of level three technique in modern dance, ballet and jazz, and two semesters of level four technique in one discipline. A minimum of 51 credit hours is required in technique with at least 15 credit hours in modern dance, ballet and jazz. Technique classes are repeatable for credit. Dance BFA majors are encouraged to take concurrent technique classes in at least two disciplines each semester they are enrolled.

All BFA dance majors are required to audition for Wichita Contemporary Dance Theatre and dance program productions each semester. Approval for dance BFA majors to perform in off-campus productions, which may conflict with dance program or Wichita Contemporary Dance Theatre events, is made on a case-by-case basis. While students are encouraged to work professionally as part of their training, it should not be done at the regular expense of student involvement in dance program/Wichita Contemporary Dance Theatre productions. Students accepted in Wichita Contemporary Dance Theatre may register for DANC 320, during the junior and senior years, in consultation with their academic advisors.

As part of the required Senior Project (DANC 580) capstone course, all BFA majors present works on a senior dance concert to include choreography and performances by the student, determined in consultation with their major advisor and the director of dance. Students are also required to submit a paper, which includes a written analysis and description of the theoretical framework and compositional development, an analysis of the production, and conclusions. These materials are submitted to the major advisor for approval. Following approval by the major advisor, students are scheduled for an oral defense of their work before the dance major faculty.

For all dance BFA and BA majors and dance minors, advancement in technique is not automatic and is possible only with faculty consent and approval. Students will be placed at the technical level the dance faculty deem appropriate for individual growth and development. Students with a developed skill in one dance technique should not expect that ability to translate into the same level of skill in other dance techniques. The dance faculty works with each student to create the best fit between student goals and interests and faculty appraisal of each student’s needs for true artistic development. The faculty seeks to produce graduates who will be competitive in the professional arena.

General requirements:

- total credit hours for graduation 120 minimum, overall GPA 2.000 (2.500 in major);
- must complete 42 credit hours of general education and must have 45 credit hours of upper division credits.

Requirements:

- dance 45 credit hours;
- core curriculum 9 credit hours;
- electives outside performing arts 15 credit hours;
- electives based on plan of study 9 credit hours

### Core Curriculum courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 243</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>Movement class (stage movement, dance, mime/physical theatre)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Technical theatre class (costuming, stagecraft, lighting)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Dance Technique

Minimum graduation proficiency must be at level 2. Classes may be repeated for credit.

Select 12 credit hours of Modern Dance Technique from the following:

- **DANC 201**  Modern Dance Technique 1 (3 credit hours)
- **DANC 301**  Modern Dance 2 (3 credit hours)
- **DANC 401**  Modern Dance 3 (3 credit hours)
- **DANC 501**  Modern Dance 4 (3 credit hours)

Select 12 credit hours of Jazz Technique from the following:

- **DANC 235**  Jazz 1 (3 credit hours)
- **DANC 335**  Jazz 2 (3 credit hours)
- **DANC 435**  Jazz Dance 3 (3 credit hours)
- **DANC 535**  Jazz Dance 4 (3 credit hours)

Select 12 credit hours of Ballet Technique from the following:

- **DANC 210**  Ballet 1 (3 credit hours)
- **DANC 310**  Ballet 2 (3 credit hours)
- **DANC 410**  Ballet 3 (3 credit hours)
- **DANC 510**  Ballet 4 (3 credit hours)

### Dance Academics/Theory

Select 9 credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 180E</td>
<td>Performing Arts Seminar</td>
<td>3</td>
</tr>
<tr>
<td>DANC 225</td>
<td>Dance History: Ancient Civilization to Early 1900s</td>
<td>3</td>
</tr>
<tr>
<td>DANC 325</td>
<td>Dance History: 20th and 21st Centuries</td>
<td>3</td>
</tr>
<tr>
<td>DANC 415</td>
<td>Dance Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>DANC 580</td>
<td>Senior Project</td>
<td>3</td>
</tr>
<tr>
<td>DANC 675</td>
<td>Directed Study</td>
<td>3</td>
</tr>
</tbody>
</table>

### Additional Requirements

Non-English language proficiency courses or outside of performing arts with advisor approval (9 minimum credit hours required at 300+ upper division)

Electives based on plan of study with advisor approval (3 minimum credit hours required at 300+ upper division)

Total Credit Hours 78

1 Placement and advancement by audition and/or faculty consent only.

### BFA in Dance

Dance BFA majors must have a minimum entrance proficiency of level two in all technique disciplines, and must complete two semesters of level three technique in modern dance, ballet and jazz, and two
DANC 435  Jazz Dance 3
Select 15 credit hours of Ballet Technique from the following: 1 15
DANC 210  Ballet 1
DANC 310  Ballet 2
DANC 410  Ballet 3

Select 6 credit hours in Level 4 Technique from the following (choose one discipline as focus): 1 6
DANC 501  Modern Dance 4
DANC 510  Ballet 4
DANC 535  Jazz Dance 4

Dance Academics/Theory/Choreography
Select 23 credit hours from the following: 23
THEA 180E  Performing Arts Seminar
DANC 225  Dance History: Ancient Civilization to Early 1900s
DANC 305  Choreography 1: Improvisation
DANC 325  Dance History: 20th and 21st Centuries
DANC 405  Choreography II
DANC 415  Dance Kinesiology
DANC 505  Choreography 3
DANC 545  Methods of Teaching Dance
DANC 580  Senior Project

Performance
DANC 320  Dance Performance (course may be repeated) 2

Recommended Electives
THEA 143  The Art of the Theater
THEA 218  Stage Movement
THEA 244  Stagecraft
THEA 253  Costuming for the Stage and Film
THEA 254  Stage Makeup
THEA 345  Stage Lighting
DANC 240  Tap 1
DANC 340  Tap 2
DANC 227  Mime/Physical Theatre 1
DANC 230  Musical Theatre Dance 1
DANC 315  Music For Dance
DANC 330  Musical Theatre Dance 2

Total Credit Hours 85

1 Placement and advancement by audition and/or faculty consent only.

Dance Minor
A minor in dance consists of the following:

Basic Dance Technique
Select 9 credit hours in dance technique (3 each discipline) from the following: 9
DANC 201  Modern Dance Technique 1
or DANC 301  Modern Dance 2
DANC 210  Ballet 1
or DANC 310  Ballet 2
DANC 235  Jazz 1
or DANC 335  Jazz 2

Dance Technique (further study)
Select 6 credit hours in two disciplines from the following: 6
DANC 301  Modern Dance 2
or DANC 401  Modern Dance 3
DANC 310  Ballet 2
or DANC 410  Ballet 3
DANC 335  Jazz 2
or DANC 435  Jazz Dance 3

Dance History
DANC 225  Dance History: Ancient Civilization to Early 1900s
or DANC 325  Dance History: 20th and 21st Centuries

Elective
Select at least 3 credit hours from the following: 3
DANC 130A  Ballroom/Swing
DANC 130V  Hip Hop I
DANC 140  Art of The Dance
DANC 225  Dance History: Ancient Civilization to Early 1900s
DANC 227  Mime/Physical Theatre 1
DANC 230  Musical Theatre Dance 1
DANC 315  Music For Dance
DANC 320  Dance Performance
DANC 340  Tap 2
DANC 415  Dance Kinesiology

Total Credit Hours 21

Music Theatre
The music theatre department offers the following degrees:

- Bachelor of Arts in Music Theatre (p. 161)
- Bachelor of Fine Arts in Music Theatre (p. 162)

BA in Music Theatre
The Bachelor of Arts (BA) in music theatre emphasizes music theatre techniques and related studies and a complimentary course of study chosen from a wide variety of fields in consultation with the student’s advisor. These studies can include, but are not limited to, fields such as business, entrepreneurship, personal selling or other areas of interest.

Graduation Requirements
- total credit hours for graduation 120 minimum, overall GPA 2.000 (2.500 in major);
- must complete 42 credit hours of general education and must have 45 credit hours of upper-division credits.

Requirements
Core 9
Theatre 17
Dance 12
Music 15
Electives 10
Non-English courses or outside of performing arts 15
General education 42

Total Credit Hours 120

Core Curriculum Courses
THEA 243  Acting I 3
Movement class (stage movement, dance, mime/physical theatre) 3
Technical theatre class (costuming, stagecraft, lighting) 3

Theatre Requirements
THEA 180E  Performing Arts Seminar 1
THEA 254  Stage Makeup 2
THEA 260  History of Musical Theatre 3
THEA 330  Musical Theatre Laboratory 2
THEA 342 Advanced Acting 3
THEA 530 Musical Theatre Scene Study 2
THEA 555 Senior Project 1
THEA 610 Directing the Musical 3

**Dance Requirements**
- DAN 210 Ballet 1 3
- DAN 230 Musical Theatre Dance 1 3
- DAN 235 Jazz 1 3
- DAN 240 Tap 1 3

**Music Requirements**
Take four semesters of the following:
- MUSA 232Y Applied Music Instruction for Majors - Voice

Take two semesters of the following:
- MUSA 432Y Applied Music Instruction for Majors - Voice
- MUSP 212 Choir

Additional Courses
- Non-English language proficiency courses or outside of performing arts with advisor approval (9 minimum credit hours required at 300+ upper division) 15
- Electives based on plan of study with advisor approval (3 minimum credit hours required at 300+ upper division) 10

Total Credit Hours 64

**BFA in Music Theatre**
Housed in the School of Performing Arts, and in collaboration with the School of Music, the BFA in music theatre is an intensive, interdisciplinary, performance-oriented major. Admittance into the program is by competitive auditions held twice a year. The program offers equal emphasis in music, theatre and dance skills. Career counseling and an understanding of the business is emphasized. Students interested in music theatre as a profession will gain the training and techniques needed to succeed in this demanding and competitive career.

**Graduation requirements:**
- total credit hours for graduation 124 credit hour minimum, overall GPA 2.000, 2.500 in major (3.000 for scholarship consideration);
- must complete 42 credit hours of general education and must have 45 credit hours of upper-division credits.

**Requirements:** 82 credit hours including:

**Core Curriculum Courses**
- THEA 243 Acting I 3
- Movement class (stage movement, dance, mime/physical theatre) 3
- Technical theatre class (costuming, stagecraft, lighting) 3

**Theatre Requirements**
- THEA 260 History of Musical Theatre 3
- THEA 254 Stage Makeup 2
- THEA 342 Advanced Acting 3
- THEA 643 Styles In Acting 3
- THEA 610 Directing the Musical 3
Select one from the following (included in the core curriculum):
- THEA 244 Stagecraft
- THEA 253 Costuming for the Stage and Film
- THEA 345 Stage Lighting

**Music Requirements**
- MUSA 113P Piano Class Level I - Music Majors 1

**Additional Courses**
- MUSC 127 Theory I 2
- MUSC 128 Theory II 2
- MUSA 323Y Applied Music Instruction for Majors - Voice 8

**Interdisciplinary Requirements**
- THEA 272 Stage Management 24
- DAN 235 Jazz 1
- DAN 335 Jazz 2
- DAN 240 Tap 1
- DAN 340 Tap 2
- DAN 201 Modern Dance Technique 1
- DAN 210 Ballet 1
- DAN 310 Ballet 2
- DAN 230 Musical Theatre Dance 1
- DAN 330 Musical Theatre Dance 2

**Music Requirements**
- MUSC 127 Theory I 2
- MUSC 128 Theory II 2
- MUSP 212F A Cappella Choir (two semesters) 4

**Interdisciplinary Requirements**
- THEA 630 Musical Theatre and Opera Audition 3
- THEA 180E Performing Arts Seminar (freshman seminar) 1
- THEA 330 Musical Theatre Laboratory 2
- THEA 530 Musical Theatre Scene Study 2
- THEA 555 Senior Project 1

Total Credit Hours 84

Incoming students with previous training in dance will be assessed to determine appropriate class level. With approval from instructors, those with prior training may substitute upper-division courses for entry level classes. Credit hours must still total 24.

Students with prior piano skills may take a proficiency exam and test out of piano class.

Music theatre majors must audition for all department musicals. Students receiving scholarships are required to perform as cast. All majors must obtain departmental approval prior to performing off campus. Permission is granted on a case-by-case basis. Although students are encouraged to obtain professional experience and credits, this may not be at the expense of the music theatre program. This rule is also intended to ensure that students gain technique rather than reinforce inadequate training. With instructor’s consent, students not cast in department musicals are encouraged to audition for roles and internships at the many professional and community theatres that flourish in Wichita. Majors are encouraged to audition for, and participate in theater, dance and opera productions, as well as musicals.
As part of the required Senior Project (THEA 555) capstone course, all majors present a senior concert to include 30 minutes of diverse material staged and performed by the student, determined in consultation with the music theatre faculty. Students are also required to submit a paper, which includes a written analysis and description of the framework, compositional development, analysis of rehearsal process and production, and conclusions about the experience. These materials are submitted to the music theatre faculty for grading. The faculty seeks to produce graduates who will be competitive in the professional performing world.

**Theatre**

Theatre offers a broad academic program, balanced by the extensive production schedule of the university theatre - Main Stage and Second Stage - and film.

**Graduation Requirements**

All theatre majors must participate in some area of the production of all university theatre plays or films, after consultation with faculty and staff. Students may choose one of three options:

- a BFA in design and technical theatre,
- a BFA in theatre performance, and
- a BA in theatre.

In addition to the general education requirements, candidates for the BFA in theatre must meet the requirements described in the following pages.

**Note:** All students must earn 45+ hours of credit in upper-division courses.

**Courses in Theatre**

- Theatre (THEA) (p. 447)

**BA in Theatre**

General requirements:

- total credit hours for graduation 120 minimum, overall GPA 2.000 (2.500 in major);
- must complete 42 credit hours of general education and must have 45 credit hours of upper-division credits.

**Core Curriculum Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 180E</td>
<td>Performing Arts Seminar</td>
<td>1</td>
</tr>
<tr>
<td>THEA 243</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>THEA 180A</td>
<td>Practicum: Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>THEA 180B</td>
<td>Practicum: Costume</td>
<td>1</td>
</tr>
<tr>
<td>THEA 180C</td>
<td>Practicum: Management</td>
<td>1</td>
</tr>
<tr>
<td>THEA 228</td>
<td>Script Analysis</td>
<td>3</td>
</tr>
<tr>
<td>THEA 244</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>THEA 253</td>
<td>Costuming for the Stage and Film</td>
<td>3</td>
</tr>
<tr>
<td>THEA 254</td>
<td>Stage Makeup</td>
<td>2</td>
</tr>
<tr>
<td>THEA 272</td>
<td>Stage Management</td>
<td>3</td>
</tr>
<tr>
<td>THEA 342</td>
<td>Advanced Acting</td>
<td>3</td>
</tr>
<tr>
<td>THEA 345</td>
<td>Stage Lighting</td>
<td>3</td>
</tr>
</tbody>
</table>

**Requirements for Major**

(in addition to one course that applies to the 9-hour core)

**Additional Requirements for Design/Technical Option**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTF 145</td>
<td>Foundation Drawing</td>
<td>3</td>
</tr>
<tr>
<td>THEA 285</td>
<td>Period Styles</td>
<td>3</td>
</tr>
<tr>
<td>THEA 300</td>
<td>Drafting for the Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THEA 344</td>
<td>Scene Design I</td>
<td>3</td>
</tr>
<tr>
<td>THEA 451</td>
<td>Portfolio Review</td>
<td>1</td>
</tr>
<tr>
<td>THEA 357</td>
<td>Costume Design I</td>
<td>3</td>
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</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 359</td>
<td>Directed I</td>
<td>3</td>
</tr>
<tr>
<td>THEA 370</td>
<td>Professional Practices for the Performing Artist</td>
<td>3</td>
</tr>
<tr>
<td>THEA 375</td>
<td>Directed Projects in Theater</td>
<td>1</td>
</tr>
<tr>
<td>THEA 623</td>
<td>Theatre History I</td>
<td>3</td>
</tr>
<tr>
<td>THEA 624</td>
<td>Theatre History II</td>
<td>3</td>
</tr>
</tbody>
</table>

**BFA in Design and Technical Theatre**

General requirements:

- total credit hours for graduation 124 minimum, overall GPA 2.000, 2.500 in major;
- must complete 42 credit hours of general education and must have 45 hours of upper division credits.

**Core Curriculum Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 180E</td>
<td>Performing Arts Seminar</td>
<td>1</td>
</tr>
<tr>
<td>THEA 243</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>THEA 180A</td>
<td>Practicum: Stagecraft</td>
<td>1</td>
</tr>
<tr>
<td>THEA 180B</td>
<td>Practicum: Costume</td>
<td>1</td>
</tr>
<tr>
<td>THEA 180C</td>
<td>Practicum: Management</td>
<td>1</td>
</tr>
<tr>
<td>THEA 228</td>
<td>Script Analysis</td>
<td>3</td>
</tr>
<tr>
<td>THEA 244</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>THEA 253</td>
<td>Costuming for the Stage and Film</td>
<td>3</td>
</tr>
<tr>
<td>THEA 254</td>
<td>Stage Makeup</td>
<td>2</td>
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<tr>
<td>THEA 272</td>
<td>Stage Management</td>
<td>3</td>
</tr>
<tr>
<td>THEA 342</td>
<td>Advanced Acting</td>
<td>3</td>
</tr>
<tr>
<td>THEA 345</td>
<td>Stage Lighting</td>
<td>3</td>
</tr>
</tbody>
</table>

**Additional Requirements**

Non-English language proficiency courses or outside of performing arts with advisor approval (9 minimum credit hours required at 300+ upper division)

Electives based on plan of study with advisor approval (3 minimum credit hours required at 300+ upper division)

Total Credit Hours 78
BFA in Theatre Performance

General requirements:

- total credit hours for graduation 124 credit hour minimum, overall GPA 2.000, 2.500 in major;
- must complete 42 credit hours of general education and must have 45 credit hours of upper-division credits.

Core Curriculum Courses

| THEA 180E | Performing Arts Seminar | 1 |
| THEA 243 | Acting I | 3 |

Movement class (stage movement, dance, mime/physical theatre) 3

Technical theatre class (costuming, stagecraft, lighting) 3

Requirements for Major

(in addition to one course that applies to the 9-hour core)

| THEA 143 | The Art of the Theater | 3 |
| THEA 180A | Practicum: Stagecraft | 1 |
| THEA 180B | Practicum: Costume | 1 |
| THEA 180C | Practicum: Management | 1 |
| THEA 228 | Script Analysis | 3 |
| THEA 244 | Stagecraft | 3 |
| THEA 253 | Costuming for the Stage and Film | 3 |
| THEA 254 | Stage Makeup | 2 |
| THEA 272 | Stage Management | 3 |
| THEA 345 | Stage Lighting | 3 |
| THEA 359 | Directing I | 3 |
| THEA 370 | Professional Practices for the Performing Artist | 3 |
| THEA 623 | Theatre History I | 3 |
| THEA 624 | Theatre History II | 3 |

Additional Requirements for Performance Option

| THEA 180D | Practicum: Performance | 1 |
| THEA 221 | Oral Interpretation | 3 |
| THEA 222 | Improvisation and Theatre Games | 3 |
| THEA 326 | Expressive Voice for Stage | 3 |
| THEA 331 | Dialect for the Stage | 3 |
| THEA 342 | Advanced Acting | 3 |
| THEA 380D | Practicum: Performance | 1 |
| THEA 390 | Acting for the Camera | 3 |
| THEA 455 | Senior Jury | 1 |
| THEA 643 | Styles In Acting | 3 |
| THEA 651 | Scene Study | 3 |

Electives

Select 10 credit hours from the following:

| THEA 365 | Stage Combat | 3 |
| THEA 375 | Directed Projects in Theater | 3 |
| THEA 380A | Practicum: Stagecraft | 3 |
| THEA 380B | Practicum: Costume | 3 |
| THEA 380C | Practicum: Management | 3 |
| THEA 385 | Theatre as a Mirror of Today’s America | 3 |
| THEA 516 | Scriptwriting I | 3 |
| THEA 517 | Scriptwriting II | 3 |
| THEA 559 | Directing II | 3 |
| THEA 590 | Theatre: Special Topics | 3 |
| THEA 675 | Directed Study | 3 |
| FA 301 | An Introduction to Entrepreneurship in the Arts | 3 |

Or any upper-division theatre elective

Total Credit Hours 85

Theatre Minor

A minor in theatre consists of the following required courses:

| THEA 243 | Acting I | 3 |
| THEA 244 | Stagecraft | 3 |
| THEA 272 | Stage Management | 3 |
| THEA 359 | Directing I | 3 |
| THEA 253 | Costuming for the Stage and Film | 3 |
| THEA 345 | Stage Lighting | 3 |

Select one of the following:

| THEA 623 | Theatre History I | 3 |
| THEA 624 | Theatre History II | 3 |

Total Credit Hours 18

Certificate in Stage Management

The certificate in stage management consists of a balanced combination of required courses that provides a wide range of knowledge in management, sociology and theatre, as well as practical training essential for a stage management professional. In addition to the classroom requirements, students are assigned to stage management positions in School of Performing Arts productions that reflect increasing responsibilities throughout the plan of study. The program is structured to prepare the student for work in commercial and regional theatre. It also provides a strong basis for learning a variety of artistic skills and management tools essential for employment opportunities in other entertainment areas such as touring, dance, opera, event management and industrials. Workshops, seminars and lectures by guest professionals provide an essential component in the program progression.

Required Courses

| THEA 180C | Practicum: Management | 1 |
| THEA 272 | Stage Management | 3 |
| THEA 375C | Directed Projects-Stage Management | 2 |
Classes required by the certificate program are taken in combination with the student’s general education and major studies classes. The certificate is open to all students of Wichita State University. Preference in selection is given to majors in the School of Performing Arts.

Certificate in Directing
The Certificate in directing provides students who have a particular interest in this area of the performing arts an opportunity to have a focus in the skill of directing. Coursework focuses on directing nonmusical and musical stage work, as well as film.

Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 359</td>
<td>Directing I</td>
<td>3</td>
</tr>
<tr>
<td>THEA 559</td>
<td>Directing II</td>
<td>3</td>
</tr>
<tr>
<td>THEA 610</td>
<td>Directing the Musical</td>
<td>3</td>
</tr>
<tr>
<td>THEA 390</td>
<td>Acting for the Camera</td>
<td>3</td>
</tr>
<tr>
<td>THEA 272</td>
<td>Stage Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 15
College of Health Professions

Sandra C. Bibb, dean
400 Ahlberg Hall • (316) WSU-3600
http://wichita.edu/chp
Stephen Arnold, associate dean

The College of Health Professions was established in 1970. Programs of study are offered in advanced education in general dentistry, communication sciences and disorders, dental hygiene, health services management and community development, medical laboratory sciences, nursing, physical therapy and physician assistant. The primary emphasis of the college’s health professions programs is the preparation of entry-level health professionals. Additionally, the college provides such services as continuing education and graduate education for health professionals.

The curricula of the health professions programs build upon a foundation of courses from the liberal arts and sciences, education, health sciences and business. In addition to the on-campus academic experience, health professions students learn in clinical settings as they care for patients and interact with clients of the health care system. All clinical programs are dependent upon the outstanding health care facilities within Wichita and surrounding areas.

Programs in the college are accredited through the following agencies:

- the Council on Academic Accreditation of Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association,
- the Commission on Dental Accreditation of the American Dental Association,
- the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association,
- Commission on Collegiate Nursing Education, Kansas State Board of Nursing,
- the National Accrediting Agency for Clinical Laboratory Sciences, and
- Accreditation Review Commission on Education for the Physician Assistant.

Licensing

Many state and national licensing and governing organizations will not grant a license, certification, registration or other similar document to practice one’s chosen profession if the applicant has been convicted of a felony, and in some cases a misdemeanor. Prospective applicants are encouraged to consult with their chosen professional governing or licensing organization for more detailed information before applying.

Clinical Learning

As noted above, learning in clinical settings is an important aspect of programs of study in the College of Health Professions. Many health care facilities require information on students engaged in clinical learning opportunities, including, but not limited to: verification of name, address and social security number, personal health information, drug and alcohol testing, criminal background checks, verification of education, listing on any registered sex offender lists, listing on the U.S. Office of Inspector General’s Excluded Individual’s list, and listing on the U.S. General Services Administration’s Excluded Parties List. While the College of Health Professions will assist students in obtaining and gathering the information required by a health care facility, the cost of obtaining such information must be assumed by the student. What information will be required to permit the student to participate in a clinical setting learning experience will depend upon the respective health care facility. If a student is unable to fulfill the clinical experiences required by the program of study, the student may be unable to matriculate and/or graduate.

Essential Functions/Technical Standards

Essential functions/technical standards define the attributes that are considered necessary for students to possess in order to complete their education and training, and subsequently enter clinical practice. These essential functions/technical standards are determined to be prerequisites for entrance to, continuation in, and graduation from a student’s chosen discipline in the WSU College of Health Professions.

Students must possess aptitude, ability and skills in five areas:

1. Observation;
2. Communication;
3. Sensory and motor coordination and function;
4. Conceptualization, integration and quantification; and
5. Behavioral and social skills, ability and aptitude.

The essential functions/technical standards described by a student’s chosen discipline are critically important to the student and must be autonomously performed by the student. It should be understood that these are essential function/technical standards for minimum competence in a student’s discipline. Contact specific programs for detailed essential functions/technical standards. Reasonable accommodation of disability will be provided after the student notifies the department of the disability, and the disability has been documented by appropriate professionals.

Undergraduate Admission

A new degree-bound student is admitted to the College of Health Professions as a premajor in one of the degree programs offered, a health science major or as a health profession undecided major. However, admission to the college as a premajor does not guarantee acceptance into any of the undergraduate professional programs. To be admitted to a professional program, a student must be admitted to Wichita State University, apply for admission to a particular program, and be accepted by the admissions committee of that program. See individual program information for application requirements and procedures.

Required grade point average for admission to College of Health Professions’ undergraduate professional programs: Minimum cumulative grade point averages are required for each undergraduate professional program. Please consult individual program information for application requirements.

New transfer students must present an earned grade point average required for admission to their program on a 4.000 scale for all prior college work to be admitted to their premajor. An earned grade point average of 3.000 is required for communication sciences and disorders, physical therapy and physician assistant premajors. An earned grade point average of 2.750 is required for premajors in dental hygiene and nursing. An earned grade point average of 2.500 is required for premedical laboratory sciences. An earned grade point average of 2.250 is required for health services management and community development premajors. An earned grade point average of 2.000 is required for health sciences and health professions undecided premajors.
Limitations on Student Credit Hour Load
Premajors in the College of Health Professions who are in good academic standing may enroll for a maximum of 19 credit hours during fall and spring semesters and a maximum of 12 credit hours during the summer session. Students wishing to enroll beyond these limits must request approval from an academic advisor in the College of Health Professions (CHP) Advising Center. Once students are admitted into their major degree programs they will be subject to limitations and requirements set by each program. See the individual majors section of this catalog and the Graduate Catalog for specific information.

Academic Advising
Academic advising is a sustained and comprehensive, developmental process which promotes progressive student responsibility, commitment to the pursuit of intellectual foundations, clarification of an appropriate major, disciplinary competence, academic success, and preparation for career advancement. Advising is coordinated through the CHP Advising Center in 402 Ahlberg Hall. Please call (316) 978-3304 to schedule an appointment. Once students are admitted into their professional degree program, academic advising is provided by the program faculty.

Progression
Once the student is accepted into one of the professional programs, progression is determined by the program. Students should check the individual program section of the Undergraduate Catalog for additional program requirements.

Probation and Dismissal
Premajors should reference the academic probation and dismissal standards set by the university found in the Academic Probation and Dismissal (p. 36) section of the Undergraduate Catalog.

Students admitted to, and enrolled in, a College of Health Professions professional program are subject to probation and dismissal policy and procedures determined by each professional program. These are described in student handbooks available in each department. Additionally, students assigned to affiliating health facilities for clinical education will be subject to dismissal from their professional program for failure to comply with the rules, regulations or professional standards governing that facility.

Exceptions
Students may petition the program, college or university for exception to any requirement and should reference the Exceptions section of this catalog and the student handbook of their professional program.

Graduation Requirements
All health professions students who are pursuing a bachelor’s degree must meet university requirements for graduation and fulfill course requirements and graduation requirements specified in the curriculum of the department offering the degree. For specific requirements, consult the individual program sections of the catalog.

General Education Requirements
The College of Health Professions conforms to the policy set forth by the division of academic affairs at Wichita State University. Students should refer to the General Education Program (p. 55) requirements section of the Undergraduate Catalog.

Cooperative Education
The College of Health Professions is one of the participating colleges in the university’s cooperative education program. This program is designed to provide off-campus paid employment experiences that integrate, complement and enhance the student’s regular academic program while providing academic credit. Students are placed for field study experiences in a variety of health settings, including hospitals and community agencies. Individualized field studies are formulated in consultation with the student and the employer and are approved by the program faculty advisor and the cooperative education coordinator for the college. Participation in the program requires enrollment for credit in specific cooperative education courses designated by the various academic programs in the college. These undergraduate courses may have prerequisites or other specific requirements for enrollment. To enroll in the program or for more information, students should contact the cooperative education office or a College of Health Professions advisor.

Clinical Affiliation
The college, because of its location in Wichita, has affiliation agreements with various excellent health facilities which assist in the clinical education of students. The clinical affiliates include a wide variety of hospitals, long-term care facilities, public schools, private practitioners and community agencies.

Liability Insurance Requirements, Health Insurance and Health Standards
Most students are required to purchase professional liability insurance (the specific level is determined by the professional program) as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program. Additionally, other health standards are required prior to entry into the clinical agencies. Students should communicate with individual programs about specific requirements.

Financial Assistance
Scholarships and student loan funds are available for students in health professions. Information on these and other scholarships and loans is available from the WSU Office of Financial Aid and the program from which the student is seeking a degree or certificate.

Undergraduate
Of the programs offered at the undergraduate level, six lead to bachelor’s degrees:
- communication sciences and disorders,
- dental hygiene,
- health sciences,
- health services management and community development,
- medical laboratory sciences, and
- nursing.

Graduate
Four programs lead to the master’s degree — aging studies, communication sciences and disorders, nursing and physician assistant. Four programs lead to the doctoral degree — audiology, communication sciences and disorders, nursing and physical therapy. Admission to all of these programs requires a bachelor’s degree and the fulfillment of additional requirements.

More information on graduate programs is available in the WSU Graduate Catalog.

Certificates
The College of Health Professions offers the following certificates:
• educational interpreter development certificate program: signing exact English;¹
• graduate certificate in public health;²
• postdoctoral certificate in advanced education in general dentistry

¹ Contact CSD for current program status.
² Contact the PHS graduate program for the latest information.

Inter-College Double Major
An inter-college double major allows a student to complete an academic degree and major in one of the professional colleges (Barton School of Business, College of Education, College of Engineering, College of Fine Arts, College of Health Professions) along with a major in Fairmount College of Liberal Arts and Sciences. For details see Inter-College Double Major (p. 38).

School of Health Sciences
The School of Health Sciences offers programs leading to the Bachelor of Arts in communication sciences and disorders, the Bachelor of Science in health services management and community development, the Bachelor of Science in health science, the Bachelor of Science in medical laboratory sciences. In conjunction with Fairmount College of Liberal Arts and Sciences, students may earn the Bachelor of Arts field major in aging studies, and the Bachelor of General Studies with an emphasis in aging studies.

The School of Health Sciences offers the Master of Arts in communication sciences and disorders, Master of Arts in aging studies, Master of Public Health, Doctor of Physical Therapy, Master of Physician Assistant, Doctor of Audiology, and PhD in communication sciences and disorders degrees. For more information about the graduate degree programs, refer to the WSU Graduate Catalog.

Specific requirements for each undergraduate degree are described under the appropriate listing. In addition, contact should be made with the CHP Advising Center at (316) 978-3304 to be advised of any changes in requirements.

Courses in the School of Health Sciences
• Aging Studies (AGE) (p. 266)
• Health Sciences (HS) (p. 361)
• Communication Sciences and Disorders (CSD) (p. 298)
• Health Professions (HP) (p. 360)
• Health Management & Community Development (HMCD) (p. 357)
• Medical Laboratory Sciences (MLS) (p. 396)
• Public Health Sciences (PHS) (p. 433)
• WSU General, First-Year Seminar (WSUH) (p. 456)

Communication Sciences and Disorders
The department of communication sciences and disorders provides academic and clinical education for students at Wichita State University who wish to work with children and adults who have communication disorders. The undergraduate program offers broad, comprehensive and preprofessional preparation for specialized training, which is offered at the graduate level. Graduate work, culminating in a master’s degree (speech-language pathology) or doctoral degree (audiology) is required to obtain professional certification in the public schools, hospitals or rehabilitation centers, or to engage in private practice. With an undergraduate, preprofessional major, students completing the graduate program will be eligible to apply for certification by the American Speech-Language-Hearing Association and for Kansas licensure. The PhD in communication sciences and disorders prepares individuals to function professionally as independent clinicians, as teacher-scholars in an academic setting, or as program administrators.

Clinical Services
Clinical services for members of the community with speech, language or hearing disorders, as well as students enrolled at Wichita State, may be arranged with the Evelyn Hendren Cassat Speech-Language-Hearing Clinic (telephone: (316) 978-3289, email: slhclinic@wichita.edu). Fees are charged for these services.

Minimum Grade Requirement
Admission to courses is possible with a minimum grade of C (2.000 points per credit hour) in each stated prerequisite or its judged equivalent, or with departmental consent, unless otherwise specified in the course description.

Special Certificate Program
The department of communication sciences and disorders offers a certificate program for interpreter development in Signing Exact English (SEE). The Educational Interpreter Development Certificate Program: Signing Exact English helps classroom interpreters or others interested in working with individuals who are deaf or hard of hearing further their knowledge and skills with the goal of meeting or exceeding level three (intermediate) performance on the Educational Interpreter Performance Assessment (EIPA). The program requires 19 credit hours and generally can be completed in one academic year, including the summer session.

Note: The certificate was suspended beginning the 2012-2013 academic year. Please consult the department website for details on curriculum and current program status.

 Majors in Communication Sciences and Disorders
• BA in Communication Sciences and Disorders (p. 169)
• BA in Communication Sciences and Disorders - Concentration in Deafness and Hard of Hearing (D/HH) (p. 171)

 Minors in Communication Sciences and Disorders
• Communication Sciences and Disorders (p. 172)

Courses in Communication Sciences and Disorders
• Communication Sciences and Disorders (CSD) (p. 298)

BA in Communication Sciences and Disorders
The preprofessional, undergraduate major places primary emphasis on the general area of communication sciences and disorders. The major, consisting of 49 credit hours, involves a combined curriculum in speech-language pathology and audiology. Students should work closely with advisors to ensure proper course selection for certification and degree. A check sheet of requirements is available from the College of Health Professions and the department office, 401 Ahlberg Hall.

All students who intend to pursue a graduate degree in this field (MA or AuD) must have coursework in biological sciences (content area related to human or animal sciences), physical sciences (physics or chemistry),
social/behavioral sciences (psychology, sociology, anthropology or public health), and statistics (stand-alone course required). These courses must have received a letter grade of C (2.000 points per credit hour) or higher to meet ASHA certification and Kansas licensure requirements. Consult an advisor for appropriate coursework.

**Clinical Certification**

The communication sciences and disorders undergraduate major may be applied toward certification by the American Speech-Language-Hearing Association (ASHA) and licensure by the state of Kansas upon completion of the required graduate program. ASHA certification requires a master’s degree, with major emphasis in speech-language pathology. A professional doctorate degree is required for certification in audiology.

**Admission**

Students should request application materials for admission to the major in the CSD department, or obtain application materials online, prior to enrolling in their last semester of prerequisite courses, typically in the spring semester of the sophomore year. The application deadline for fall semester admission is April 1; November 1 for spring semester admission.

Admission requirements include:

1. An overall GPA of 3.000; and
2. The completion of the following courses with a grade that generates at least 3.000 credit points per credit hour in each course:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD 111</td>
<td>Disorders of Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>CSD 301</td>
<td>Basic Anatomy and Physiology of the Speech Mechanism</td>
<td>2</td>
</tr>
<tr>
<td>CSD 302</td>
<td>Basic Anatomy and Physiology of the Auditory System</td>
<td>2</td>
</tr>
<tr>
<td>CSD 304</td>
<td>Early Language Development</td>
<td>3</td>
</tr>
<tr>
<td>CSD 306</td>
<td>Applied Phonetics</td>
<td>3</td>
</tr>
</tbody>
</table>

Students can be currently enrolled in those courses offered during the semester in which the application is made.

Once admitted to the undergraduate major, students are required to obtain a criminal background check at their own expense as part of clinically-based assignments throughout the program. Students should consult the beginning of the College of Health Professions section of the catalog for additional requirements which may be needed to participate in clinical settings. In addition, enrollment in CSD 425, is subject to departmental approval and proof of medical clearance (see department for details) prior to the start of the course.

**Curriculum**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD 111</td>
<td>Disorders of Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>CSD 251</td>
<td>Auditory Development and Disorders</td>
<td>2</td>
</tr>
<tr>
<td>CSD 260 or CSD 270</td>
<td>Signing Exact English I or American Sign Language I</td>
<td>2-3</td>
</tr>
<tr>
<td>CSD 301</td>
<td>Basic Anatomy and Physiology of the Speech Mechanism</td>
<td>2</td>
</tr>
<tr>
<td>CSD 302</td>
<td>Basic Anatomy and Physiology of the Auditory System</td>
<td>2</td>
</tr>
<tr>
<td>CSD 304</td>
<td>Early Language Development</td>
<td>3</td>
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<td>CSD 306</td>
<td>Applied Phonetics</td>
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<td>CSD 306L</td>
<td>Applied Phonetics Lab</td>
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<tr>
<td>CSD 351</td>
<td>Introduction to Auditory Assessment</td>
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<td>CSD 416</td>
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<td>CSD 425</td>
<td>Introduction to Clinical Processes</td>
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<tr>
<td>CSD 504</td>
<td>Aural Rehabilitation</td>
<td>3</td>
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<tr>
<td>CSD 506</td>
<td>Acoustic and Perceptual Phonetics</td>
<td>3</td>
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<td>CSD 514</td>
<td>Speech-Sound Disorders</td>
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<tr>
<td>CSD 515</td>
<td>Speech-Sound Disorders Lab</td>
<td>1</td>
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<tr>
<td>CSD 517</td>
<td>Communication in Aging</td>
<td>3</td>
</tr>
<tr>
<td>CSD 518</td>
<td>Deaf Culture</td>
<td>3</td>
</tr>
<tr>
<td>CSD 519</td>
<td>Genetic and Organic Syndromes</td>
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</tr>
<tr>
<td>CSD 521</td>
<td>Genetic and Organic Syndromes Lab</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one of the following options:

| Option A:                | CSD 605 | Neuroscience of Speech and Language: Basic Processes | 4 |
| Option B:                | HS 570  | Neuroscience for Health Professionals: Peripheral Nervous System | 49-50 |
| HS 571                   | Neuroscience for Health Professionals: Ascending and Descending Pathways | 49-50 |
| HS 572                   | Neuroscience for Health Professionals: Brainstem and Cerebellum | 49-50 |
| HS 573                   | Neuroscience for Health Professionals: Forebrain | 49-50 |

**Requirements for Graduation**

Students in the communication sciences and disorders program are required to maintain a cumulative grade point average of 2.500, with no individual course grade in the major having a grade that generates less than 2.000 points per credit hour.

To be eligible for graduation from Wichita State University, students must have credit for 124 acceptable credit hours toward their degree and a GPA in the major of 2.500. Students transferring from a two-year college must complete at least 60 credit hours of four-year college work and 45 credit hours of upper-division coursework in order to qualify for graduation.

**Honors Program**

Scholarship and research are encouraged at the undergraduate level. Students who meet the qualifications should explore adding the honors program to their undergraduate major. Students who are not CSD majors and are involved in the Honors College, please contact the CSD department to enroll in these courses.
Admission requirements include:

1. Admission to the CSD undergraduate major or D/HH concentration;
2. An overall GPA of 3.500 in CSD coursework;
3. A one-page, double-spaced letter describing reasons for applying to the honors track, goals, and potential benefits to participating in the program; and
4. A CSD faculty member to mentor the final project.

Students admitted to the CSD honors track must complete the following:

1. Maintain a 3.500 cumulative GPA in CSD coursework;
2. Complete honors assignments in (minimum 12 credit hours); 
   CSD 416H Introduction to Language Disorders - Honors 3
   CSD 490H Dir St Sp-La/Audi 1-2
   CSD 506H Acoustic and Perceptual Phonetics - Honors 3
   CSD 514H Speech-Sound Disorders 3
   CSD 517H Communication in Aging - Honors 3
   CSD 519H Genetic and Organic Syndromes - Honors 3
   CSD 605H Neuroscience of Speech and Language: Basic Processes - Honors 4
3. Actively participate in facilitated meetings with other CSD honors students;
4. Be a participating member of the WSU Student Speech-Language-Hearing Association (WSUSSLHA) student organization;
5. Maintain a portfolio of assignments, activities and reflections throughout the honors track; and
6. Complete and present a mentored scholarship activity during the last year of the program.

**BA in Communication Sciences and Disorders - Concentration in Deafness and Hard of Hearing (D/HH)**

The concentration in D/HH prepares students to work with individuals who are deaf or hard of hearing. The purpose is to provide a degree path for undergraduate students who may choose to pursue careers in sign language interpreting and those entering the fields of speech-language pathology (SLP) and audiology (AUD) who seek to work with populations who are deaf or hard of hearing. A student with the concentration in deafness and hard of hearing would have completed the necessary undergraduate requirements for entry into graduate education in either SLP or AUD with the additional foundation in deafness and hearing impairment.

This program of study emphasizes the importance of communication in all modalities: signed, spoken and written. As such, students study typical and atypical communication, audition and amplification, aural rehabilitation, signed language systems and speech-language habilitation. With an undergraduate degree in communication sciences and disorders and a concentration in deafness and hard of hearing, students are prepared to advance their skill in sign language interpreting if they so choose. The emphasis of this program is on understanding, embracing and accommodating diversity and valuing the contributions of individuals with sensory differences as vital members of every society.

The undergraduate major in CSD with a concentration in D/HH requires a total of 54 credit hours. Students wishing to enroll in this concentration must meet the admission requirements for the undergraduate major.

**Admission**

Students should request application materials for admission to the major in the CSD department, or obtain application materials online, prior to enrolling in their last semester of prerequisite courses, typically in the spring semester of the sophomore year. The application deadline for fall semester admission is April 1; November 1 for spring semester admission.

Admission requirements include:

1. An overall GPA of 3.000; and
2. The completion of the following courses with a grade that generates at least 3.000 credit points per credit hour in each course:
   
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<tr>
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</table>

Students can be currently enrolled in those courses offered during the semester in which the application is made.

Once admitted to the undergraduate major, students are required to obtain a criminal background check at their own expense as part of clinically-based assignments throughout the program. Students should consult the beginning of the College of Health Professions section of the catalog for additional requirements which may be needed to participate in clinical settings. In addition, enrollment in CSD 425, is subject to departmental approval and proof of medical clearance (see department for details) prior to the start of the course.

**Curriculum**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD 11</td>
<td>Disorders of Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>CSD 240</td>
<td>Introduction to Deaf and Hard of Hearing</td>
<td>2</td>
</tr>
<tr>
<td>CSD 251</td>
<td>Auditory Development and Disorders</td>
<td>2</td>
</tr>
<tr>
<td>CSD 260</td>
<td>Signing Exact English</td>
<td>2</td>
</tr>
<tr>
<td>CSD 270</td>
<td>American Sign Language</td>
<td>3</td>
</tr>
<tr>
<td>CSD 301</td>
<td>Basic Anatomy and Physiology of the Speech Mechanism</td>
<td>2</td>
</tr>
<tr>
<td>CSD 302</td>
<td>Basic Anatomy and Physiology of the Auditory System</td>
<td>2</td>
</tr>
<tr>
<td>CSD 304</td>
<td>Early Language Development</td>
<td>3</td>
</tr>
<tr>
<td>CSD 306</td>
<td>Applied Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>CSD 306L</td>
<td>Applied Phonetics Lab</td>
<td>0</td>
</tr>
<tr>
<td>CSD 351</td>
<td>Introduction to Auditory Assessment</td>
<td>3</td>
</tr>
</tbody>
</table>
in settings such as hospitals, clinics, reference labs and physicians’ medical laboratories are employed in medical laboratories to aid in the prevention, diagnosis and treatment of diseases. Most medical laboratory scientists are employed in medical laboratories to perform laboratory procedures accurately and precisely in order to aid in the prevention, diagnosis and treatment of diseases. Most medical laboratory scientists are employed in medical laboratories in settings such as hospitals, clinics, reference labs and physicians’

| CSD 360 | Signing Exact English II | 2 |
| CSD 370 | American Sign Language II | 3 |
| CSD 416 | Introduction to Language Disorders | 3 |
| CSD 417 | Introduction to Language Disorders Lab | 1 |
| CSD 504 | Aural Rehabilitation | 3 |
| CSD 514 | Speech-Sound Disorders | 3 |
| CSD 515 | Speech-Sound Disorders Lab | 1 |
| CSD 518 | Deaf Culture | 3 |
| CSD 519 | Genetic and Organic Syndromes | 3 |
| CSD 521 | Genetic and Organic Syndromes Lab | 1 |
| CSD 522 | Deaf Heritage | 2 |
| CSD 524 | Select one of the following options: | 4 |
| Option A: | | |
| CSD 605 | Neuroscience of Speech and Language: Basic Processes | |
| Option B: | | |
| HS 570 | Neuroscience for Health Professionals: Peripheral Nervous System | |
| HS 571 | Neuroscience for Health Professionals: Ascending and Descending Pathways | |
| HS 572 | Neuroscience for Health Professionals: Brainstem and Cerebellum | |
| HS 573 | Neuroscience for Health Professionals: Forebrain | |

Total Credit Hours 54

**Minor in Communication Sciences and Disorders**

A minor in communication sciences and disorders consists of 18 credit hours. The following courses are recommended for a minor unless other arrangements are made:

| CSD 111 | Disorders of Human Communication | 3 |
| CSD 301 | Basic Anatomy and Physiology of the Speech Mechanism | 2 |
| CSD 302 | Basic Anatomy and Physiology of the Auditory System | 2 |
| CSD 304 | Early Language Development | 3 |
| CSD 306 | Applied Phonetics | 3 |
| CSD 306L | Applied Phonetics Lab | 0 |
| CSD 517 | Communication in Aging | 3 |
| CSD 519 | Genetic and Organic Syndromes | 3 |
| CSD 521 | Genetic and Organic Syndromes Lab | 1 |

Total Credit Hours 20

**Medical Laboratory Sciences**

The medical laboratory scientist’s role in the health care team is to perform laboratory procedures accurately and precisely in order to aid in the prevention, diagnosis and treatment of diseases. Most medical laboratory scientists are employed in medical laboratories in settings such as hospitals, clinics, reference labs and physicians’ offices. The medical laboratory scientist also has the skills necessary for employment in related areas such as laboratory and pharmaceutical sales; quality assurance in industries such as food, beverage, chemicals, milling and plastics; office laboratory consulting, forensic medicine, research, molecular diagnostics and veterinary medicine. The bachelor degree may also be used as a foundation for graduate study in health professions.

**Majors in Medical Laboratory Sciences**

- BS in Medical Laboratory Sciences (p. 172)

**Courses in Medical Laboratory Sciences**

- Medical Laboratory Sciences (MLS) (p. 396)

**BS in Medical Laboratory Sciences**

**Admission to Professional Curriculum**

The deadline for fall semester admission to the professional program is November 1. The deadline for spring semester admission to the professional program is April 1.

To qualify as a candidate for admission to the professional phase, the student must:

1. Be admitted to WSU;
2. Be in the process, or have completed, the preprofessional requirements with grades of C (2.000) or better;
3. Submit application to department;
4. Submit three letters of recommendation;
5. Have a minimum GPA of 2.500; and
6. Complete a professional goal statement.

Acceptance into the professional phase of the program is determined by the medical laboratory sciences admissions committee.

The Bachelor of Science program in medical laboratory sciences requires a total of 31–34 credit hours of prerequisite science courses, in addition to WSU general education requirements, and 53 credit hours of professional courses. Professional courses include professional practice in medical laboratories that are affiliated with WSU. The program is accredited by the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS). Upon successful completion of the program, students are eligible to sit for the national certification examination through the American Society for Clinical Pathology (ASCP).

**Prerequisite Science Courses**

Select one of the following: 10

| CHEM 211 & CHEM 212 | General Chemistry I and General Chemistry II | |
| Or equivalent general chemistry (two semesters at the chemistry major level with lab) | |

Select one of the following: 3

| MLS 311 | Biochemistry for Clinical Scientists |
| CHEM 661 | Introductory Biochemistry |
| Or equivalent biochemistry | |

Select one of the following: 4-6

| BIOL 210 | General Biology I (or equivalent general biology, one semester with lab) |
| HS 290 | Foundational Human Anatomy and Physiology |
| BIOL 223 | Human Anatomy and Physiology |
Be admitted to WSU;
In addition, the MLT applicant must submit transcripts showing
Be in the process, or have completed, the preprofessional
Submit application to department;
Complete a professional goal statement.

### MLT to MLS Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 400</td>
<td>Introduction to Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>MLS 400</td>
<td>Clinical Laboratory Management/Education</td>
<td>3</td>
</tr>
<tr>
<td>MLS 411</td>
<td>Special Topics</td>
<td>1-6</td>
</tr>
<tr>
<td>MLS 458</td>
<td>Advanced Clinical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>MLS 468</td>
<td>Advanced Clinical Hematology</td>
<td>4</td>
</tr>
<tr>
<td>MLS 478</td>
<td>Advanced Immunohematology</td>
<td>4</td>
</tr>
<tr>
<td>MLS 482</td>
<td>Molecular Diagnostic Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MLS 485</td>
<td>Advanced Clinical Microbiology</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours: 27-32

### Other Requirements of all Students

Students are required to provide their own transportation to the clinical sites. Students are required to purchase health and professional liability insurance, and to show compliance with current guidelines of health and immunity protection.

### Physical Therapy

Because physical therapy is an entry point into the health care system for many individuals, the physical therapy program at Wichita State University develops practitioners who can meet this responsibility and provide leadership inside and outside the profession. The Doctor of Physical Therapy degree allows the student to achieve a foundation in liberal arts and sciences as well as to gain an education in the profession of physical therapy. Graduates have the skills and knowledge base necessary to assist them in influencing the quality of physical therapy care, the profession of physical therapy, and health care in the local community and beyond. For more information about the Doctor of Physical Therapy degree, please see the program information in the Graduate Catalog (http://catalog.wichita.edu/graduate/health-professions/health-sciences/physical-therapy).

### Physician Assistant

The department of physician assistant offers a graduate degree program leading to an MPA degree. Refer to the Graduate Catalog for program requirements. The bachelor degree was phased out summer 2005. No new bachelor degree-seeking students are being admitted.

Please see the Graduate Catalog for information about WSU's Master of Physician Assistant program (http://catalog.wichita.edu/graduate/health-professions/health-sciences/physician-assistant).

### Public Health Sciences

The department of public health sciences offers the Bachelor of Science in health services management and community development (HSMCD), the Bachelor of Science in health science, coursework leading to the Bachelor of Arts field major in aging studies and the Bachelor of General Studies with an emphasis in aging studies, a minor in HSMCD, a minor in aging studies, the Master of Arts in aging studies, a graduate certificate in public health, and the administrator-in-training (AIT) for long-term care administration licensure.
BS in Health Science

The health sciences field is enjoying an explosion of career opportunities, with job growth of 27 percent predicted in the next decade for all health services professions (U.S. Bureau of Labor Statistics). In concert with this growth, the department of public health sciences offers a Bachelor of Science (BS) in health science.

Typically, health science graduates go on to work in health care settings such as pharmaceutical and hospital sales representatives, specialists in insurance companies, science technicians (or research assistants). The degree may also be used for those who wish to progress to supervisory or instructional positions requiring a baccalaureate degree (e.g., radiologic technologists, respiratory therapists).

Others opt to extend their employability even further by pursuing a graduate or professional education. Graduate-level education can lead to careers in health administration, medicine, physical therapy, physician assistant or public health.

Salaries vary widely among occupations, but generally reflect the unprecedented demand for qualified health sciences professionals. Health science majors are introduced to the full array of health career opportunities and can begin to focus their interests during the last two years of the four-year program.

A bachelor degree program in health science provides a foundation in liberal arts and sciences, along with a core health sciences curriculum. The BS in health science degree at Wichita State University will be useful to students:

1. Pursuing positions in the health care sector as pharmaceutical and hospital sales representatives, specialists in insurance companies, research assistants, etc.;
2. Needing an undergraduate degree for entry into a graduate professional degree program offered by the College of Health Professions or other colleges/universities requiring such a degree; or
3. Desiring a general degree in the health field, and/or having a preprofessional health interest.

Program Learning Objectives

1. Describe the evolution of public health and its roles and issues across local, national and global health systems.
2. Demonstrate ability to use data to promote, protect, and assure improved population health outcomes and knowledge.
3. Explain the relationship between health leadership, management and policy.
4. Illustrate the importance of social, behavioral, cultural and environmental factors that impact community health.
5. Demonstrate professionalism and appraise public health ethics, stewardship, social justice and life-long learning.
6. Exhibit oral and written communication skills for diverse populations and environments.
7. Outline foundations of clinical sciences (e.g. human nutrition, pathophysiology and pharmacology).

Admission to the College of Health Professions

Students choosing to study health science are admitted to the BS in health science degree program. They are assigned a college advisor who will assist them in meeting the requirements for the degree.

Degree Requirements

<table>
<thead>
<tr>
<th>Program Mathematics and Natural Sciences Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a minimum of 14 credit hours from the following (general education courses from this area may also be used to meet general education program requirements)</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>BIOL 106</td>
</tr>
<tr>
<td>BIOL 107</td>
</tr>
<tr>
<td>BIOL 210</td>
</tr>
<tr>
<td>BIOL 211</td>
</tr>
<tr>
<td>BIOL 220</td>
</tr>
<tr>
<td>BIOL 223 or HS 290</td>
</tr>
<tr>
<td>BIOL 330</td>
</tr>
<tr>
<td>CHEM 103</td>
</tr>
<tr>
<td>CHEM 211</td>
</tr>
<tr>
<td>CHEM 331</td>
</tr>
<tr>
<td>GEOL 102</td>
</tr>
<tr>
<td>GEOL 111</td>
</tr>
<tr>
<td>GEOL 300</td>
</tr>
<tr>
<td>PHYS 111</td>
</tr>
<tr>
<td>PHYS 131</td>
</tr>
<tr>
<td>PHYS 213</td>
</tr>
<tr>
<td>PHYS 214</td>
</tr>
<tr>
<td>STAT 370</td>
</tr>
</tbody>
</table>

Health Science Core (required)

| HP 203 or HP 303 | Medical Terminology 2-3 |
| PHIL 327 | Bioethics 3 |
| HMCD 310 | Introduction to the U.S. Health Services System 3 |
| HMCD 325 | Introduction to Epidemiology 3 |
| HMCD 344 | The Role of Culture in Health Care 3 |
must have credit for 120 acceptable credit hours toward their degree. To be eligible for graduation from Wichita State University, students must have a cumulative grade point average of 2.000, with no individual course in the major having a grade that generates less than 1.700 credit points per credit hour.

For more information contact the undergraduate coordinator by email (phs@wichita.edu), by phone at (316) 978-3060, or visit the public health sciences website (http://wichita.edu/phs).

BS in Health Services Management and Community Development

The Bachelor of Science degree in HSMCD develops leadership capacity for a healthy society through its undergraduate degree program. This curriculum establishes a 48-credit-hour professional degree program to prepare graduates for entry-level positions in the management, planning and assessment of health services delivery across the spectrum of health care, such as acute care medicine, public and community health, and long-term care.

This 48-credit-hour professional degree program is appropriate for individuals interested in applying the social and business sciences to a career in the health care sector. Students enrolled in this curriculum must complete 18 credit hours of HSMCD core coursework that provides the knowledge and skill sets that are basic to health services delivery and population health assessment.

Program majors complete 24 credit hours of elective courses beyond the core coursework. Elective courses are chosen, with the assistance of an assigned faculty advisor, based on a student’s career focus. In addition to didactic coursework, students must complete a 3-credit-hour practicum placement (educational work experience) in a local health care organization, as well as a 3-credit-hour capstone seminar at or near the end of their program of study.

For students with a health services management interest, elective courses are selected to provide the analytic, administrative and leadership skills necessary for entry level managerial positions in acute care medicine (medical group practices, health insurance corporations, medical product companies, hospital and ambulatory care clinics, and EMS systems management), long-term care (nursing homes, home health care agencies, continuing care facilities and hospice), and public and community health (state health agencies, local health departments and community-based health and wellness agencies).

For students with a community orientation, elective courses are selected to provide entry-level competencies in designing and implementing culturally sensitive health care services, planning and assessing health programs, developing strategies for health promotion, and building advocacy relationships with those who make health policy.

Both options allow students to gain first-hand experience with local community initiatives.

Students who are interested in pursuing a career in health services management are strongly encouraged to minor in business administration as an appropriate complement to this career choice. Additional information on this minor can be found in the Barton School of Business section of this catalog, or can be obtained through program advisors. Students who are interested in community development work are strongly encouraged to consult with their faculty advisor when selecting an appropriate minor.

Requirements for Graduation

Students in the health science program are required to maintain a cumulative grade point average of 2.000, with no individual course in the major having a grade that generates less than 1.700 credit points per credit hour.

To be eligible for graduation from Wichita State University, students must have credit for 120 acceptable credit hours toward their degree. and a GPA in the major of 2.000. Students transferring from a two-year college must complete at least 60 hours of four-year college work and 45 hours of upper-division coursework in order to qualify for graduation.

1 Human Anatomy/Physiology plus one semester of college chemistry are prerequisite for HS 301 & HS 400.
Program Learning Objectives

1. Describe the evolution of public health and its roles and issues across local, national and global health systems.

2. Demonstrate ability to use data to promote, protect, and assure improved population health outcomes and knowledge.

3. Explain the relationship between health leadership, management and policy.

4. Illustrate the importance of social, behavioral, cultural and environmental factors that impact community health.

5. Demonstrate professionalism and appraise public health ethics, stewardship, social justice and life-long learning.

6. Exhibit oral and written communication skills for diverse populations and environments.

Preprogram Courses

Preprogram Courses
HP 203 Medical Terminology 2-3
or HP 303 Medical Terminology
HMCD 310 Introduction to the U.S. Health Services System 3

Statistics Requirement
Select one of the following: 3
CESP 704 Introduction to Educational Statistics
ECON 231 Introductory Business Statistics
PSY 301 Psychological Statistics
SOC 501 Sociological Statistics
STAT 370 Elementary Statistics

Communication Requirement
Select one of the following: 3
COMM 302 Interpersonal Communication
COMM 311 Persuasion
COMM 313 Argumentation & Advocacy
COMM 325 Speaking in Business and the Professions
COMM 328 Teamwork, Leadership and Group Communication
ENGL 210 Composition: Business, Professional and Technical Writing

Total Credit Hours 11-12

Progression

Upon admission to the HSMCD program, a student will be assigned a faculty advisor with primary expertise in the student’s area of interest. Students should not select HSMCD elective coursework without input from their faculty advisors.

Students must have satisfied the HSMCD core course requirements and have been admitted to the HSMCD professional program to take either HMCD 460; or HMCD 470.

Students in the health services management and community development program are required to maintain a cumulative grade point average of 2.000, with no individual course in the major having a grade that generates less than 1.700 credit points per credit hour. Students failing to meet this requirement will have one semester to correct their GPA deficiencies. Failure to do so will result in dismissal from the program.

Professional Curriculum

HMCD Core Courses
HMCD 308 Leadership in Self and Society 3
or HMCD 333 Organizational Behavior and Leadership in Health Organizations
HMCD 325 Introduction to Epidemiology 3
HMCD 330 Community Health and Development 3
HMCD 342 Introduction to Financing Health Care Systems 3
or HMCD 642 Financing Health Care Services
HMCD 344 The Role of Culture in Health Care 3
HMCD 356 Introduction to Health Care Administration and Policy 3

HMCD Electives
Select 24 credit hours from the following (no more than two from AGE): 24
AGE 404 Psychology of Aging
AGE 405 Sociology of Aging
AGE 408 Biology of Aging
AGE 512 Diversity and Aging
AGE 515 Women and Aging
AGE 516 Age, Work and Retirement
AGE 525 Dying, Death and Bereavement
AGE 527 Introduction to Sexuality and Aging
AGE 560 Aging Network Seminar
AGE 622 Public Health and Aging
AGE 710 Systems in Long-Term Care
AGE 765 The Medicare System
HMCD 326 Emerging Health Care Issues of the 21st Century
HMCD 327 Introduction to Global Health Issues
HMCD 328 Introduction to Alternative and Complementary Medicine
HMCD 403 Health Education and Health Promotion
HMCD 413 Introduction to Social and Behavioral Aspects of Public Health
HMCD 428 Health Care Organization
HMCD 478 Health Economics
HMCD 416 Introduction to Environmental Health
HMCD 621 Supervisory Management in Health Care Organizations
HMCD 622 Human Resources Management in Health Care Organizations
HMCD 624 Community Development Methods
HMCD 625 Special Topics in Health Services
HMCD 625C Entrepreneurship
HMCD 625F Princ of Leadership in Health
HMCD 642 Financing Health Care Services
Minor in Aging Studies

The undergraduate minor in aging studies consists of at least 15 credit hours of aging studies courses. Students are required to complete AGE 100, as the foundational course for the minor.

Courses for the Minor:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE 100</td>
<td>Introduction to Gerontology</td>
</tr>
</tbody>
</table>

Select at least 12 credit hours from among the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE 404</td>
<td>Psychology of Aging</td>
</tr>
<tr>
<td>AGE 405</td>
<td>Sociology of Aging</td>
</tr>
<tr>
<td>AGE 408</td>
<td>Biology of Aging</td>
</tr>
<tr>
<td>AGE 501</td>
<td>Field Experience</td>
</tr>
<tr>
<td>AGE 512</td>
<td>Diversity and Aging</td>
</tr>
<tr>
<td>AGE 515</td>
<td>Women and Aging</td>
</tr>
<tr>
<td>AGE 516</td>
<td>Age, Work and Retirement</td>
</tr>
<tr>
<td>AGE 521</td>
<td>Images of Aging in the Media</td>
</tr>
<tr>
<td>AGE 525</td>
<td>Dying, Death and Bereavement</td>
</tr>
<tr>
<td>AGE 527</td>
<td>Introduction to Sexuality and Aging</td>
</tr>
<tr>
<td>AGE 529</td>
<td>Caregiving and Aging</td>
</tr>
<tr>
<td>AGE 550</td>
<td>Selected Topics in Aging Studies</td>
</tr>
<tr>
<td>AGE 560</td>
<td>Aging Network Seminar</td>
</tr>
<tr>
<td>AGE 660</td>
<td>Administrator-in-Training Long-Term Care Practicum</td>
</tr>
<tr>
<td>AGE 622</td>
<td>Public Health and Aging</td>
</tr>
<tr>
<td>AGE 710</td>
<td>Systems in Long-Term Care</td>
</tr>
<tr>
<td>AGE 717</td>
<td>Health Communications and Aging</td>
</tr>
<tr>
<td>AGE 780</td>
<td>Physical Dimensions of Aging</td>
</tr>
</tbody>
</table>

Total Credit Hours: 15

Please note: If planning to enter the aging studies master’s program, courses taken for undergraduate credit cannot be applied to or retaken for graduate credit. Please speak with an adviser and AGE faculty/staff when choosing classes.

Minor in Health Science

A minor in health science is available to any College of Health Professions student outside the program major. The minor consists of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMCD 310</td>
<td>Introduction to the U.S. Health Services System</td>
</tr>
<tr>
<td>HMCD 325</td>
<td>Introduction to Epidemiology</td>
</tr>
<tr>
<td>HMCD 344</td>
<td>The Role of Culture in Health Care</td>
</tr>
<tr>
<td>HMCD 356</td>
<td>Introduction to Health Care Administration and Policy</td>
</tr>
</tbody>
</table>

Select 6-7 credit hours of clinical coursework from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 301</td>
<td>Clinical Pharmacology</td>
</tr>
<tr>
<td>HS 331</td>
<td>Principles of Dietetics &amp; Nutrition</td>
</tr>
<tr>
<td>HS 400</td>
<td>Introduction to Pathophysiology</td>
</tr>
</tbody>
</table>

Total Credit Hours: 18-19
At least 12 credit hours must be taken at WSU with a minor GPA of 2.000 or better, with no individual course in the minor having a grade that generates less than 1.700 (C-) credit points per hour.

**Minor in Health Services Management and Community Development**

A minor in health services management and community development is available to any student outside the program major. The minor consists of:

- **HMCD 310** Introduction to the U.S. Health Services System 3
- Select 12 credit hours of HMCD introductory (300-level) coursework 12
- Total Credit Hours 15

**School of Nursing**

The School of Nursing offers:

- the Bachelor of Science in Nursing (BSN),
- the Master of Science in Nursing (MSN), and
- the Doctor of Nursing Practice (DNP).

For more information about the graduate degrees, refer to the WSU Graduate Catalog.

**Majors in Nursing**

- Bachelor of Science in Nursing (BSN) (p. 178)
  - Bachelor of Science in Nursing - Traditional Program (p. 180)
  - Bachelor of Science in Nursing - Accelerated Program (p. 178)
  - Bachelor of Science in Nursing - RN to BSN Online Degree Completion Program (p. 179)

**Courses in the School of Nursing**

- Nursing (NURS) (p. 416)

**BS in Nursing**

The Bachelor of Science in Nursing program is designed to prepare students for the practice of professional nursing. The graduate is prepared for beginning positions in nursing in any health care delivery system, for further study at the master and doctoral levels, and for advancement to nursing positions of increasing responsibility and leadership.

Students are admitted to the School of Nursing at the junior year after completing 58 credit hours of coursework. Persons interested in the Bachelor of Science in Nursing may direct inquiries to:

Undergraduate Nursing Office, School of Nursing
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0041
Email (nursing.undergraduate@wichita.edu)

**BSN - Accelerated Program**

The accelerated program prepares students to graduate with a Bachelor of Science in Nursing degree. Graduates of the program are prepared to take the RN licensure examination, and for entry-level nursing positions in all health care settings. The program provides a foundation for graduate study in nursing. The curriculum is the same as the traditional BSN in a compressed format. A new class of students will begin in May and finish in June of the following year. Instruction is intense with courses offered full time with few breaks between sessions. There will be evening and weekend class and clinical time. Students will receive the same number of clinical hours as their counterparts in the traditional program.

The rigorous 13-month curriculum recognizes each person’s past experiences and success and is geared toward students who are capable of undertaking this course of study. This program is recommended for students who have senior standing (90+ credits) or have a previous bachelor’s degree or higher.

Tuition and fees for the accelerated program are approximately double the cost of the traditional four-semester program.

**Preprofessional Curriculum**

Students applying for admission to the School of Nursing must have completed the following courses. Students should consider taking 16 credit hours per semester or attending summer session.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 112</td>
<td>Precalculus Mathematics</td>
<td></td>
</tr>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 100</td>
<td>Meaning of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 125</td>
<td>Introductory Logic</td>
<td></td>
</tr>
<tr>
<td>PHIL 144</td>
<td>Moral Issues</td>
<td></td>
</tr>
<tr>
<td>SOCY 111</td>
<td>Introductory course in humanities</td>
<td>3</td>
</tr>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 325</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 221</td>
<td>Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>or CHEM 211</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>or HS 290</td>
<td>Foundational Human Anatomy and Physiology</td>
<td></td>
</tr>
<tr>
<td>HS 301</td>
<td>Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>HS 400</td>
<td>Introduction to Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>HS 331</td>
<td>Principles of Dietetics &amp; Nutrition</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Medical terminology</td>
<td>1-3</td>
</tr>
<tr>
<td></td>
<td>Statistics with approval</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>1-2</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>59-62</td>
</tr>
</tbody>
</table>

**Admission to School of Nursing**

Students should request application materials from the School of Nursing, or obtain application materials online, prior to enrolling in their last semester of prerequisite courses. Applications for summer
semester admission are required by February 1. To qualify as a candidate for admission to the School of Nursing, students must:

1. Be enrolled in, or admitted to, WSU;
2. Have completed, or have plans to complete, the prerequisite requirements prior to beginning the professional curriculum;
3. Have an overall grade point average of at least 3.00 in all courses completed and no grade lower than a 2.000 in any of the specified required courses;
4. Submit application materials including expected semester of enrollment; and
5. Complete the standardized TEAS test with a minimum percentage score, or achieve an ACT score # 27 points, or an SAT score # 1125.

GPA requirements to finalize admission and prior to starting BSN courses:
- Cumulative GPA for all science classes (chemistry, microbiology, anatomy, physiology, pathophysiology and pharmacology) must be # 3.000
- Cumulative GPA must remain # 3.00
- All prerequisites must be successfully completed with a grade of C (2.000) or higher.

Other Requirements
Uniforms are required for all clinical laboratory experiences. Students are required to provide their own transportation to and from health care agencies used for these experiences. Students are required to purchase professional liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually.

Students must successfully complete a background check prior to beginning any nursing course.

Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing and lab experiences may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

### Accelerated Program Progression

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year Summer Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NURS 302</td>
<td>Professional Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 310</td>
<td>Fundamentals of Nursing Care</td>
<td>4</td>
</tr>
<tr>
<td>NURS 340</td>
<td>Mental Health Nursing Care</td>
<td>4</td>
</tr>
<tr>
<td>NURS 345</td>
<td>Health Assessment</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Credit Hours</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Fall Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NURS 320</td>
<td>Nursing Care of Adults I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 325</td>
<td>Introduction to Evidence-Based Practice</td>
<td>2</td>
</tr>
<tr>
<td>NURS 360</td>
<td>Clinical Care of Adults I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 365</td>
<td>Nursing Care of Older Adults</td>
<td>2</td>
</tr>
<tr>
<td>NURS 370</td>
<td>Nursing Care of Adults II</td>
<td>4</td>
</tr>
<tr>
<td>NURS 430</td>
<td>Pediatric Nursing Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 440</td>
<td>Maternal/Newborn Nursing Care</td>
<td>3</td>
</tr>
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<td></td>
<td><strong>Credit Hours</strong></td>
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### Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 410</td>
<td>Clinical Care Adults II</td>
<td>4</td>
</tr>
<tr>
<td>NURS 450</td>
<td>Nursing Care of Populations</td>
<td>3</td>
</tr>
<tr>
<td>NURS 460</td>
<td>Leadership and Clinical Decision Making</td>
<td>4</td>
</tr>
<tr>
<td>NURS 470</td>
<td>Nursing Care of Clients with Critical Illness</td>
<td>5</td>
</tr>
<tr>
<td>NURS 499</td>
<td>Clinical Capstone</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Credit Hours</strong></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td>57</td>
</tr>
</tbody>
</table>

### BSN - RN to BSN Online Degree Completion Program

The RN to BSN program offers advanced placement to registered nurses seeking a Bachelor of Science in Nursing degree. The program is completely online, is accessible 24 hours a day, and can be completed in as little as one calendar year or up to six years of part-time study. Up to 30 credit hours of retroactive credit or credit by exam in nursing courses can be applied to the degree. This value added program builds on the skills of the registered nurse’s previous nursing educational program. The BSN expands an RN’s knowledge base to provide a means for continued advancement in the profession, and to meet the necessary requirements for pursuing a graduate degree in nursing. Students interested in more information should visit the RN to BSN webpage (http://wichita.edu/RNtoBSN) or contact the RN to BSN advisor at:

Email (RNtoBSN@wichita.edu)
Phone: (316) 978-7332
Toll free: (844) 827-3828

### Registered Nurses must:

1. Apply to Wichita State University and submit official transcripts of college courses and records verifying completion of an accredited registered nurse program;
2. Submit verification of current license to practice as a registered nurse in their state of residence; and
3. Submit an application to the RN to BSN program.

Transcript evaluation will determine the exact general education required for the Bachelor of Science in Nursing degree. Students with an Associates Degree in Nursing (ADN) from an accredited university will meet WSU’s general education requirements.

### Program Prerequisite Courses

*Each of these courses must be completed with a C (2.000) or higher grade*

#### Foundation Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
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</table>

#### Social and Behavioral Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 325</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Mathematics and Natural Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>or CHEM 211</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>5</td>
</tr>
</tbody>
</table>
Credit Awarded for Previous Nursing Experience

The Associate Degree (ADN) RN student is eligible to receive nursing credit for 30 credit hours of ADN coursework upon successful completion of the degree requirements. During the final semester of coursework, the student will pay an administrative fee of $50 for receiving the credit. To avoid the award of duplicate credit toward graduation, the associate degree nursing coursework will be parenthesized on the transcript at the time the up to 30 credit hours of upper-division nursing coursework are posted.

RN diploma students who have graduated from an NLN accredited program and who meet the work experience criteria may earn 30 upper-division hours through credit by examination (CrE) or through portfolio review.

Dual/Accelerated Bachelor’s to Master’s Degree Program (RN to MSN Program)

The RN to MSN Dual/Accelerated Program offers the opportunity for outstanding registered nurse (RN) undergraduate students, who are admitted to and enrolled in the BSN program at WSU, to advance their careers in a significant way by pursuing the BSN and MSN degrees in a coordinated program that provides the student with the high level of academic advising necessary for program success. A cumulative grade point average (GPA) of 3.250 or higher is required at the time of admission to the BSN program and must be maintained throughout the BSN and MSN programs.

BSN Traditional Prepofessional Curriculum

Students applying for admission to the School of Nursing must have completed the following courses. Students should consider taking 16 credit hours per semester or attending summer session.

Graduation and Program Requirements

1. All prerequisite and professional courses must be completed with a C (2.000) or higher.
2. Graduation requirements
   a. 60 credit hours must be from a four-year university (up to 30 of these awarded via retroactive credit or credit by exam);
   b. 30 credit hours must be taken from WSU;
   c. Last 24 of 30 credit hours must be at WSU;
   d. 45 upper-division credit hours (up to 30 of these awarded via retroactive credit or credit by exam);
   e. 120 total credit hours required for Bachelor of Science in Nursing.
3. 2.500 cumulative GPA for admission to the School of Nursing.
4. Licensed RN (must be obtained within the first eight weeks of beginning the program).

Credit Awarded for Previous Nursing Experience

The Associate Degree (ADN) RN student is eligible to receive nursing credit for 30 credit hours of ADN coursework upon successful completion of the degree requirements. During the final semester of coursework, the student will pay an administrative fee of $50 for receiving the credit. To avoid the award of duplicate credit toward graduation, the associate degree nursing coursework will be parenthesized on the transcript at the time the up to 30 credit hours of upper-division nursing coursework are posted.

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Contact the School of Nursing for the latest updates.

BSN Traditional Prepofessional Curriculum

Students applying for admission to the School of Nursing must have completed the following courses. Students should consider taking 16 credit hours per semester or attending summer session.

Graduation and Program Requirements

1. All prerequisite and professional courses must be completed with a C (2.000) or higher.
2. Graduation requirements
   a. 60 credit hours must be from a four-year university (up to 30 of these awarded via retroactive credit or credit by exam);
   b. 30 credit hours must be taken from WSU;
   c. Last 24 of 30 credit hours must be at WSU;
   d. 45 upper-division credit hours (up to 30 of these awarded via retroactive credit or credit by exam);
   e. 120 total credit hours required for Bachelor of Science in Nursing.
3. 2.500 cumulative GPA for admission to the School of Nursing.
4. Licensed RN (must be obtained within the first eight weeks of beginning the program).

Credit Awarded for Previous Nursing Experience

The Associate Degree (ADN) RN student is eligible to receive nursing credit for 30 credit hours of ADN coursework upon successful completion of the degree requirements. During the final semester of coursework, the student will pay an administrative fee of $50 for receiving the credit. To avoid the award of duplicate credit toward graduation, the associate degree nursing coursework will be parenthesized on the transcript at the time the up to 30 credit hours of upper-division nursing coursework are posted.

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Contact the School of Nursing for the latest updates.
Admission to School of Nursing

Students should request application materials from the School of Nursing, or obtain application materials online, prior to enrolling in their last semester of prerequisite courses. Applications for summer semester admission are required by February 1. To qualify as a candidate for admission to the School of Nursing, students must:

1. Be enrolled in, or admitted to, WSU;
2. Have completed, or have plans to complete, the prerequisite requirements prior to beginning the professional curriculum;
3. Have an overall grade point average of at least 2.75 in all courses completed and no grade lower than a 2.000 in any of the specified required courses;
4. Submit application materials including expected semester of enrollment; and
5. Complete the standardized TEAS test with a minimum percentage score, or achieve an ACT score # 27 points, or an SAT score # 1125.

GPA requirements to finalize admission and prior to starting BSN courses:

- Cumulative GPA for all science classes (chemistry, microbiology, anatomy, physiology, pathophysiology and pharmacology) must be # 3.000
- Cumulative GPA must remain # 2.75
- All prerequisites must be successfully completed with a grade of C (2.000) or higher.

Professional Curriculum

The following courses in the School of Nursing are required for the Bachelor of Science in Nursing. A total of 124 hours of university credit is required for graduation.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 5</td>
<td></td>
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</tr>
<tr>
<td>NURS 302</td>
<td>Professional Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 310</td>
<td>Fundamentals of Nursing Care</td>
<td>4</td>
</tr>
<tr>
<td>NURS 320</td>
<td>Nursing Care of Adults I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 345</td>
<td>Health Assessment</td>
<td>4</td>
</tr>
<tr>
<td>HS 331</td>
<td>Principles of Dietetics &amp; Nutrition (Can be a pre- or corequisite course)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Credit Hours</td>
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</tr>
<tr>
<td>Semester 6</td>
<td></td>
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<tr>
<td>NURS 325</td>
<td>Introduction to Evidence-Based Practice</td>
<td>2</td>
</tr>
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<td>NURS 340</td>
<td>Mental Health Nursing Care</td>
<td>4</td>
</tr>
<tr>
<td>NURS 360</td>
<td>Clinical Care of Adults I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 365</td>
<td>Nursing Care of Older Adults</td>
<td>2</td>
</tr>
<tr>
<td>NURS 370</td>
<td>Nursing Care of Adults II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Credit Hours</td>
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<tr>
<td>Semester 7</td>
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<td>NURS 410</td>
<td>Clinical Care Adults II</td>
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<td>NURS 430</td>
<td>Pediatric Nursing Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 440</td>
<td>Maternal/Newborn Nursing Care</td>
<td>3</td>
</tr>
</tbody>
</table>

LPN to BSN Progression Plan

The LPN to BSN plan offers advanced placement to licensed practical nurses seeking a Bachelor of Science in Nursing degree. Up to 4 credit hours of credit via examination can be applied to the degree. LPNs seeking admission must meet undergraduate admission requirements, be a graduate of a state-approved LPN education program, pass a standardized test, have an active LPN license in Kansas, and have the equivalent of 1,000 hours of clinical practice as an LPN within the last year. Students seeking admission to this program should contact the School of Nursing.

MICT to BSN Progression Plan

The MICT to BSN progression plan offers advanced placement to paramedics seeking a Bachelor of Science in Nursing degree. Up to 7 hours of credit for previous coursework can be applied to the degree. Paramedics seeking admission must meet undergraduate admission requirements, be a graduate of a certified paramedic education program, be nationally certified as an EMT-P, and have the equivalent of 1,000 hours of documented EMT-P work experience within the last three years. Students seeking admission into this program should contact the School of Nursing.

Other Requirements

Uniforms are required for all clinical laboratory experiences. Students are required to provide their own transportation to and from health care agencies used for these experiences. Students are required to purchase professional liability insurance in the amount of $1 million per single claim/$3 million aggregate per year. The insurance must be renewed annually.

Students must successfully complete a background check prior to beginning any nursing course.

Students must provide evidence of personal health insurance and evidence of a completed physical examination prior to clinical laboratory experiences each academic year. Additional costs for instructional materials, testing and lab experiences may be required throughout the program. CPR certification is required. Information related to these requirements is available from the School of Nursing.

School of Oral Health

The School of Oral Health consists of the department of dental hygiene and the advanced education in general dentistry residency program. The School of Oral Health offers degree programs leading to a Bachelor of Science (BS) in dental hygiene, and a postdoctoral certificate in advanced education in general dentistry.

Dental Hygiene
Majors in Dental Hygiene
• BS in Dental Hygiene - Entry Level Program (p. 182)
• BS in Dental Hygiene - Degree Completion (p. 183)

Courses in Dental Hygiene
• Dental Hygiene (DH) (p. 330)

BS in Dental Hygiene - Entry Level Program
The baccalaureate entry level program in dental hygiene provides students with knowledge of the social, dental and clinical sciences and competencies needed by the dental hygienist in contributing to the attainment of optimum oral health for individuals through the life span. The graduate is prepared for beginning positions in dental hygiene and for further study at the graduate level.

Students are admitted to the program in the junior year after completing the prerequisite courses and general education requirements. Upon completion of the degree, students are eligible to take the appropriate examinations for licensure as dental hygienists. The Wichita State University dental hygiene program is accredited by the Commission on Dental Accreditation.

Preprofessional Curriculum
Students applying for admission to the entry level baccalaureate program must have completed the prerequisite courses and general education requirements. Students should consider taking 15 credit hours per semester or attending summer school.

Foundation Courses
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 112</td>
<td>Precalculus Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
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</table>

Humanities and Fine Arts
<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
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<td>Fine Arts</td>
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</tr>
<tr>
<td>Gen. Ed. Intro. course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Gen. Ed. Intro. course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Advanced Further Study/I&amp;P</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Social and Behavioral Sciences
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 111</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Further Study/I&amp;P</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Natural Sciences and Mathematics
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Further Study/I&amp;P</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Other Prerequisites
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>or HS 290</td>
<td>Foundational Human Anatomy and Physiology</td>
<td></td>
</tr>
<tr>
<td>HS 301</td>
<td>Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>HS 331</td>
<td>Principles of Dietetics &amp; Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HP 203</td>
<td>Medical Terminology</td>
<td>2-3</td>
</tr>
<tr>
<td>or HP 303</td>
<td>Medical Terminology</td>
<td>2-3</td>
</tr>
<tr>
<td>PC 105</td>
<td>Introduction to Computers and Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective

Total Credit Hours

Admission to the Entry Level Baccalaureate Degree
Persons interested in the dental hygiene program should direct their inquiries to:
Department of Dental Hygiene
Wichita State University
Wichita, Kansas 67260-0144

Acceptance into the College of Health Professions does not guarantee admission into the dental hygiene program. To qualify for admission to the dental hygiene program students must:
1. Be enrolled in, or admitted to, WSU;
2. Have completed, or have plans to complete, the prerequisite requirements the spring semester before beginning the program;
3. Have an overall grade point average of at least 2.750 in all courses completed and no grade lower than a grade that generates 2.000 credit points per credit hour in any of the specified required courses; and
4. Submit application materials by the established deadline.

Professional Curriculum
The following courses in the dental hygiene program are required for the entry level Bachelor of Science in dental hygiene. A total of 124 hours of university credit is required for graduation.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DH 311</td>
<td>Preclinical Dental Hygiene</td>
<td>5</td>
</tr>
<tr>
<td>DH 317</td>
<td>Clinical Radiology</td>
<td>4</td>
</tr>
<tr>
<td>DH 318</td>
<td>Oral Anatomy, Histology &amp; Embryology</td>
<td>3</td>
</tr>
<tr>
<td>DH 319</td>
<td>Dental Materials</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours

Semester 1

Semester 2

Semester 3

Semester 4

Semester 5

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DH 333</td>
<td>Dental Hygiene Clinic II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Credit Hours</td>
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<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>DH 410</td>
<td>Community Oral Health Management I</td>
<td>3</td>
</tr>
<tr>
<td>DH 416</td>
<td>Pain Management</td>
<td>2</td>
</tr>
<tr>
<td>DH 431</td>
<td>Dental Hygiene Concepts II</td>
<td>3</td>
</tr>
<tr>
<td>DH 434</td>
<td>Dental Hygiene Clinic III</td>
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Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>DH 407</td>
<td>Ethics and Jurisprudence</td>
<td>3</td>
</tr>
<tr>
<td>DH 432</td>
<td>Dental Hygiene Concepts III</td>
<td>2</td>
</tr>
<tr>
<td>DH 435</td>
<td>Dental Hygiene Clinic IV</td>
<td>4</td>
</tr>
<tr>
<td>DH 440</td>
<td>Community Oral Health Management II</td>
<td>3</td>
</tr>
</tbody>
</table>
Admission to Degree Completion

Special Requirements
Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students also are required to purchase professional liability insurance and personal health insurance on an annual basis. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Students must successfully complete a background check prior to beginning any dental hygiene course.

Information related to special requirements is available to students at:
Department of Dental Hygiene
Wichita State University
1845 Fairmount
Wichita, Kansas 67260-0144

BS in Dental Hygiene - Degree Completion
The degree completion Bachelor of Science in dental hygiene is available to dental hygienists who seek to expand their professional role in such areas as community dental hygiene, teaching in a dental hygiene program, alternative practice settings, or in preparation for a graduate program. The program is completely online, accessible 24 hours a day, on an annual basis. In addition, students are required to provide their own transportation to and from the health care agencies used for clinical experiences.

Students interested in more information should visit the degree completion webpage (http://wichita.edu/dhonline), or contact the BSDH degree completion advisor:

- Email: dhonline@wichita.edu
- Phone: (316) 978-7332

Admission to Degree Completion \(^1\)

1. Have an overall cumulative GPA of 2.500.
2. Submit an application to the university. WSU Online Gateway Application (https://wsu-info.org/go/split.htm).
   a. Former Wichita State students need to fill out a reactivation form with the registrar's office.
   b. Applicants should check information about State Authorization before continuing with the application to confirm that WSU is authorized to offer courses and programs in their state.
3. Request that official transcripts of previous college courses, and records verifying completion of an accredited dental hygiene program, be sent to Wichita State University.
4. Connect with an advisor to evaluate transcripts, verify dental hygiene license, and determine an individualized plan of study by email (dhonline@wichita.edu).

\(^1\) Refer to the dental hygiene department website (http://wichita.edu/dhonline) with questions, and for the most current and complete information.

Professional Curriculum

Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>DH 360</td>
<td>Fundamentals of Advanced Professional Roles (^1)</td>
<td>2</td>
</tr>
<tr>
<td>DH 420</td>
<td>Educational Methodology in Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>DH 430</td>
<td>Curriculum Design, Evaluation and Management in Dental Hygiene Education</td>
<td>3</td>
</tr>
<tr>
<td>DH 452</td>
<td>Population Health Management in Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>DH 456</td>
<td>Special Care Populations</td>
<td>3</td>
</tr>
<tr>
<td>DH 465</td>
<td>Research and Evidence-Based Practice in Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>DH 470</td>
<td>Issues in Dental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>HMC 308</td>
<td>Leadership in Self and Society</td>
<td>3</td>
</tr>
<tr>
<td>or HMC 333</td>
<td>Organizational Behavior and Leadership in Health Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE 404</td>
<td>Psychology of Aging</td>
</tr>
<tr>
<td>DH 462</td>
<td>Special Projects in Dental Hygiene</td>
</tr>
<tr>
<td>DH 481</td>
<td>Cooperative Education</td>
</tr>
<tr>
<td>HMC 310</td>
<td>Introduction to the U.S. Health Services System</td>
</tr>
<tr>
<td>HMC 326</td>
<td>Emerging Health Care Issues of the 21st Century</td>
</tr>
<tr>
<td>HP 430</td>
<td>Impact of Disease Upon Global Events</td>
</tr>
</tbody>
</table>

Total Credit Hours 32

\(^1\) Sequencing: DH 360 must be taken the first semester of enrollment in the degree completion program. STAT 370 must be taken in the first or second semester of enrollment and prior to DH 465.

Graduation and Program Requirements

1. A 2.500 cumulative GPA for admission to the BSDH degree completion program.
2. A current, unencumbered dental hygiene license for admission and progression.
3. College algebra and all professional courses must be completed with a C (2.000) or higher.
4. Graduation requirements:
   a. 60 credit hours must be from a four-year university;
   b. 30 credit hours must be taken from WSU;
   c. Last 24 of 30 credit hours must be at WSU;
   d. 45 upper-division credit hours (25 of these awarded via retroactive credit);
   e. 124 total credit hours required for Bachelor of Science in dental hygiene.
Fairmount College of Liberal Arts and Sciences

Ronald R. Matson, dean
200 Lindquist Hall • (316) WSU-6659
http://wichita.edu/las
Charles Koebel, senior associate dean
Marche Fleming-Randle, assistant to the president for diversity, and
senior assistant dean
Cheryl Miller, senior assistant dean

LAS Advising Center
115 Grace Wilkie Hall
(316) WSU-3700
Advising webpage (http://wichita.edu/lasadvising)

The mission of Fairmount College of Liberal Arts and Sciences is to cultivate intellectual curiosity and foster contemplation of the human experience and the natural world. Faculty members are dedicated to creating, expanding, applying and preserving knowledge, and to introducing students to the scholarship, theories, methods and perspectives of their diverse disciplines. A liberal arts and sciences education develops transferable analytical skills — the capacity to gather and interpret information, think critically and communicate effectively — and stimulates a lifelong love of learning that enriches graduates and their communities.

Fairmount College offers undergraduate majors in natural sciences, social sciences, humanities and programs of professional training. An education in these disciplines helps students develop knowledge and appreciation of our physical and biological world, the arts and different cultures; and an awareness of civic responsibilities, as well as professional preparation. Fairmount College provides foundation coursework, as well as general education, and courses required for graduation from other colleges at WSU. These provide students with skills that are intrinsically valuable and often fundamental to professional training and the needs of the workplace.

Admission

Students are admitted to Fairmount College of Liberal Arts and Sciences upon meeting the general admission requirements for Wichita State University and declaring one of three categories:

1. Degree-bound. These students enter with the intention of pursuing one of the degree programs offered by Fairmount College;
2. Degree-bound as an exploratory student. These students have not yet decided on a major area of study when they enter WSU; and
3. Nondegree-bound. These students enroll in classes or programs for purposes other than achieving a degree.

Admissions details are in the Admissions (p. 9) section of this catalog.

Probation and Dismissal Standards

1. Students are placed on probation whenever their cumulative or WSU grade point average falls below 2.000 and they have attempted at least 6 credit hours at Wichita State University.
2. Probation is removed when the cumulative and WSU grade point averages reach the required 2.000 level.
3. Students continue on probation when they earn a 2.000 or better semester average but their cumulative or WSU grade point average remains below 2.000.
4. Students will be dismissed at the end of any semester on probation if they fail to earn a semester grade point average at or above the minimum required, and have a cumulative or overall WSU grade point average also below the minimum required. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.
5. When dismissed, students may re-enroll only with the permission of the university’s Committee on Admissions and Exceptions, which considers petitions forwarded by the Fairmount College Admissions and Exceptions Committee.

Students who have been dismissed for academic reasons may seek readmission to the university by filing a written petition with the Fairmount College Admissions and Exceptions Committee. Cases for readmission must be developed by the student after consultation with an advisor. The petition is then considered by the Fairmount College committee and forwarded to the university’s committee for final action.

Because advising and advance planning require careful attention and much time, students must meet the published deadlines to have their petitions considered.

Enrollment Limits

Students in good academic standing may enroll for a maximum of 19 credit hours during fall and spring semesters and a maximum of 12 credit hours during the summer session. Students wishing to enroll beyond these limits must request approval from an academic advisor in the LAS Advising Center (LASAC).

Academic Advising

Academic advising is an ongoing educational partnership between the student and the academic advisor. Advising promotes student academic success, supports diverse and equitable educational experiences, encourages students to become self-directed learners, responsible decision makers and knowledgeable global citizens. Academic advisors assist students in clarifying self-defined academic goals, selecting a major, understanding academic procedures, and using campus resources to their advantage. The Liberal Arts and Sciences Advising Center (LASAC) assists students who are degree-bound, exploratory or nondegree-bound.

Degree-Bound Students in Fairmount College Programs

Degree-bound students who have declared interest in any of Fairmount College’s programs receive advising from department faculty. Students with early and sustained involvement in their major departments develop methods of inquiry, peer and mentoring relationships, and intellectual and social perspectives which deepen and enrich their Fairmount College experience. Students with interdisciplinary or preprofessional interests also benefit from contact with faculty advisors qualified to discuss educational programs leading to the exercise of civic and social responsibility, enjoyment of intellectual pursuits, and realization of career fulfillment.

Degree-Bound Exploratory Students

LASAC advisors help degree-bound exploratory students make academic choices that allow for flexibility while pursuing general education requirements so that they may transfer to any college within WSU once a major is declared. Students develop educational planning skills, develop effective college-level study skills, choose an academic major, develop personalized academic and career/life plans, and complete part of the general education requirements. When a student declares a major field of study, an immediate transfer occurs to the college and department that sponsors that program. Exploratory students must declare a major or a degree preference within the first 48 credit hours of enrollment. Those students transferring 48 credit hours or more must declare a major or degree preference during the first
semester of enrollment. Advising is then provided through the student’s academic major department. General education questions are answered by LASAC academic advisors. Advice on the major is given by the main department.

**Nondegree-Bound Students**
The nondegree-bound category includes students from other colleges who attend WSU for a short time period, high school guests who attend classes and earn credit on the WSU campus, and high school students in concurrent enrollment partnerships who earn WSU credit while taking classes in their high schools. Other nondegree students take courses to pursue their education with no immediate degree plans. This may involve self-enrichment, job advancement, career change, skills updating or professional certification. Students in this latter category are admitted as open admissions students. (See the information in the Undergraduate Admission (p. 9) section of the catalog.) LASAC advisors can assist students in defining their academic goals and in making the transition to a degree-earning status where that is appropriate. Students in this category are not eligible for financial aid.

**Application for Graduation**
Students apply for graduation when they have completed 80 credit hours of coursework that counts toward the degree. Applying at this time facilitates scheduling required courses for the three or four semesters that typically remain before graduation.

Two documents are required of all students graduating with a degree from Liberal Arts and Sciences:

- the Senior Form and
- the online Application for Degree.

*The Senior Form* is a written list of all remaining requirements for graduation. Students begin in the LAS Advising Center in 115 Grace Wilkie Hall. The student and the academic advisor complete the general education portion of the form. The student takes the form to the faculty advisor for their major. The faculty advisor completes the academic major portion of the form. The student is responsible for returning that form to the LAS Advising Office.

*The online Application for Degree (AFD)* is the only document that alerts the college of the semester and year in which the student intends to graduate. A student who does not complete this document will not graduate, because the student’s name will not appear on the graduation list generated by the AFD.

*How to complete the AFD:* The online application for degree link can be found in the myWSU portal. Students are able to complete the application for a bachelor’s degree once they have earned 80 hours. Students may apply for a graduation date for the current semester, or for any of the three semesters beyond the current semester. The correct graduation date is determined by the length of time needed to complete remaining requirements as listed on the Senior Form.

Students who wish to have their names listed in the official commencement program must complete both the Senior Form and the online Application for Degree by March 1, for a May graduation, and October 1, for a December graduation.

Additional application process for students earning the Bachelor of General Studies degree: Students declare their intention to earn this degree and create a plan of study for completion no later than 30 hours before the degree is granted. Students are advised by the academic department of the primary concentration or by an LASAC advisor.

Additional BGS requirements are listed under Section XII. BGS: Area of Concentration (p. 187).

**Assessment of Academic Programs**
Fairmount College participates in a university-wide program to assess the effectiveness of all curricula and instruction within the university. Individual departments within Fairmount College have established assessment strategies which are shared with their students. Assessment activities involving students occur throughout enrollment.

**Cross-Listed Courses**
Selected courses in the university curriculum are cross-listed because course content is suitable to more than one academic area. Every department or program which offers cross-listed courses provides a separate catalog description. When enrolling in cross-listed courses, students — in consultation with their advisors — may select the listing under which they wish to receive credit, but credit may be earned under only one of the course listings.

**Field Trips**
Attendance on field trips is mandatory in any course that includes in its catalog description a statement that field trips are required or in which the instructor states that field trips are essential for earning credit. Absences are permitted only with the instructor’s approval. Students may have credit withheld for a course if they do not complete the required field trips.

**Credit for Life Experience**
Fairmount College awards life experience credit. LAS requires that the learning from life experience fits the approved curriculum of the college. Students must be fully admitted to WSU. The College of Liberal Arts and Sciences is conservative in protecting the autonomy of the faculty and the goals of the curriculum. Credit for life experience is granted only when a student’s learning from life experiences duplicates the content of a course described in the catalog. Students pay for Life Credit on a course by course basis. The student begins by contacting an advisor in the LASAC to obtain the Credit for Life Experience form. The student contacts the faculty member who teaches the course that duplicates the student’s life experience. That faculty member must certify that the life experience is the same as the content of the course. The student returns the signed form to the LASAC, which facilitates the process for student payment and posting the credit to the student’s transcript.

**Cooperative Education and Internships**
Fairmount College participates in the cooperative education program which matches paid internships with undergraduate and graduate students who wish to combine their classroom studies with academically related employment. In LAS, a maximum of 12 hours of cooperative education credit may be applied to baccalaureate degree requirements.

Interested students should contact the Career Development Center, located in Brennan Hall III, at the corner of 17th Street and Yale Avenue. The telephone number is (316) 978-3688, or register online (http://wichita.edu/careerdevelopment).

**Academic Honesty and Code of Conduct**
The faculty of Fairmount College strongly endorses the statement on academic honesty, the student code of conduct and the appeals procedure outlined in the Student Handbook. (Also see Student
courses which provide thematic coherence in a unique area of applied
completion of a disciplinary or interdisciplinary focus consisting of
granting colleges. A certificate is awarded acknowledging a student's
for students pursuing degrees in Fairmount College or other degree-
of the community, to students who have already earned degrees, and
Certificate Programs
Catalog.

For more information, consult the Wichita State University Graduate
mathematics and psychology — human factors and community/clinical.

Public Administration (MPADM) in public administration, and the
in Liberal Studies (MALS) in interdisciplinary studies, the Master of
Science (MS) may be obtained in biological sciences, English, history, mathematics, modern and classical languages and
philosophy, physics, political science, psychology, social work, sociology and women’s studies. Concentrations in communication sciences and disorders, ethnic studies, geography, German and religion may be designed with the Bachelor of Arts or the Bachelor of General Studies degrees.

Bachelor of Science (BS), or the Bachelor of General Studies (BGS) degrees from

Bachelor of General Studies requires breadth in distribution of coursework and allows for the development of areas of concentration which may be thematically or occupationally related. This degree is available through every college department.

Graduate
Graduate programs are offered through the Graduate School in many liberal arts and sciences areas. The Master of Arts (MA) may be earned in anthropology, communication (interdisciplinary), criminal justice, English, history, mathematics, modern and classical languages and literature (French and Spanish), philosophy, physics, political science, psychology, social work, sociology and women’s studies. The Master of Science (MS) may be obtained in biological sciences, chemistry and mathematics.

The Master of Fine Arts (MFA) in creative writing, the Master of Arts in Liberal Studies (MALS) in interdisciplinary studies, the Master of Public Administration (MPADM) in public administration, and the Master of Social Work (MSW) in social work.

The Doctor of Philosophy (PhD) degree is offered in chemistry, applied mathematics and psychology — human factors and community/clinical.

For more information, consult the Wichita State University Graduate Catalog.

Certificate Programs
Certificate programs in Fairmount College are available to members of the community, to students who have already earned degrees, and to students pursuing degrees in Fairmount College or other degree-granting colleges. A certificate is awarded acknowledging a student’s completion of a disciplinary or interdisciplinary focus consisting of courses which provide thematic coherence in a unique area of applied or theoretical work. Specific requirements for the following certificate programs may be reviewed in the relevant departmental sections:

- Museum Studies — Anthropology (graduate)
- Film Studies — English, Interdisciplinary
- Medieval and Renaissance Studies — English, Interdisciplinary
- Asian Studies — Interdisciplinary Liberal Arts and Sciences
- Global Competency — Interdisciplinary Liberal Arts and Sciences
- Great Plains Studies (graduate and undergraduate) — Interdisciplinary Liberal Arts and Sciences
- Tilford Diversity Studies — Interdisciplinary Liberal Arts and Sciences
- Spanish for the Professions — Modern and Classical Languages and Literatures
- Community Psychology — Psychology
- Human Factors Psychology — Psychology
- Social Work and Addiction — Social Work
- City and County Management, Economic Development, Nonprofit Management, Public Finance (graduate) — Hugo Wall School of Public Affairs

Bachelor of Arts, Bachelor of Science, Field Major and Bachelor of General Studies
The following Fairmount College requirements must be met in order for students to receive the Bachelor of Arts (BA), the Bachelor of Science (BS), or the Bachelor of General Studies (BGS) degrees from Fairmount College. Courses taken to fulfill these requirements also satisfy the university’s general education distribution requirements.

1. Foundation courses — The following courses must be completed in the first 48 Fairmount College credit hours with a grade of C- or above.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 100</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 101</td>
<td>College English I</td>
<td></td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 131</td>
<td>Contemporary Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

2. Upper-Division — at least 45 credit hours in courses numbered 300 or above;

3. Residence — at least 30 hours of course credit at Wichita State. At least 24 of the last 30 credit hours or 50 of the last 60 credit hours must be completed at Wichita State;

4. Four-year institution — a minimum of 60 credit hours must be completed in a four-year, degree-granting college or university; and

5. D Grades — no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours needed for the degree.

The Schedule of Courses produced each semester outlines specific courses approved in each of the following categories:

1. Fine Arts and Humanities
Candidates for the BA, BS and BGS degrees must take 12 credit hours of courses with the following distribution:

1. One introductory course from a fine arts discipline listed below;
2. One introductory course from two different humanities disciplines listed below; plus
3. An advanced further study course or an advanced issues and perspectives course in fine arts or humanities.

**Fine Arts:** art history, dance (history), musicology-composition, theater, other approved discipline for an advanced issues and perspectives class.

**Humanities:** communication (excluding foundation courses), English (excluding foundation courses), history, linguistics, modern and classical languages and literature, philosophy, religion, women’s studies, other approved discipline for an advanced issues and perspectives class.

A total of 24 credit hours must be taken in the fine arts/humanities and social and behavioral sciences disciplines by candidates for the BA and BGS degrees.

II. Literature

All BA, BS and BGS candidates must complete at least one course in English or foreign language literature. Inclusion of this course should be considered in general education course planning in humanities.

III. American Political System

All BA, BS and BGS candidates must demonstrate proficiency in the field of the American political system and institutions by passing either HIST 131 or HIST 132 (humanities) or POLS 121 (social sciences). Inclusion of one of these three courses should be considered in general education course planning.

IV. Social and Behavioral Sciences

Candidates for the BA and BGS degrees must take 12 credit hours in three different departments with the following distribution:

1. One introductory course from two different social and behavioral sciences disciplines listed below; plus
2. An advanced further study course or an advanced issues and perspectives course in the social and behavioral sciences;
3. One additional course may come from the student’s major or from any other elective courses within social sciences departments of the college.

Candidates for the BS degree must take a minimum of three courses (9 credit hours) following the first two distributions above. Courses within the student’s major may not apply to this university general education requirement.

**Social and Behavioral Sciences:** anthropology, criminal justice, economics, ethnic studies, geography, political science, psychology, social work, sociology, other approved discipline for an advanced issues and perspectives class.

**Other Social and Behavioral Sciences** for elective use: aging studies.

V. Natural Sciences and Mathematics

Candidates for the BA, BS and BGS degrees who have completed at least two years of high school laboratory science classes (exclusive of general and physical science) must take a minimum of 9 credit hours of courses with the following distribution:

1. One introductory course from two different natural sciences disciplines listed below (one of which must be a biological science and the other a physical science); plus
2. An advanced further study course or an advanced issues and perspectives course in natural sciences.

One of the above courses must include a laboratory experience.

Candidates for the BA, BS and BGS degrees who have not completed at least two years of high school laboratory science must take 12 credit hours following the minimum distribution given above. Should a fourth course be necessary to complete the 12 credit hours, this class may come from any of the elective disciplines indicated below.

**Natural Sciences and Mathematics:** biology, chemistry, geology, physics or other approved discipline for an advanced issues and perspectives class.

**Other Natural Sciences and Mathematics:** for elective use: ANTH 101 and ANTH 106 (count as biology); GEOG 235 (counts as physical sciences).

VI. Advanced Issues and Perspectives Courses

Students must complete at least one and not more than two advanced issues and perspectives courses to fulfill university general education program requirements. In addition, courses within the student’s major discipline do not count toward university general education program requirements.

VII. Foreign Languages

Candidates for any BA degree and for the BS degree in criminal justice must demonstrate proficiency at a level equivalent to 5 hours beyond the 112 course in one foreign language or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in the following ways:

1. Students may successfully complete 111 and 112, plus 5 additional credit hours in one foreign language, or 111 and 112 in two foreign languages;
2. Other foreign language experience, or high school foreign language study at the rate of one high school unit for each college semester, may apply toward the required proficiency;
3. Students who have completed three or more years of one language in high school may fulfill the foreign language requirement by successfully completing a 3-credit-hour intermediate-level class in the same language;
4. Students who wish to fulfill their foreign language requirement with American Sign Language may seek permission to do so by submitting a written request to the LAS exceptions committee. This request should include a justification and a list of the courses to be taken. If the committee approves the plan, a copy is put in the student’s file; and
5. Students with English as their second language have met the college’s foreign language requirement for a baccalaureate degree.

Language 210 classes, although approved to count toward humanities requirements in the university general education program, will not fulfill a humanities course requirement for Fairmont College students. Any language course from the 220 or above level will count as general education humanities credit if on the approved list of classes published in this catalog.

Students with sufficient high school background in language study to merit placement in a Fairmont College language class beyond the 111 level may qualify for retroactive credit in language. Please see guidelines for retroactive credit outlined in the modern and classical languages and literatures departmental section of the catalog.
A student who has credit in two years of a high school foreign language may enroll in 111 and 112 for credit without departmental consent. A student who has credit in three or more years of high school foreign language may take 111 and 112 for credit only if departmental consent has been received in writing. Otherwise, a student who has credit in three or more years of a high school foreign language may enroll in any 200-level course for credit without departmental consent.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department.

The BGS also has no foreign language requirement.

Enrollment in Spanish courses may require a placement exam. See individual course descriptions.

**VIII. BA, BS: Major**

All specific departmental major courses and requirements are listed in the catalog by department. While the department controls its own requirements for the major, the following expectations apply to all majors:

1. A minimum 2.000 grade point average is required in the major.
2. No more than 6 credit hours from the major may be used to satisfy the Fairmount College distribution requirements.
3. Of the 45 credit hours of upper-division credit required for each degree, a minimum of 12 upper-division credit hours are required in the major or area of concentration.
4. No more than 48 credit hours in the major may be used for graduation with a BA degree, and no more than 50 credit hours in the major may be used for graduation with a BS degree.
5. A minimum of 9 hours of credit in the major discipline must be included from Wichita State University.

**IX. Combined Major**

A BA degree with a combined major, consisting of 24 credit hours from one field of study and 12 credit hours from an allied field of study, may be designed with the assistance of the primary department’s academic advisor. A minimum of 12 upper-division credit hours must be included in the combined major.

**X. Field Major**

Students may select a major that correlates three or more fields of study to receive a broad appreciation of the cultural and dynamic factors of human conduct. The selection of courses must be made with an advisor from the primary department of interest and with the dean’s office approval. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable to the college. Thirty-six (36) credit hours are required for the field major, with 18 credit hours in the major department and at least 9 in each of the two allied departments. Twelve (12) of the 36 credit hours must be upper-division, and the first two departments must be LAS. Students may work with an academic advisor in developing an appropriate field major or may use one of the predesigned field majors indicated below. Students must meet BA graduation requirements for all field majors except biochemistry and chemistry/business which lead to the BS degree.

For the purposes of the field major, LAS courses can include the academic majors and disciplines housed historically in the College of Liberal Arts and Sciences, including aging studies (AGE) (formerly gerontology), art history (ARTH), communication sciences and disorders (CSD), economics (ECON), music composition (MUSC), and theatre (THEA).

All 18 credit hours in the primary department of interest must be courses approved for the major or minor as defined for that department in the Undergraduate Catalog.

**Biochemistry**

Biochemistry is a rapidly growing science in which many important advances have been made in the last two decades. It requires both an understanding of biological processes and a knowledge of sophisticated techniques of chemistry and physics. The field major in biochemistry prepares students for employment or further study in this area.

Students choosing this field major should seek the advice of an advisor in the department of biological sciences or the department of chemistry as early as possible. Both the biological sciences and chemistry sections of the catalog provide complete descriptions of this major.

**Chemistry/Business**

See the chemistry section of the catalog for complete description.

**Classical Studies**

Classical studies is an interdisciplinary program designed to give students a sense of continuity and to interpret the values, ideas and ideals of antiquity as shown in its history, art, mythology, literature, political institutions and religions. The major also serves as a sound preparation for areas in which sensitivity to language and ideas is an important tool — classics, linguistics, ancient history, art history, archaeology, comparative literature, law, religion and Near Eastern studies.

The major consists of 36 credit hours which must be selected from a list of approved courses, except that courses of independent study in one of the departments of the field major may count toward the major if the subject matter is at least half classical. For further information and a list of approved courses, contact the department of modern and classical languages and literatures.

**Global Studies**

In recent years the world has rapidly become more closely connected and interdependent in virtually every facet of life. As a result, traditional American and Western academic perspectives alone are no longer sufficient to make sense of complex global realities. Therefore, many scholars have found it necessary to construct and include a global perspective in their teaching, and many students have sought to gain this perspective in their learning.

The global studies field major is an interdisciplinary program which allows students to pursue their course of study in a broad, complex and interconnected way, and helps them discover the area of global studies which most interests them (e.g., literature, health, business, environment). This major provides direction for those interested in pursuing a further graduate course of study or for those who will search for employment. It will also prepare students to become well-informed global citizens.

Students choosing the global studies field major will select from an approved list of courses that have a global focus. These courses are offered on the basis of two criteria: either they address their subjects from a world or global perspective, or they address geographic areas of the world outside of the United States. The major consists of 36 hours, 18 of which must be selected from a set of core courses, and the other 18 from a set of elective courses. Each student will conclude the requirements of the major by completing a final project, such as an internship or research paper, which must be approved by their advisor.
Students interested in pursuing this major should contact the global studies field major advisor in the department of anthropology.

**International Studies**
In a rapidly globalization world, the demand for college graduates who have a deeper understanding of different regions and cultures of the world is growing. Many employers look favorably on prospective employees with language skills and international knowledge.

The international studies field major is an interdisciplinary degree with courses required in multiple departments. Students have the option to follow an area studies track or a business administration track. Both require students to focus on a particular region of the world, including language courses for that region. The core courses for each track vary, with the area studies track focusing more on historical, political and cultural relations, and the business administration track focusing on international business courses. The international studies degree is a BA degree in Fairmount College of Liberal Arts and Sciences. There is also an international studies minor available.

There are many career opportunities that can be pursued with an international studies degree including possible employment with federal and state government executive agencies, multinational corporations, law firms, international organizations such as the United Nations, nonprofit organizations and public and private schools. An international studies degree can also prepare students for a course of study in graduate school.

Students interested in pursuing a major or minor in international studies should contact the international studies advisors in the departments of political science or history, or seek additional information online (http://wichita.edu/is).

**XI. Minor**
Minors are offered in all fields of study in which a major may be earned as well as in ethnic studies, geography, German, linguistics and religion. The number of hours required for a minor is set by each department. A 2.000 minimum grade point average is required in the minor. Minors from other colleges are acceptable and must meet minimum requirements of those colleges.

**XII. BGS: Area of Concentration**
The Bachelor of General Studies (BGS) degree allows students to design a major plan of study crossing departmental or even college lines. The BGS degree allows generalists, preprofessionals or nontraditional career students greater flexibility in planning their academic major plans.

For the purposes of the BGS major, LAS courses can include the academic majors and disciplines housed historically in the College of Liberal Arts and Sciences, including aging studies (AGE) (formerly gerontology), art history (ARTH), communication sciences and disorders (CSD), economics (ECON), music composition (MUSC), and theatre (THEA).

With the assistance of the advisor in the department of primary interest, each student develops a major plan of study consisting of a minimum of 33 credit hours, divided into 3 areas. The primary and secondary areas must be in LAS departments. The tertiary area may cross departmental or college lines or be thematically or occupationally related. The primary area will consist of 15 to 21 credit hours. The remaining 12 to 18 credit hours must be divided between two other departments. At least 6 credit hours must be in each of the secondary and tertiary areas. All courses used in the primary area must be courses approved for an academic major or minor as defined by that academic department in the Undergraduate Catalog. A minimum of 12 LAS upper-division credit hours must be included in the major plan.

Additional limits to the minimum hours required for the BGS degree include: no more than 30 credit hours from one department, no more than 60 credit hours in one division (humanities, social and behavioral sciences, natural sciences and mathematics), and no more than 30 out-of-college credit hours.

**XIII. Non Liberal Arts and Sciences Courses**
Students may count only 24 credit hours of non liberal arts and sciences courses toward either the BA or BS degree. Thirty (30) credit hours of non liberal arts and sciences courses may count toward the BGS degree. Any non liberal arts and sciences courses required by a major within Fairmount College will apply to LAS hours required for the degree.

**Communication Sciences and Disorders**
Students desiring an emphasis in applied language study through Fairmount College should see requirements and curriculum for a major in communication sciences and disorders listed in the College of Health Professions section of the catalog.

**Special Preprofessional Programs**
Advisors in the LASAC or in various preprofessional academic departments provide specific information regarding courses and requirements.

**Prelaw**
The Association of American Law Schools states that students interested in pursuing a law degree should get a broad undergraduate education that provides “comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and creative power in thinking.” These qualities are to be achieved through disciplined study in fields of the student’s choice. Requirements for the bachelor’s degree provide students with both a general education and a concentration in a major field of study.

Law school admission requires completion of a baccalaureate degree. Many majors provide appropriate foundation for the study of law. LAS academic advisors offer prelaw students assistance in contacting appropriate academic departments.

**Premedical Professions — Medicine, Dentistry, Optometry, Pharmacy, Veterinary Medicine, Podiatry, Chiropractic Medicine**
Academic advising for premedical professions is coordinated through the LASAC. A four-year bachelor’s degree is required for admission to medical and osteopathic schools and is strongly encouraged for other premedical professional programs. Any academic major is acceptable, as long as the degree includes the prerequisite core of courses in math and sciences. Medical and professional schools expect candidates to demonstrate the intellectual, analytical and problem-solving skills necessary to succeed in medical school. Students are strongly advised to balance coursework in the natural sciences with coursework in humanities and social sciences. The general education component of a liberal arts degree provides a sound foundation for demonstrating an interest in and knowledge of a diverse and global society. Candidates should also consider coursework in areas such as anthropology, communication, economics, ethics, logic, psychology, sociology and statistics.

**Preparation for Secondary Education**
A professional teaching field in foreign language Pre-K through 12 may be obtained through the College of Liberal Arts and Sciences. A professional teaching field for middle and secondary school teachers
is offered through the College of Education as are teaching fields in all other areas.

**Aging Studies**
The aging studies program has transitioned from Fairmount College of Liberal Arts and Sciences to the College of Health Professions. The College of Health Professions offers an undergraduate minor in aging studies and the Master of Arts in aging studies as well as instructing all the courses. See Aging Studies (p. 173).

The College of Liberal Arts and Sciences will continue to offer undergraduate degrees with a concentration in aging studies through the field major and Bachelor of General Studies (p. 187) options. Contact the LAS Advising Center for degree requirements.

**Anthropology**
Anthropology offers perspectives on issues of the origins, history, and diversity of the dynamics of culture and behavior, people and places, personal and community identity, origins and the biological history of humankind in all of its manifestations in all times. Anthropology is holistic and explores psychological, biological, social and cultural—including technological, economic, religious, political and artistic—aspects of human action.

Anthropologists examine the vast diversity of human cultures, striving to understand and appreciate the myriad ways of life that constitute alternative solutions to the universal problems of human existence. By combining the perspective of science and the humanities, archaeologist, socio-cultural, linguistic and biological anthropologists take an interdisciplinary, evolutionary and humanistic approach to the study of human beings and human societies.

The department offers a broad range of courses for majors, minors and general education requirements. The curriculum spans socio-cultural, archaeological and biological emphases, but also includes complementary courses in medical, linguistic and museum studies in anthropology. The coursework provides students with opportunities to learn about, appreciate and understand the values and perspectives of people from cultural traditions other than their own and also addresses their abilities to interact cross-culturally.

The program offers a Bachelor of Arts (BA) degree major, an interdisciplinary field major, and a minor in anthropology. The BA in anthropology prepares students for a variety of professional careers in and outside anthropology. The minor effectively complements a diverse number of majors within Fairmount College and across colleges. Elective and general education courses in anthropology seek to broaden the students’ Fairmount College experience by offering them an opportunity to appreciate the strength of human cultural and biological history and diversity through socio-cultural, bio-cultural and cultural-historical perspectives to understanding the living world in the framework of its past and present circumstance.

**Majors in Anthropology**
- BA in Anthropology (p. 191)
- Interdisciplinary Field Major (p. 192)

**Minors in Anthropology**
- Anthropology (p. 192)

**Courses in Anthropology**
- Anthropology (ANTH) (p. 269)

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**BA in Anthropology**
A major in anthropology consists of at least 30 credit hours:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101</td>
<td>Biological Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 103</td>
<td>Introduction to Anthropology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one upper-level biological anthropology course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 356</td>
<td>Human Variability and Adaptation</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 555</td>
<td>Paleoanthropology and Human Paleontology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 557</td>
<td>Human Osteology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 597R</td>
<td>Human Rights and Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 600</td>
<td>Forensic Anthropology</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one upper-level cultural anthropology course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 303</td>
<td>World Cultures</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 307</td>
<td>Peoples of Africa</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 312</td>
<td>Asia Pacific Cultures</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 318</td>
<td>Psychological Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 327</td>
<td>Magic, Witchcraft and Religion</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 344</td>
<td>Ecological Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 361</td>
<td>Law, Politics and Society</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 388</td>
<td>Cognitive Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 506</td>
<td>Peoples of the Pacific</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 511</td>
<td>The Indians of North America</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 515</td>
<td>China</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 516</td>
<td>Japan: People and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 522</td>
<td>Art and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 526</td>
<td>Social Organization</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 528</td>
<td>Medical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 540</td>
<td>The Indians of the United States: Conquest and Survival</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 542</td>
<td>Women in Other Cultures</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one upper-level archaeology course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 305</td>
<td>World Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 335</td>
<td>Archaeology of North America</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 508</td>
<td>Ancient Civilizations of the Americas</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 538</td>
<td>Early Man in the New World</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 611</td>
<td>Southwestern Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 612</td>
<td>Indians of the Great Plains</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 613</td>
<td>Archaeology of the Great Plains</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 647</td>
<td>Theories of Culture (all majors must take a course in method and theory)</td>
<td>3</td>
</tr>
</tbody>
</table>

Select an additional 9 credit hours of electives which can be distributed across catalog listings for anthropology to match the student’s interest in a particular sub-discipline(s)

**Total Credit Hours** 30

A maximum of 6 credit hours of certain coursework in related departments can be counted toward an anthropology major if the student meets discipline-specific requirements and if approved by a committee of the anthropology department faculty.
Anthropology Field Major

A field major in anthropology allows undergraduate students to combine studies from three separate departments. The anthropology field major consists of 18 credit hours in anthropology, including:

- ANTH 101 Biological Anthropology 3
- ANTH 102 Cultural Anthropology 3
- ANTH 103 Introduction to Archaeology 3

Select at least 9 credit hours of related coursework in two departments other than anthropology 9

Total Credit Hours 18

All anthropology and nonanthropology courses must be chosen in consultation with the student’s anthropology advisor.

Minor in Anthropology

A minor in anthropology consists of 15 credit hours:

Select 15 credit hours in anthropology (including at least 6 credit hours of upper-division work) chosen in consultation with the student’s anthropology advisor. Students minoring in anthropology are encouraged to take the following:

- ANTH 101 Biological Anthropology
- ANTH 102 Cultural Anthropology
- ANTH 103 Introduction to Archaeology

Total Credit Hours 15

Biological Sciences

The department of biological sciences offers a broad and flexible curriculum leading to the Bachelor of Arts (BA), the Bachelor of Science (BS), the field major in biochemistry (BS), and the bachelor degree programs (BA and BS) to teach in secondary education. Students interested in an interdisciplinary program with a biological focus are encouraged to consider the Fairmount College field major (BA) or the Bachelor of General Studies (BGS) programs. All students who intend to pursue one of the programs within the department of biological sciences should contact the department as early in their educational career as possible for assignment to a faculty academic advisor. Candidates for all degrees are required to take the Field Achievement Test in Biology during the senior year and contribute examples of their coursework to the department’s assessment program. All candidates must maintain a grade point average of 2.000 in all biological sciences coursework.

Nonmajor Courses

The department of biological sciences offers courses designed primarily to meet the needs of students in other departments. These are listed below as nonmajor courses. These courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences coursework requirements for the major or the minor.

These nonmajor courses may not be used to satisfy the requirements for a biological sciences major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 103</td>
<td>Microbes &amp; You</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 106</td>
<td>The Human Organism</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 107</td>
<td>The Human Organism Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Introduction to Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 309</td>
<td>Foundations of Human Heredity</td>
<td>3</td>
</tr>
</tbody>
</table>

Majors in Biological Sciences

- BA in Biological Sciences with Biological/Biomedical Emphasis (p. 192)
- BS in Biological Sciences with Biological/Biomedical Emphasis (p. 193)
- BA in Biological Sciences with Ecological/Environmental/ Organismal Emphasis (p. 193)
- BS in Biological Sciences with Ecological/Environmental/ Organismal Emphasis (p. 193)
- Biochemistry Field Major (p. 193)
- Major in Biological Sciences: Secondary Education (p. 194)
- Field Major (BA) or Bachelor of General Studies (BGS) (p. 194)

Minors in Biological Sciences

- Biological Sciences (p. 194)

Courses in Biological Sciences

- Biology (BIOL) (p. 284)

BA in Biological Sciences with Biological/Biomedical Emphasis

A major in biological sciences leading to the BA with a biological/biomedical emphasis requires a minimum of 30 credit hours of biological sciences coursework; up to 40 credit hours may be taken for credit.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 418</td>
<td>General Ecology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 419</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 420</td>
<td>Molecular Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 497</td>
<td>Biology Colloquium</td>
<td>1-2</td>
</tr>
<tr>
<td>or BIOL 499</td>
<td>Undergraduate Research</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following: 3-5

- BIOL 330 General Microbiology
- BIOL 502 Vascular Plants
- BIOL 503 Field Botany
- BIOL 523 Freshwater Invertebrates
- BIOL 524 Vertebrate Zoology
- BIOL 528 Parasitology

Select additional approved major level biology electives 3-6

Minimum biological sciences credit hours 30

Additional Science Requirements for Biological Sciences (BA)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 212</td>
<td>General Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 531</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 532</td>
<td>Organic Chemistry II</td>
<td>5</td>
</tr>
</tbody>
</table>

Total Credit Hours 20

1 See list of excluded courses (p. 192) (nonmajor courses may not be used to satisfy the requirements for the major).
### BA in Biological Sciences with Ecological/Environmental/Organismal Emphasis
A major in biological sciences leading to the BA with an ecological/environmental/organismal emphasis requires 35 credit hours of biological sciences coursework.

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
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<td>General Biology I</td>
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<td>Molecular Cell Biology</td>
<td>4</td>
</tr>
<tr>
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<td>Biology Colloquium</td>
<td>1-2</td>
</tr>
<tr>
<td>or BIOL 499</td>
<td>Undergraduate Research</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following: 3-5

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<tr>
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<td>General Microbiology</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>BIOL 503</td>
<td>Field Botany</td>
<td></td>
</tr>
<tr>
<td>BIOL 523</td>
<td>Freshwater Invertebrates</td>
<td></td>
</tr>
<tr>
<td>BIOL 524</td>
<td>Vertebrate Zoology</td>
<td></td>
</tr>
<tr>
<td>BIOL 528</td>
<td>Parasitology</td>
<td></td>
</tr>
</tbody>
</table>

Select 5 additional credit hours from among those approved for the ecological/environmental/organismal emphasis (see academic advisor or departmental offices for approved courses) 5

Select additional approved major level biology electives 3-6

**Total Credit Hours** 35

### Additional Science Requirements for Biological Sciences (BA-Ecological/Environmental/Organismal)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
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<td>5</td>
</tr>
<tr>
<td>CHEM 532</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 214</td>
<td>General College Physics II</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 30

1. See list of excluded courses (p. 192) (nonmajor courses may not be used to satisfy the requirements for the major).

### BS in Biological Sciences with Biological/Biomedical Emphasis
A major in biological sciences leading to the BS with a biological/biomedical emphasis requires 50 credit hours of biological sciences coursework.

<table>
<thead>
<tr>
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<td>Molecular Cell Biology</td>
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<tr>
<td>or BIOL 499</td>
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<td></td>
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Select one of the following: 3-5

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<th>Description</th>
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<tr>
<td>BIOL 524</td>
<td>Vertebrate Zoology</td>
<td></td>
</tr>
<tr>
<td>BIOL 528</td>
<td>Parasitology</td>
<td></td>
</tr>
</tbody>
</table>

Select 15 additional elective credit hours from approved EEO electives. 15

Select additional approved major level biology electives. 8-11

**Total Credit Hours** 50

### Additional Science Requirements for Biological Sciences (BS-Biological/Biomedical Emphasis)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>CHEM 532</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 213</td>
<td>General College Physics I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 214</td>
<td>General College Physics II</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 20

1. See list of excluded courses (p. 192) (nonmajor courses may not be used to satisfy the requirements for the major).

### Biochemistry Field Major
The departments of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental chairpersons as early as possible.

**Required courses are:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 419</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 420</td>
<td>Molecular Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
</tbody>
</table>
CHEM 212 General Chemistry II 5
CHEM 523 Analytical Chemistry 4
CHEM 531 Organic Chemistry I 5
CHEM 532 Organic Chemistry II 5
CHEM 662 Biochemistry I 3
CHEM 663 Biochemistry II 3
CHEM 664 Biochemistry Laboratory 3
BIOL 666 Special Topics in Biochemistry 3

Select two enrollments of either one of the following two courses for a total for 4 credit hours
BIOL 669 Research in Biochemistry
CHEM 669 Research In Biochemistry

Select 21 credit hours of biochemistry electives chosen in consultation with a biochemistry academic advisor

Total Credit Hours 77

Additional science requirements for the Biochemistry field major
Select either Option A or Option B below 5-6
Option A
MATH 111 College Algebra 6
MATH 123 College Trigonometry

Option B
MATH 112 Pre-calculus Mathematics 5

PHYS 213 General College Physics I 5
PHYS 214 General College Physics II 5

Total Credit Hours 15-16

Field Major (BA) or Bachelor of General Studies (BGS)

Students interested in such interdisciplinary programs should consult with a departmental advisor early to design a curriculum with a focus in biological sciences that will satisfy Fairmount College requirements for these degrees.

Major in Biological Sciences: Secondary Education

This major allows for the completion of the requirements for a degree in biological sciences and the certification requirements to teach biology in grades 6–12. Students selecting this option should work closely with the teacher education advisor.

The major requires:

BIOL 210 General Biology I 4
BIOL 211 General Biology II 4
BIOL 330 General Microbiology 5
BIOL 418 General Ecology 4
BIOL 419 Genetics 4
BIOL 420 Molecular Cell Biology 4
BIOL 502 Vascular Plants 4
or BIOL 503 Field Botany

Select one of the following: 3-5
BIOL 523 Freshwater Invertebrates
BIOL 524 Vertebrate Zoology
BIOL 527 Comparative Anatomy
CHEM 211 General Chemistry I 5
CHEM 212 General Chemistry II 5
CHEM 531 Organic Chemistry I 5

PHYS 213 General College Physics I 5
PHYS 502 Science Investigations: Physics 3-5
GEOL 300 Energy, Resources and Environment 3

Professional Education Requirements 1
Additional hours 2

Total Credit Hours 58-62

1 The professional education requirements for majors in science as outlined by the College of Education (p. 87).
2 Additional hours to complete the requirements for either the Bachelor of Arts or the Bachelor of Science with an emphasis in either biological/biomedical biology or ecological/environmental/organismal biology.

Minor in Biological Sciences

Candidates for the minor in biological sciences must complete four biology courses including:

Required Courses

BIOL 210 General Biology I 4
BIOL 211 General Biology II 4

Select either option A or option B: 7-9
Option A:

Select two of the following:
BIOL 418 General Ecology
BIOL 419 Genetics
BIOL 420 Molecular Cell Biology

Option B:
Select one of the following and a course from the additional course list below:
BIOL 418 General Ecology
BIOL 419 Genetics
BIOL 420 Molecular Cell Biology

Additional courses for option B (choose one):
BIOL 330 General Microbiology
BIOL 502 Vascular Plants
BIOL 503 Field Botany
BIOL 523 Freshwater Invertebrates
BIOL 524 Vertebrate Zoology
BIOL 528 Parastology

Total Credit Hours 15-17

Chemistry

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options: An ACS-certified Bachelor of Science (BS) in chemistry, with an available biochemistry option; Bachelor of Science (BS) in chemistry—premedicine; Bachelor of Arts (BA) in chemistry; biochemistry field major (BS); and chemistry/business field major (BS). Students should consult a chemistry advisor for assistance in choosing the most appropriate degree program.

All programs require additional courses to satisfy general education curriculum requirements and the graduation requirements in Fairmount College of Liberal Arts and Sciences.

Advising

All students pursuing one of the above degrees should consult closely with the department of chemistry in planning their program.
Majors in Chemistry

- BS in Chemistry - Chemistry Option (p. 195)
- BS in Chemistry - Biochemistry Option (p. 195)
- BS in Chemistry - Premedicine (p. 196)
- BA in Chemistry (p. 195)
- Biochemistry Field Major (p. 197)
- Chemistry/Business Field Major (p. 197)

Minors in Chemistry

- Chemistry (p. 197)

Courses in Chemistry

- Chemistry (CHEM) (p. 291)

BA in Chemistry

This degree requires:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211 &amp; CHEM 212</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 523 &amp; CHEM 524</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 531 &amp; CHEM 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 545 &amp; CHEM 546</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 547</td>
<td>2</td>
</tr>
<tr>
<td>MATH 112</td>
<td>5</td>
</tr>
<tr>
<td>MATH 242</td>
<td>5</td>
</tr>
<tr>
<td>MATH 243</td>
<td>5</td>
</tr>
<tr>
<td>MATH 344</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 315</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 316</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours 69

1 Students who wish to take biochemistry or inorganic chemistry may satisfy the BA requirements with one of the following three alternatives:

1. Replace CHEM 524 with CHEM 514 and CHEM 661; or
2. Replace CHEM 547 and either CHEM 545 or CHEM 546 with CHEM 514 and CHEM 661; or
3. Replace CHEM 524, CHEM 547 and either CHEM 545 or CHEM 546 with CHEM 662, CHEM 663 and CHEM 664.

BS in Chemistry - Biochemistry Option

The curriculum for the BS in chemistry (either the chemistry or biochemistry option) is approved by the American Chemical Society for the professional training of chemists. It is strongly recommended that students interested in advanced study in chemistry or biochemistry should pursue this degree. Students completing the program receive certification from the American Chemical Society.

In agreement with the American Chemical Society Committee on Professional Training, the chemistry department strongly encourages students studying for the BS degree to select courses in computer science, economics, marketing and business, and to use every opportunity to develop competence in technical writing and oral communication.

This program requires:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211 &amp; CHEM 212</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 514</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 523 &amp; CHEM 524</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 531 &amp; CHEM 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 545 &amp; CHEM 546</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 547</td>
<td>2</td>
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<td>BIOL 210</td>
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<td>BIOL 211</td>
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<td>BIOL 420</td>
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<td>MATH 243</td>
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<td>MATH 344</td>
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<td>PHYS 313</td>
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</tr>
<tr>
<td>PHYS 315</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 316</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours 87

BS in Chemistry - Chemistry Option

The curriculum for the BS in chemistry (either the chemistry or biochemistry option) is approved by the American Chemical Society for the professional training of chemists. It is strongly recommended that students interested in advanced study in chemistry or biochemistry should pursue this degree. Students completing the program receive certification from the American Chemical Society.

In agreement with the American Chemical Society Committee on Professional Training, the chemistry department strongly encourages students studying for the BS degree to select courses in computer science, economics, marketing and business, and to use every opportunity to develop competence in technical writing and oral communication.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211 &amp; CHEM 212</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 514</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 523 &amp; CHEM 524</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 531 &amp; CHEM 532</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 545 &amp; CHEM 546</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 547</td>
<td>2</td>
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</table>
### Representative Course Sequence

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 112</td>
<td>Precalculus Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>College English I</td>
<td>3</td>
</tr>
<tr>
<td>COMM 111</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 212</td>
<td>General Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 242</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>College English II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 131</td>
<td>History of the United States: Colonial to 1865</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 132</td>
<td>or History of the United States Since 1865</td>
<td></td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 531</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 243</td>
<td>Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 313</td>
<td>Physics for Scientists I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 315</td>
<td>University Physics Lab I</td>
<td>1</td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 532</td>
<td>Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Physics for Scientists II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 316</td>
<td>University Physics Lab II</td>
<td>1</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>A general education introductory course in social sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

| Junior               |                                            |              |
| **Semester 1**       |                                            |              |
| CHEM 523             | Analytical Chemistry                       | 4            |
| CHEM 545             | Physical Chemistry I                       | 3            |
| BIOL 210             | General Biology I                          | 4            |
| ENGL 230             | Exploring Literature                       | 3            |
| or ENGL 232          | or Themes in American Literature           |              |
| A general education introductory course in fine arts | 3 |
| **Credit Hours**     |                                            | 17           |
| **Semester 2**       |                                            |              |
| CHEM 524             | Instrumental Methods of Chemical Analysis  | 4            |
| CHEM 546             | Physical Chemistry II                      | 3            |
| CHEM 661             | Introductory Biochemistry                  | 3            |
| A general education introductory course in a second social sciences | 3 |
| A general education advanced further study or advanced I&P course in history, English or fine arts | 3 |
| **Credit Hours**     |                                            | 16           |
| **Senior**           |                                            |              |
| **Semester 1**       |                                            |              |
| CHEM 514             | Inorganic Chemistry                        | 3            |
| CHEM 547             | Physical Chemistry Lab                     | 2            |
| CHEM 690             | Independent Study and Research             | 2-3          |
| Professional electives |                                    | 3-4          |
| A general education advanced further study or advanced I&P course in social sciences | 3 |
| **Credit Hours**     |                                            | 13-15        |
| **Semester 2**       |                                            |              |
| CHEM 615             | Inorganic Chemistry                        | 3            |
| CHEM 616             | Inorganic Chemistry Lab                    | 2            |
| Electives            |                                            | 9            |
| **Credit Hours**     |                                            | 14           |
| **Total Credit Hours** |                                        | 123-125      |

1. If both CHEM 662 and CHEM 663 are taken, only 1 credit hour of professional electives is required.

2. CHEM 531, CHEM 514 and CHEM 523 all have CHEM 212 as a prerequisite and can be taken in any order.

3. Or other English literature

### BS in Chemistry - Premedicine

This program is designed for students intending to pursue postgraduate education in medicine, pharmacy, optometry, dentistry, veterinary medicine, or other health professions. Students who intend to pursue graduate studies in chemistry or biochemistry should consider the BS in chemistry degree program (either the chemistry or biochemistry option).

The following courses are required for the BS in chemistry — premedicine:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 212</td>
<td>General Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 523</td>
<td>Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 545</td>
<td>Physical Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 531</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 532</td>
<td>Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 690</td>
<td>Independent Study and Research</td>
<td>1-3</td>
</tr>
<tr>
<td>CHEM 662</td>
<td>Biochemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 663</td>
<td>Biochemistry II</td>
<td>3</td>
</tr>
<tr>
<td>Select two of the following:</td>
<td></td>
<td>6-7</td>
</tr>
<tr>
<td>CHEM 514</td>
<td>Inorganic Chemistry</td>
<td></td>
</tr>
</tbody>
</table>
CHEM 524 Instrumental Methods of Chemical Analysis
CHEM 545 Physical Chemistry I
MATH 242 Calculus I 5
MATH 243 Calculus II 5
Select a one-year sequence of physics courses above 200 10
Select 6 additional credit hours of chemistry courses numbered above 500 6
BIOL 210 General Biology I 4
BIOL 211 General Biology II 4
Select two of the following advanced biology courses: 6-10
BIOL 330 General Microbiology
BIOL 526 Endocrinology
BIOL 527 Comparative Anatomy
BIOL 528 Parasitology
BIOL 540 Developmental Biology
BIOL 590 Immunobiology
BIOL 710 Glycobiology
BIOL 730 Cancer Biology
BIOL 534 & BIOL 535 Human Physiology and Human Physiology Lab (both courses)

Total Credit Hours 77-84

1 And their necessary prerequisites.

Biochemistry Field Major

The departments of biological sciences and chemistry participate jointly in this program. Students selecting this major should seek the advice of one of the departmental advisors or chairpersons as early as possible.

The required courses are:

CHEM 211 & CHEM 212 General Chemistry I and General Chemistry II 10
CHEM 523 Analytical Chemistry 4
CHEM 531 & CHEM 532 Organic Chemistry I and Organic Chemistry II 10
CHEM 662 & CHEM 663 Biochemistry I and Biochemistry II 6
CHEM 664 Biochemistry Laboratory 3
CHEM 666 Special Topics in Biochemistry 3
or BIOL 666 Special Topics in Biochemistry
Select one of the following and take two semesters: 4
CHEM 669 Research In Biochemistry
BIOL 669 Research in Biochemistry
BIOL 210 & BIOL 211 General Biology I and General Biology II 8
BIOL 419 Genetics 4
BIOL 420 Molecular Cell Biology 4
Select one of the following: 5-6
MATH 112 Precalculus Mathematics
MATH 111 & MATH 123 College Algebra and College Trigonometry
PHYS 213 & PHYS 214 General College Physics I and General College Physics II 10
Biochemistry Electives — select 21 credit hours in consultation with a biochemistry academic advisor 21

Total Credit Hours 92-93

Chemistry/Business Field Major

The Charles M. Buess program in chemistry/business is designed for students who wish to pursue careers in pharmaceutical or chemical sales, management, advertising and other related areas, and may be appropriate for those intending to open private practices in medicine, dentistry, veterinary medicine, etc. Students selecting this option should contact an advisor in the department of chemistry as early as possible.

This program requires:

CHEM 211 & CHEM 212 General Chemistry I and General Chemistry II 10
CHEM 523 Analytical Chemistry 4
CHEM 514 or CHEM 524 Inorganic Chemistry 3-4
CHEM 531 & CHEM 532 Organic Chemistry I and Organic Chemistry II 10
Select one of the following: 3-6
CHEM 661 Introductory Biochemistry
CHEM 662 & CHEM 663 Biochemistry I and Biochemistry II 6
MATH 144 or MATH 242 Business Calculus and Calculus I 3-5
ACCT 210 & ACCT 220 Financial Accounting and Managerial Accounting 6
ECON 201 & ECON 202 Principles of Microeconomics and Principles of Macroeconomics 6
BLAW 431 Legal Environment of Business 3
FIN 340 Financial Management I 3
MKT 300 Principles of Management 3
MKT 405 Consumer Behavior 3
MKT 608 Selling and Sales Force Management 3

Total Credit Hours 63-69

1 Denotes an upper-division course.

Minor in Chemistry

The chemistry minor consists of at least 16 credit hours of chemistry courses:

CHEM 211 General Chemistry I 5
CHEM 212 General Chemistry II 5
Select at least 6 credit hours from the following: 6
CHEM 514 Inorganic Chemistry
CHEM 523 Analytical Chemistry
CHEM 524 Instrumental Methods of Chemical Analysis
CHEM 531 Organic Chemistry I
CHEM 532 Organic Chemistry II
CHEM 545 Physical Chemistry I
CHEM 546 Physical Chemistry II
CHEM 661 Introductory Biochemistry

Total Credit Hours 16
The 6 credit hours of upper-division courses must be taken at WSU. A 2.000 GPA is required for all chemistry courses taken.

**Communication, Elliott School of**

The Elliott School of Communication offers an integrated major in communication leading to the Bachelor of Arts (BA) degree. Students can develop a special (open) emphasis that respects their background and experience and is consistent with their educational and professional goals, or choose a structured emphasis in strategic communication, journalism, electronic media or integrated marketing communication.

This comprehensive communication degree has three distinguishing characteristics:

1. **It is interdisciplinary in nature, reflecting the contemporary belief** that all communication media are engaged in essentially the same functions (gathering information and creating and disseminating messages) and that the present-day communication professional must be schooled in the basic skills—writing, speaking and visual communication—and must develop the ability to plan, organize, evaluate and think strategically. Founded on the principle that communication specialists should also be communication generalists, this degree program combines disciplinary strengths in an inter-disciplinary matrix.

2. **It is consistent with the mission of Wichita State University to offer programs** that are responsive to the needs of the urban community that the university serves. The Kansas communication industry has its focus in Wichita, the major media center of the state.

3. **Its location allows the program and its students to take full advantage of the communication opportunities afforded by the largest city in Kansas.** The region of the state served by WSU includes one public and four commercial television stations, more than 15 radio stations, nine daily and 32 weekly newspapers, more than 25 advertising agencies, and a range of international, national, regional and local industries, businesses, and public agencies, many with substantial communication operations. This setting allows students to combine academic and professional interests in a program that matches concept with example, education with experience.

**Admission Requirements**

Students planning to pursue a major in communication must make formal application for admission to major status. To be admitted, applicants must be students in Fairmount College; have an overall grade point average of 2.500 or better; pass a standardized departmental English proficiency test (the Grammar, Spelling and Punctuation test, or GSP); and file an Application for Admission to Major Status form with the Elliott School of Communication. Additional information regarding the application process and procedures is available from the main office of the Elliott School, 102 EH.

**Advising Requirements**

The undergraduate coordinator will advise all premajors in communication to help students understand and attempt to meet the requirements for admission to major status in communication (see Admission Requirements above). Upon admission to major status, students will be assigned a faculty advisor, who will help them select their emphasis area or develop an open emphasis, which requires preparation of an undergraduate plan of study. Students are strongly encouraged to meet with their advisors at least once a semester while they are enrolled.

**Portfolio Requirement**

Students majoring in communication must submit a portfolio of work for review. The portfolio should reflect their academic and professional work in communication. Portfolio review sessions will be scheduled in both the fall and spring. Students should schedule their review upon achieving senior status (i.e., finishing 90 credit hours of coursework) and after completing at least 18 credit hours of communication coursework. Additional information is available from the main office of the Elliott School, 102 EH.

**Communication Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130</td>
<td>Communication &amp; Society</td>
</tr>
<tr>
<td>COMM 190</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>COMM 301</td>
<td>Writing for the Mass Audience</td>
</tr>
<tr>
<td>COMM 305</td>
<td>Visual Technologies</td>
</tr>
<tr>
<td>COMM 306</td>
<td>Introduction to Multimedia</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
</tr>
<tr>
<td>COMM 430</td>
<td>Communication Research and Inquiry</td>
</tr>
<tr>
<td>COMM 535</td>
<td>Communication Analysis and Criticism</td>
</tr>
<tr>
<td>COMM 630</td>
<td>Communication Law and Responsibility</td>
</tr>
<tr>
<td>COMM 631</td>
<td>Historical and Theoretical Issues in Communication</td>
</tr>
</tbody>
</table>

**majors in Communication**

- BA in Communication - Electronic Media Emphasis (p. 199)
- BA in Communication - Journalism Emphasis (p. 199)
- BA in Communication - Integrated Marketing Communication Emphasis (p. 199)
- BA in Communication - Strategic Communication Emphasis (p. 200)
- BA in Communication - Open Emphasis (p. 198)
- Field Major (p. 201)
- Bachelor of General Studies (p. 200)
- Departmental Honors in Communication (p. 201)

**Minors in Communication**

- Communication (p. 201)
- Graphic Design Communication (p. 201)
- Graphic Design (p. 201)

**Certificates in Communication**

- Strategic Communication (p. 200)

**Courses in the Elliott School of Communication**

- Communication (COMM) (p. 294)

**BA in Communication - Open Emphasis**

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 21 credit hours in the communication core, and submit a portfolio of their work during their...
senior year — see Portfolio Requirement (p. 198). At least 18 credit hours must be in either a structured or an open emphasis area.

### Communication Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130 or COMM 190</td>
<td>Communication &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 301</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
<td>3</td>
</tr>
<tr>
<td>COMM 535</td>
<td>Communication Analysis and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>COMM 305 or COMM 306</td>
<td>Visual Technologies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Multimedia</td>
<td></td>
</tr>
<tr>
<td>COMM 430</td>
<td>Communication Research and Inquiry</td>
<td>6</td>
</tr>
<tr>
<td>COMM 630</td>
<td>Communication Law and Responsibility</td>
<td></td>
</tr>
<tr>
<td>COMM 631</td>
<td>Historical and Theoretical Issues in Communication</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 21

### Open Emphasis

Students can develop and propose an open emphasis more appropriate for their interests and needs than a structured emphasis area and which respects their background and experience. These proposals must be developed by students in consultation with a faculty advisor, be substantially different from the structured emphases available, and be coherent and justifiable to a faculty committee, which will review and act on these proposals at specified times during the academic year. Each student must submit for approval an open emphasis plan of study to the Undergraduate Admissions Committee of the Elliott School of Communication at the beginning of the student’s junior year or upon completion of 18 credit hours in the major.

### BA in Communication - Electronic Media Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 21 credit hours in the communication core, and submit a portfolio of their work during their senior year — see Portfolio Requirement (p. 198). At least 18 credit hours must be in either a structured or an open emphasis area.

#### Communication Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130 or COMM 190</td>
<td>Communication &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 301</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
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<td>Speaking in Business and the Professions</td>
<td>3</td>
</tr>
<tr>
<td>COMM 535</td>
<td>Communication Analysis and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>COMM 305 or COMM 306</td>
<td>Visual Technologies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Multimedia</td>
<td></td>
</tr>
<tr>
<td>COMM 430</td>
<td>Communication Research and Inquiry</td>
<td>6</td>
</tr>
<tr>
<td>COMM 630</td>
<td>Communication Law and Responsibility</td>
<td></td>
</tr>
<tr>
<td>COMM 631</td>
<td>Historical and Theoretical Issues in Communication</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 45

1. Both COMM 305 and 306 are required in the Electronic Media emphasis area.

### BA in Communication - Integrated Marketing Communication Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 21 credit hours in the communication core, and submit a portfolio of their work during their senior year — see Portfolio Requirement (p. 198). At least 18 credit hours must be in either a structured or an open emphasis area.

#### Communication Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130 or COMM 190</td>
<td>Communication &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 301</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 301</td>
<td>Writing for the Mass Audience</td>
<td>3</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
<td>3</td>
</tr>
<tr>
<td>COMM 535</td>
<td>Communication Analysis and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>COMM 305 or COMM 306</td>
<td>Visual Technologies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Multimedia</td>
<td></td>
</tr>
<tr>
<td>COMM 430</td>
<td>Communication Research and Inquiry</td>
<td>6</td>
</tr>
<tr>
<td>COMM 630</td>
<td>Communication Law and Responsibility</td>
<td></td>
</tr>
<tr>
<td>COMM 631</td>
<td>Historical and Theoretical Issues in Communication</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 45

### Integrated Marketing Communications Emphasis Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 324</td>
<td>Integrated Marketing Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 450</td>
<td>Integrated Marketing Communication Strategy</td>
<td>3</td>
</tr>
<tr>
<td>COMM 502</td>
<td>Public Information Writing</td>
<td>3</td>
</tr>
<tr>
<td>COMM 525</td>
<td>Advertising Copywriting</td>
<td>3</td>
</tr>
<tr>
<td>COMM 626</td>
<td>Integrated Marketing Communications Campaigns</td>
<td>3</td>
</tr>
<tr>
<td>MKT 300</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 405</td>
<td>Consumer Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 45

### BA in Communication - Journalism Emphasis

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 21 credit hours in the communication core, and submit a portfolio of their work during their
senior year — see Portfolio Requirement (p. 198). At least 18 credit hours must be in either a structured or an open emphasis area.

**Communication Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130</td>
<td>Communication &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 190</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 301</td>
<td>Writing for the Mass Audience</td>
<td>3</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
<td>3</td>
</tr>
<tr>
<td>COMM 535</td>
<td>Communication Analysis and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>COMM 305</td>
<td>Visual Technologies</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 306</td>
<td>Introduction to Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>Select two of the following:</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>COMM 430</td>
<td>Communication Research and Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>COMM 630</td>
<td>Communication Law and Responsibility</td>
<td>3</td>
</tr>
<tr>
<td>COMM 631</td>
<td>Historical and Theoretical Issues in Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Journalism Emphasis Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 401</td>
<td>Reporting the News</td>
<td>3</td>
</tr>
<tr>
<td>COMM 510</td>
<td>Editing For Print</td>
<td>3</td>
</tr>
<tr>
<td>COMM 512</td>
<td>Principles of Video Production</td>
<td>3</td>
</tr>
<tr>
<td>COMM 500</td>
<td>Advanced News and Feature Writing</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 622</td>
<td>Studio B: Live Television News</td>
<td>3</td>
</tr>
<tr>
<td>Select 12 credit hours of journalism-related electives</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>

**BA in Communication — Strategic Communication Emphasis**

Students majoring in communication must maintain a 2.500 grade point average (overall and in the major), complete a minimum of 40 credit hours in communication, including 21 credit hours in the communication core, and submit a portfolio of their work during their senior year — see Portfolio Requirement (p. 198). At least 18 credit hours must be in either a structured or an open emphasis area.

**Communication Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 130</td>
<td>Communication &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 190</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 301</td>
<td>Writing for the Mass Audience</td>
<td>3</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
<td>3</td>
</tr>
<tr>
<td>COMM 535</td>
<td>Communication Analysis and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>COMM 305</td>
<td>Visual Technologies</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 306</td>
<td>Introduction to Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>Select two of the following:</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>COMM 430</td>
<td>Communication Research and Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>COMM 630</td>
<td>Communication Law and Responsibility</td>
<td>3</td>
</tr>
<tr>
<td>COMM 631</td>
<td>Historical and Theoretical Issues in Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Strategic Communication Emphasis Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 311</td>
<td>Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>COMM 328</td>
<td>Teamwork, Leadership and Group Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 511</td>
<td>Strategic Communication in Organizations</td>
<td></td>
</tr>
<tr>
<td>Select one of the following (interpersonal communication cluster):</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COMM 302</td>
<td>Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 312</td>
<td>Nonverbal Communication</td>
<td></td>
</tr>
<tr>
<td>Select one of the following (organizational communication cluster):</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COMM 640</td>
<td>Issues in Corporate Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 650</td>
<td>Communication Training and Development</td>
<td></td>
</tr>
<tr>
<td>Select one of the following (public affairs cluster):</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COMM 502</td>
<td>Public Information Writing</td>
<td></td>
</tr>
<tr>
<td>Select one of the following or two courses that combine for three credit hours from the following (practicum):</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COMM 402</td>
<td>Debate &amp; Forensics</td>
<td></td>
</tr>
<tr>
<td>COMM 481</td>
<td>Cooperative Education</td>
<td></td>
</tr>
<tr>
<td>COMM 581</td>
<td>Communication Practicum</td>
<td></td>
</tr>
<tr>
<td>COMM 622</td>
<td>Studio B: Live Television News</td>
<td></td>
</tr>
<tr>
<td>COMM 690</td>
<td>Communication Internship</td>
<td></td>
</tr>
<tr>
<td>Select one additional course in consultation with advisor (elective)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

**Bachelor of General Studies**

Students seeking a BGS degree in the Elliott School of Communication may elect either a 15- to 21-credit-hour concentration in communication (as the focal or primary concentration) or a 6- to 12-credit-hour concentration (as one of two secondary concentrations taken in addition to the primary concentration). Some or all of the upper-division coursework may be in the communication core courses.

**Certificate in Strategic Communication**

This certificate program is designed for supervisors, managers and other professionals who interact with employees and coworkers. The six courses (18 credit hours) offered in this program concentrate on applied communication, a key component of successful management. These are standard college classes offering practical tools for professionals. Many are offered in the evenings, on weekends, or in condensed formats. The certificate program requires successful completion of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 302</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 312</td>
<td>Nonverbal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 325</td>
<td>Speaking in Business and the Professions</td>
<td>3</td>
</tr>
<tr>
<td>COMM 328</td>
<td>Teamwork, Leadership and Group Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 360</td>
<td>Applied Communication Strategies</td>
<td>3</td>
</tr>
<tr>
<td>COMM 650</td>
<td>Communication Training and Development</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

COMM 111, or the equivalent, is a prerequisite for the certificate program.
Departmental Honors in Communication

Students must have a 3.250 GPA overall and must maintain at least a 3.500 GPA in communication as well as in departmental honors courses in communication to earn departmental honors. Students must apply for and be admitted to departmental honors in communication before their senior year. The departmental honors track in communication requires:

- COMM 535 Communication Analysis and Criticism (3 credit hours)
- Select two of the following:
  - COMM 430 Communication Research and Inquiry (3 credit hours)
  - COMM 630 Communication Law and Responsibility (3 credit hours)
  - COMM 631 Historical and Theoretical Issues in Communication (3 credit hours)
- COMM 633 Senior Honors Project 1 (3 credit hours)

Total Credit Hours: 12

1 To be taken only after completing two of the other courses in the departmental honors track.

Field Major

Students seeking a field major may elect either an 18-credit-hour concentration in communication (as the major area of study) or a 9-credit-hour concentration in communication (as one of two allied departments taken in addition to the major area of study). Some or all of the upper-division coursework may be in the communication core courses.

Minor in Communication

A minor in communication consists of two courses from the communication core plus at least 12 credit hours of electives in communication chosen with the approval of a faculty advisor (6 of the 12 credit hours must be at the 300-level or above).

Minor in Graphic Design

A minor in graphic design is also available to communication students through the graphic design department in fine arts. The minor consists of a minimum of 15 credit hours in graphic design courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTG 216</td>
<td>Typography I</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 234</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 235</td>
<td>Graphic Design Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ARTG 490</td>
<td>Graphic Design Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Course

Select an additional course from the following:

- ARTG 316 Typography II (3 credit hours)
- ARTG 490 Graphic Design Applications (as a repeat)
- ARTG 491 Interactive Design
- ARTG 530 Seminar in Graphic Design

Or one 300+ course in graphic design chosen in consultation with an advisor

Total Credit Hours: 15

Minor in Graphic Design Communication

A minor in graphic design communication is available to any student working toward a bachelor of fine arts graphic design degree. This minor consists of 15 credit hours made up of the following 3-hour courses:

- COMM 301 Writing for the Mass Audience (3 credit hours)
- COMM 324 Integrated Marketing Communication (3 credit hours)
- COMM 510 Editing For Print (3 credit hours)
- COMM 525 Advertising Copywriting (3 credit hours)
- COMM 626 Integrated Marketing Communications Campaigns (3 credit hours)

An additional 1-credit-hour course is strongly recommended to students who pursue this minor:

- COMM 472 Senior Portfolio Seminar (1 credit hour)

Total Credit Hours: 15

Community Affairs, School of

WSU’s School of Community Affairs, created in 1999, brings together the departments of criminal justice and ethnic studies to form a unique and diverse curriculum to better serve the needs of students who will work in an ever-changing urban and global community. Additionally, the Midwest Criminal Justice Institute (MCJI), the Regional Community Policing Training Institute (RCPTI), and the Juvenile Justice Research Center provide opportunities to blend teaching, research and service. As a result, the School of Community Affairs not only serves as a quality educational unit for students, but also functions as a research and service unit that assists with a broader range of needs identified in the community.

Criminal Justice

The Criminal Justice Program offers the Bachelor of Science (BS) and Master of Arts (MA) in criminal justice degrees. Both degrees can be completed in the classroom or online. These degree programs are designed to provide preservice and inservice students with a broad educational background in all aspects of the criminal justice field. The Bachelor of Science degree program is described in the following pages.

Prerequisites

CJ 191 is the prerequisite for all criminal justice courses. Courses numbered 600 and above require a minimum of 15 credit hours of criminal justice courses or junior, senior or graduate standing.

Majors in Criminal Justice

- BS in Criminal Justice (p. 201)

Minors in Criminal Justice

- Criminal Justice (p. 202)

Courses in Criminal Justice

- Criminal Justice (CJ) (p. 307)

BS in Criminal Justice

The major in criminal justice consists of at least 36 credit hours (but not more than 50 credit hours will count toward the BS degree). ENGL 210 and ETHS 360 are additional requirements. Students must also satisfy Fairmount College of Liberal Arts and Sciences
requirements (including the foreign language requirement) and the university requirements for the Bachelor of Science degree.

### Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 191</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 315</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>CJ 320</td>
<td>Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>CJ 391</td>
<td>Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CJ 392</td>
<td>Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>CJ 394</td>
<td>Courts &amp; Judicial Systems</td>
<td>3</td>
</tr>
<tr>
<td>CJ 407</td>
<td>Introduction to Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>CJ 593</td>
<td>Crime Causation and Criminal Justice Policy</td>
<td>3</td>
</tr>
<tr>
<td>CJ 598</td>
<td>Contemporary Issues in Criminal Justice</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives

Select 9 credit hours of electives (there is a maximum of 6 credit hours total allowed in CJ 481 and CJ 483)

Total Credit Hours 36

Students may take 14 additional credit hours beyond the 36 hours required for the major (for a total of 50 hours).

### Minor in Criminal Justice

The minor in criminal justice consists of at least 18 credit hours of criminal justice courses and must include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 191</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 391</td>
<td>Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CJ 392</td>
<td>Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>CJ 394</td>
<td>Courts &amp; Judicial Systems</td>
<td>3</td>
</tr>
<tr>
<td>CJ 593</td>
<td>Crime Causation and Criminal Justice Policy</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 9 additional credit hours of criminal justice courses

Total Credit Hours 18

### Ethnic Studies (ETHS)

Ethnic studies is an interdisciplinary program whose primary focus is on developing knowledge, attitudes and skills to communicate effectively across cultural boundaries. Basic to the development of those knowledges, attitudes and skills is an understanding of and appreciation for the unique experiences of the various ethnic groups in the larger context of United States society. This discussion helps students understand the role of past experiences in influencing current race and ethnic relations. Students from all backgrounds engage in constructive debates and critical thinking and work diligently with dedicated faculty to develop strategies for harmonious living.

The ethnic studies program offers undergraduate degrees through the field major and the Bachelor of General Studies (BGS) options.

### Majors in Ethnic Studies

- Field Major/Bachelor of General Studies (BGS) (p. 202)

### Minors in Ethnic Studies

- Ethnic Studies (p. 202)

### Courses in Ethnic Studies

- Ethnic Studies (ETHS) (p. 346)

### Field Major/Bachelor of General Studies (BGS)

A field major requires 18 credit hours of coursework including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHS 100</td>
<td>Introduction to Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 210</td>
<td>Fundamentals of Cross-Cultural Communications</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 332</td>
<td>The Native American</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 360</td>
<td>Dealing with Diversity</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 370</td>
<td>The Black Experience in America</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHS 320</td>
<td>Martin Luther King</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 330</td>
<td>Ethnic America, 1500-1924</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 331</td>
<td>The Black Family</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 334</td>
<td>Ethnic America in the 20th Century</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 380</td>
<td>Native American Tribal Systems</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 381</td>
<td>Special Topics</td>
<td>3</td>
</tr>
<tr>
<td>ETHS 400</td>
<td>The Black Child</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

### Minor in Ethnic Studies

A minor in ethnic studies consists of at least 18 credit hours. The courses are to be approved by the student’s advisor in the program.

### Forensic Sciences

The forensic sciences program offers the Bachelor of Science (BS) in forensic sciences degree. This degree program is designed to prepare students for entry-level work in a forensic sciences laboratory that operates within the context of the criminal investigation and crime detection processes.

**Program.** The forensic sciences program consists of a minimum of 94 credit hours involving courses from chemistry, biological sciences, anthropology, psychology, criminal justice and forensic sciences. Some of these required courses may also satisfy the university’s general education requirements. Students must also satisfy Fairmount College of Liberal Arts and Sciences and university requirements for the Bachelor of Science degree.

### Majors in Forensic Sciences

- BS in Forensic Sciences (p. 202)

### Courses in Forensic Sciences

- Forensic Sciences (FS) (p. 350)

### BS in Forensic Sciences

The following courses are required for the completion of the degree:

1. Twelve (12) credit hours of humanities courses which must include:
   (See sample course sequence.)
   - An English literature course 3
   - HIST 131 History of the United States: Colonial to 1865 3
   or HIST 132 History of the United States Since 1865 3
   - A fine arts course 3
   - An advanced further study course 3

Total Credit Hours 12
2. Seven (7) credit hours of general electives.
3. Seventy-six (76) credit hours of coursework for the major including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 523</td>
<td>Analytical Chemistry</td>
<td>4</td>
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<td>CHEM 524</td>
<td>Instrumental Methods of Chemical Analysis</td>
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<td>CHEM 531</td>
<td>Organic Chemistry I</td>
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<td>CHEM 532</td>
<td>Organic Chemistry II</td>
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<td>CHEM 661</td>
<td>Introductory Biochemistry</td>
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<td>BIOL 223</td>
<td>Human Anatomy and Physiology</td>
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<td>BIOL 330</td>
<td>General Microbiology</td>
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<tr>
<td>BIOL 419</td>
<td>Genetics</td>
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<tr>
<td>BIOL 420</td>
<td>Molecular Cell Biology</td>
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</tr>
<tr>
<td>ANTH 101 &amp; ANTH 106</td>
<td>Biological Anthropology and Biological Anthropology Lab</td>
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<td>ANTH 557</td>
<td>Human Osteology</td>
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</tr>
<tr>
<td>CJ 315</td>
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<td>CJ 420</td>
<td>Criminal Evidence</td>
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<tr>
<td>FS 450</td>
<td>Forensic Identification of Marijuana</td>
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<tr>
<td>FS 451</td>
<td>Forensic Identification of Narcotics and Other Illicit Substances</td>
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<td>FS 452</td>
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<td>FS 453</td>
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<td>FS 454</td>
<td>Fingerprint Development and Analysis</td>
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<td>FS 455</td>
<td>Forensic Arson Analysis</td>
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<td>FS 498</td>
<td>Seminar in Forensic Sciences Techniques I</td>
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<tr>
<td>FS 499</td>
<td>Seminar in Forensic Sciences Techniques II</td>
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Total Credit Hours 76

### Sample Course Sequence

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<td>College English I</td>
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<td></td>
<td>BIOL 210</td>
<td>General Biology I</td>
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<td>CHEM 211</td>
<td>General Chemistry I</td>
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<td>2</td>
<td>ENGL 102</td>
<td>College English II</td>
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<td>COMM 111</td>
<td>Public Speaking</td>
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<td></td>
<td>BIOL 211</td>
<td>General Biology II</td>
<td>4</td>
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<tr>
<td></td>
<td>CHEM 212</td>
<td>General Chemistry II</td>
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<td></td>
<td></td>
<td>Credit Hours</td>
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<td>HIST 131 or HIST 132</td>
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<td></td>
<td>or History of the United States Since 1865</td>
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<td></td>
<td>PSY 111</td>
<td>General Psychology</td>
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<td>BIOL 223</td>
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<tr>
<td>4</td>
<td>Fine Arts course</td>
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<td>English Literature course</td>
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<td>BIOL 330</td>
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<td>CHEM 532</td>
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<td>5</td>
<td>Humanities advanced I&amp;P course</td>
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<td></td>
<td>ANTH 101</td>
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<td>&amp; ANTH 106 &amp; Biological Anthropology Lab</td>
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<td>BIOL 419</td>
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<td>FS 453</td>
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Total Credit Hours 94

### Minimum Requirements

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</table>
Earth, Environmental and Physical Sciences

The earth, environmental and physical sciences (EEPS) program, coadministered by the departments of geology and physics, combines the disciplines of geology, physics and environmental science, and supporting fields such as biology and chemistry. It is designed to train a new generation of scientists, professionals and educators who will be well equipped with general knowledge and skills in methodology, critical and creative thinking in scientific research, and advanced knowledge and skills in geology, environmental science or physics.

Although there is no undergraduate degree in earth, environmental and physical sciences (EEPS), the following EEPS courses may be used toward an undergraduate degree in physics or geology.

Courses in Earth, Environmental and Physical Sciences
• Earth, Environmental and Physical Sciences (EEPS) (p. 331)

Economics

The economics major in Fairmount College provides excellent preparation for law school, for additional academic study in economics, business and other fields, and for careers in public service. The study of economics is useful in helping students develop both their skill in critical thinking and their ability to use analytical tools to solve complex problems. It is a major that lays a foundation for many career paths.

Teaching of Economics

Because Kansas Department of Education regulations governing the licensure of secondary economics teachers are very specific and contain requirements beyond the economics major, students planning to be teachers of economics should contact a secondary social studies advisor in the College of Education for program planning.

Majors in Economics
• BA in Economics (p. 204)

Minors in Economics
• Economics (p. 204)

Courses in Economics
• Economics (ECON) (p. 332)

BA in Economics

The economics major in Fairmount College requires a minimum of 37 credit hours and a maximum of 39 credit hours in economics. MATH 144 or MATH 242 is required. Students who plan to major in economics should consult with the undergraduate advisor in the department of economics in the Barton School of Business. Enrollment in all upper-division economics classes requires junior standing and completion of all course prerequisites. Students in this major or minor must achieve a minimum 2.250 GPA.

The economics major in Fairmount College requires a minimum of 37 credit hours and a maximum of 39 credit hours in economics. MATH 144 or MATH 242 is required. Students who plan to major in economics should consult with the undergraduate advisor in the department of economics in the Barton School of Business. Enrollment in all upper-division economics classes requires junior standing and completion of all course prerequisites. Students in this major or minor must achieve a minimum 2.250 GPA. The following courses are required:

- MATH 144 or MATH 242: Business Calculus or Calculus I
- ECON 201 or ECON 202: Principles of Macroeconomics or Principles of Microeconomics
- BADM 160 or PC 105: Business Software
- ECON 231: Introductory Business Statistics
- ECON 232: Statistical Software Applications for Business
- ECON 301 or ECON 302: Intermediate Macroeconomics or Microeconomics

Select 15 credit hours in upper-division economics to be chosen in consultation with an undergraduate economics advisor; at least 9 credit hours in economics, with up to 6 credit hours outside the department, with advisor’s consent

Total Credit Hours: 37-39

1 Prerequisite for ECON 232 is either BADM 160 or PC 105.

Note: ECON 201 and ECON 202 may be taken as part of Fairmount College general education requirements. ECON 400, ECON 401 and ECON 481 may not be used in the economics major.

Minor in Economics

A minor in economics is available to any student whose major field or area of emphasis is outside of economics. A minor consists of:

- ECON 201: Principles of Macroeconomics
- ECON 202: Principles of Microeconomics
Nine (9) credit hours of the economics classes must be in residency at WSU, and a minimum 2.250 GPA is required. ECON 481 may not be used in the economics minor.

English Language and Literature
The English department offers a broad and flexible program of courses that are central to a liberal arts education while offering students the opportunity for personal enrichment and a variety of career possibilities. The department offers degree programs in creative writing, literature, and English teaching, as well as a range of courses in linguistics. Students who combine an English major with substantial work in other disciplines will find the knowledge and communication skills acquired in their work in English a valuable asset as they seek entrance into a wide range of fields that include communication, education, government, law and business.

Teaching
Students must file a declaration of English teaching major with an assigned English-education advisor at the time they apply to the teacher education program. A 2.500 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in middle and secondary school English.

Majors in English Language and Literature
• BA in English (p. 206)
• BA in Creative Writing (p. 205)
• BA in English Teaching - Middle Schools (p. 206)
• BA in English Teaching - Secondary Schools (p. 206)
• Accelerated Bachelor’s to Master’s Program in English (p. 205)

Minors in English Language and Literature
• English (p. 207)
• Creative Writing (p. 206)

Courses in English Language and Literature
• (English (ENGL) (p. 339)

1 Courses numbered 000–099 do not count toward any degree program.

Accelerated Bachelor's to Master's Program in English
The dual/accelerated bachelor’s to master’s program in English is designed to prepare qualified students for graduate work in English at WSU through a coordinated program leading to both degrees. A student in the program will be allowed to enroll in courses for graduate credit while completing undergraduate degree requirements.

To be considered for admission to the program, the following must be satisfied:

1. An undergraduate GPA of 3.000 overall and 3.500 in English courses;
2. Completion of at least 60 credit hours of undergraduate study, with at least 18 credit hours remaining for completion of the undergraduate degree;
3. Completion of four English classes at the 300 level or above; and
4. Positive recommendation from at least one member of the English graduate faculty.

The student should apply for admission to the program during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit. Students admitted to the dual/accelerated program will be allowed to enroll in courses for graduate credit, including 800-level courses, prior to completing undergraduate degree requirements. At most 9 credit hours may be joint degree hours—hours taken for graduate credit at the 700 level (or above) that are also applied to the bachelor’s degree. If this deviation is requested, joint-degree hours may not include workshop courses, undergraduate core curriculum courses, cooperative education courses, or courses that are prerequisite for the graduate program. A course taken for joint credit must be so identified at the time of enrollment in that course. Where courses specify differing requirements for graduate and undergraduate students (500–799), the student must meet the requirements for graduate students to apply the course to graduate credit. A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.

After initial admission, continuation in the program requires a continuing WSU undergraduate cumulative GPA of at least 3.000 and a GPA of at least 3.000 in courses taken for graduate credit. ENGL 700 must be included in the undergraduate program of study for students in the dual/accelerated program. (Note: ENGL 700 is normally offered only during fall semester. Students will be expected to plan accordingly.) Dual/accelerated students should also complete the English MA language requirement before completing the undergraduate degree. In addition to completing the undergraduate degree requirements for their major emphasis (English literature, creative writing, English education), all dual/accelerated students, regardless of their major emphasis, should complete all four courses in the 360–363 sequence before completing the undergraduate degree.

Upon admission to the dual/accelerated program the student is granted tentative admission to the graduate program in English, pending award of the undergraduate degree. The student should draw up a tentative plan of study in consult with the undergraduate coordinator and/or the graduate coordinator. This plan will be reviewed periodically by the undergraduate coordinator and the graduate coordinator. The student’s progress in the program will be reviewed annually with a written progress report placed in the student’s departmental file.

BA in Creative Writing
A student planning to major in creative writing must complete ENGL 101 and ENGL 102 and thereafter complete 33 credit hours of coursework in English, including the following courses:

Basic Requirements
ENGL 101 College English I 3
ENGL 102 College English II 3
ENGL 322 Origins of Western Literature 3
or ENGL 323 World Literature
ENGL 310 Nature of Poetry 3
ENGL 320 The Nature of Drama 3
or ENGL 330 The Nature of Fiction

Select an English literature class numbered 300 or above 3

Major Requirements
ENGL 285 Introduction to Creative Writing 3

Skill Requirements
Select at least 12 credit hours from the following: 12
### ENGL 301
Fiction Writing 2

### ENGL 303
Poetry Writing 2

### ENGL 305
Creative Nonfiction Writing 2

### ENGL 401
Fiction Workshop 2

### ENGL 403
Poetry Workshop 2

### ENGL 517
Scriptwriting I

### ENGL 518
Scriptwriting II

### ENGL 585
Writer’s Tutorial: Prose Fiction 2

### ENGL 586
Writer’s Tutorial: Poetry 2

Or university honors English courses (1–3)

<table>
<thead>
<tr>
<th>Electives</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Select at least 6 credit hours of upper-division hours from any other area of emphasis within the department</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 39

1 To be completed with a grade of B- or better or receive departmental consent for further creative writing coursework.

2 May be repeated once for credit.

### BA in English

A major consists of 33 credit hours, with the coursework distributed as follows:

#### Basic Requirements
Select one of the following: 3

| ENGL 310 | Nature of Poetry |
| ENGL 320 | The Nature of Drama |
| ENGL 330 | The Nature of Fiction |
| ENGL 322 | Origins of Western Literature 3 |
| or ENGL 323 | World Literature |
| ENGL 360 | Major British Writers I 3 |
| ENGL 361 | Major British Writers II 3 |
| ENGL 362 | Major American Writers I 3 |
| ENGL 363 | Major American Writers II 3 |
| ENGL 590 | Senior Seminar 3 |

#### Electives
Select 12 credit hours of work in other English courses, at least 6 of which must be taken at the 500-600 level 1

Total Credit Hours 33

1 ENGL 101, and ENGL 102 are not counted toward a major.

### BA in English Teaching - Middle Schools

The major in the College of Education consists of 18 credit hours of content courses distributed as follows:

#### Language

| ENGL 315 | Introduction to English Linguistics 3 |
| ENGL 317 | History of the English Language 3 |

#### Composition

| ENGL 680 | Theory and Practice in Composition 3 |

#### Literature

| ENGL 322 | Origins of Western Literature 3 |
| or ENGL 323 | World Literature |
| ENGL 330 | The Nature of Fiction |

#### Minor in Creative Writing

A minor with a creative writing sequence is available and consists of 12 credit hours of creative writing coursework including:

| ENGL 285 | Introduction to Creative Writing 3 |

Select 9 credit hours from the following skill courses: 9

| ENGL 301 | Fiction Writing 1 |
| ENGL 303 | Poetry Writing 1 |
| ENGL 305 | Creative Nonfiction Writing 1 |

| ENGL 401 | Fiction Workshop 1 |
| ENGL 403 | Poetry Workshop 1 |
| ENGL 517 | Scriptwriting I |
| ENGL 518 | Scriptwriting II |
| ENGL 585 | Writer’s Tutorial: Prose Fiction 1 |
| ENGL 586 | Writer’s Tutorial: Poetry 1 |

Or university honors English courses (1–3)

Select one of the following: 3

| ENGL 310 | Nature of Poetry |
| ENGL 320 | The Nature of Drama |
| ENGL 330 | The Nature of Fiction |

Total Credit Hours 15

1 May be repeated once for credit.
Minor in English
A minor consists of 15 credit hours and requires:

Select one of the following:  3
- ENGL 310 Nature of Poetry
- ENGL 320 The Nature of Drama
- ENGL 330 The Nature of Fiction

Select 12 additional credit hours in ENGL. At least 9 must be in upper-
division work.  12

Total Credit Hours  15

Note: ENGL 101 and ENGL 102 are not counted toward a minor.

Film Studies
Wichita State University does not offer a film studies major. Students may earn a certificate in film studies.

Certificate in Film Studies
• Film Studies (p. 207)

Certificate in Film Studies
The certificate in film studies requires 12 credit hours in film-oriented courses from any department, discipline or college that offers such courses. The certificate is offered both for those students seeking employment in some aspect of film, film making or film criticism, and for those wishing to improve their understanding of film or the influence of film on a discipline or on a culture. The film studies certificate can prove useful to students majoring in language, literature, broadcast journalism, speech and fine arts; it also can appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable or where film has influenced the view of that field, including sociology, history, anthropology, political science, psychology, criminal justice, education and administration. The certificate offers opportunities to study film as an art form and to gain experience in media production.

The film studies certificate consists of 12 credit hours from the courses listed below, selected with the approval of the coordinator of film studies. Other courses having film content may be substituted for the listed courses, with the approval of the coordinator as well. Courses (with different content) that can be repeated within their discipline can also be repeated for the film studies certificate. Courses approved for the film studies certificate include:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>ANTH 397AD</td>
<td>Visual Anthropology</td>
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<td>ANTH 597AD</td>
<td>Visual Anthropology</td>
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<td>COMM 304</td>
<td>Studio Video Production</td>
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<td>COMM 305</td>
<td>Visual Technologies</td>
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<td>COMM 306</td>
<td>Introduction to Multimedia</td>
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<td>COMM 321</td>
<td>Introduction to Film Studies</td>
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<td>COMM 406</td>
<td>Audio Production</td>
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<td>COMM 512</td>
<td>Principles of Video Production</td>
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<td>COMM 604</td>
<td>Video Storytelling</td>
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<td>COMM 622</td>
<td>Studio B: Live Television News</td>
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<td>COMM 660AK</td>
<td>Film Production</td>
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<td>CJ 518</td>
<td>Criminal Justice &amp; Crime in Film</td>
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<td>ENGL 307</td>
<td>Narrative in Literature and Film</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 508</td>
<td>Critical Studies in Film</td>
<td>3</td>
</tr>
<tr>
<td>FREN 520</td>
<td>Novel and Film</td>
<td>3</td>
</tr>
<tr>
<td>HIST 318</td>
<td>The Holocaust in Film</td>
<td>3</td>
</tr>
<tr>
<td>HIST 399C</td>
<td>World War II In Film</td>
<td>3</td>
</tr>
<tr>
<td>HIST 399Q</td>
<td>Civil War In Film</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 590T</td>
<td>Japanese Philosophy &amp; Film</td>
<td>3</td>
</tr>
<tr>
<td>POLS 390E</td>
<td>Film/Great Trials</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 520</td>
<td>Literature in Film</td>
<td>3</td>
</tr>
<tr>
<td>THEA 228</td>
<td>Script Analysis</td>
<td>3</td>
</tr>
<tr>
<td>THEA 253</td>
<td>Costuming for the Stage and Film</td>
<td>3</td>
</tr>
<tr>
<td>THEA 390</td>
<td>Acting for the Camera</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 382</td>
<td>Feminism and Girl Culture</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 510</td>
<td>Hollywood Melodrama: The Woman's Film</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 523</td>
<td>Feminist Film Criticism</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 585</td>
<td>The Femme Fatale In Film</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 580Z</td>
<td>Femme Fatale and Fighting</td>
<td>3</td>
</tr>
<tr>
<td>WSUA 102E</td>
<td>First-Year Seminar: World Cultures in Popular Media</td>
<td>3</td>
</tr>
</tbody>
</table>

Geography
Wichita State University does not offer a major in geography. GEOG 235 is intended to be a natural sciences course, while GEOG 125 and GEOG 210 are social sciences courses.

Minors in Geography
• Geography (p. 207)

Courses in Geography
• Geography (GEOG) (p. 352)

Minor in Geography
Students may minor in geography with 15 credit hours.

Select 9 credit hours of upper-division GEOG courses  9
Select 6 additional credit hours of GEOG courses  6

Total Credit Hours 15

At least 9 credit hours must be from WSU. A minor in geography can be useful to students majoring in history, anthropology and political science, or for anyone interested in globalization or in understanding the diverse world in which we live.

Geology
Geology is the comprehensive study of the solid earth, atmosphere, ocean, other planets and the fossil record of life. It also encompasses the study of the effects of human activities on the Earth’s environment and the availability and extraction of natural resources. Earth science is interdisciplinary, and the study of geology frequently employs tools, concepts and theories from mathematics and the other natural sciences, including chemistry, biology and physics. Geologists work to solve problems of local and global perspectives related to all Earth systems. The study of minerals, rocks and fossils continues to be an essential and exciting component of a geologist’s training.

Through the geology program at Wichita State, students may earn either a Bachelor of Arts (BA) or Bachelor of Science (BS) degree. The program also offers a minor in geology and courses designed to fulfill general education requirements in the natural sciences.
Candidates for either the BA or BS degree are required to contribute examples of their coursework and other scholarly achievements to the department’s assessment program. Students also are required to take at least one integrating capstone course, preferable during their senior year. Capstone courses are identified below.

The department of geology also offers graduate degree work at the Master of Science level in the earth, environmental and physical sciences (EEPS) degree program. This program offers students advanced training in methodology, critical and creative thinking in scientific research, and advanced knowledge and skills in geology, environmental science or physics. For more information about this graduate program, see the Graduate Catalog.

Through the generosity of its alumni and industry supporters, the geology department proudly awards more than $20,000 annually in scholarships and awards to qualified undergraduate majors and graduate students. Contact the geology department office for a complete listing of scholarship amounts, qualifications and application procedures.

Active student associations for geology majors and other students interested in geology include the Geology Club, the student chapter of the American Association of Petroleum Geologists (AAPG), and Sigma Gamma Epsilon (SGE), the national geology honorary society. These clubs cosponsor such extra-curricular activities as field trips, visiting lecturers, short courses, attendance at academic conferences and social gatherings.

**Majors in Geology**
- BA in Geology (p. 208)
- BS in Geology (p. 208)

**Minors in Geology**
- Geology (p. 209)

**Courses in Geology**
- Geology (GEOL) (p. 352)

**BA in Geology**

The BA degree program, providing flexible, broad training in the earth sciences, is for students who wish to combine the geology major with teacher preparation (K–12), environmental studies, land-use planning, science journalism, environmental law, natural resource management/business or similar majors. The BA degree also is suited to students discovering geology as an interest later in their college or life experience. This program represents a minimum proficiency. Students are strongly advised to elect additional courses in geology and supporting sciences if they are interested in pursuing graduate studies in the geosciences after earning the BA.

A major with the BA requires a minimum of 30 credit hours in geology, including:

<table>
<thead>
<tr>
<th>Required Core Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 102</td>
</tr>
<tr>
<td>or GEOL 111</td>
</tr>
<tr>
<td>GEOL 302</td>
</tr>
<tr>
<td>GEOL 312</td>
</tr>
<tr>
<td>GEOL 320</td>
</tr>
<tr>
<td>GEOL 526</td>
</tr>
<tr>
<td>GEOL 544</td>
</tr>
</tbody>
</table>

**Capstone Course**

Select one of the following Capstone Courses: 3-6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 621</td>
<td>Geochemical Cycling</td>
</tr>
<tr>
<td>GEOL 640</td>
<td>Field Geology</td>
</tr>
<tr>
<td>GEOL 650</td>
<td>Geohydrology</td>
</tr>
<tr>
<td>GEOL 678</td>
<td>Geologic Perspectives on Climatic Change</td>
</tr>
</tbody>
</table>

**Additional Courses**

Select an additional 6 credit hours of electives chosen from the catalog listings for geology to match the student’s career interest and in consultation with an advisor from the geology department.

**Required Supporting Sciences**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 370</td>
<td>Elementary Statistics</td>
</tr>
<tr>
<td>MATH 112</td>
<td>Precalculus Mathematics</td>
</tr>
<tr>
<td>or MATH 123</td>
<td>College Trigonometry</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>Introductory Chemistry</td>
</tr>
<tr>
<td>or CHEM 211</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>Introductory Physics (if the student did not have high school physics)</td>
</tr>
</tbody>
</table>

Total Credit Hours | 45-50

It is recommended that the required supporting sciences courses be taken prior to, or at least concurrently with, the required core courses in geology listed above.

Students interested in pursuing graduate degrees in environmental sciences should also consider taking PHYS 213 and PHYS 214, BIOL 210 and BIOL 418, CHEM 211 and CHEM 212, and MATH 242 or earning a BS degree in geology. PC 105 is recommended for students with little experience with computers.

**BS in Geology**

The BS degree program, providing comprehensive training in geology and allied natural sciences, prepares graduates for professional work in industry or government, as well as for graduate study in any field of geoscience or environmental sciences. This program prepares students for the examination for the professional geologist license. Students who expect to earn the BS in geology within a minimum amount of time (four years as a full-time student) should have completed geometry, trigonometry, two years of algebra, and chemistry in high school.

A major with the BS requires a minimum of 45 credit hours in geology, including:

<table>
<thead>
<tr>
<th>Required Core Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 111</td>
</tr>
<tr>
<td>GEOL 312</td>
</tr>
<tr>
<td>GEOL 320</td>
</tr>
<tr>
<td>GEOL 324</td>
</tr>
<tr>
<td>GEOL 526</td>
</tr>
<tr>
<td>GEOL 540</td>
</tr>
<tr>
<td>GEOL 544</td>
</tr>
<tr>
<td>GEOL 552</td>
</tr>
<tr>
<td>GEOL 570</td>
</tr>
</tbody>
</table>

**Required Capstone Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 640</td>
<td>Field Geology</td>
</tr>
</tbody>
</table>

**Additional Courses**

Select an additional 9 credit hours of upper-division geology electives chosen to match the student’s career interest and in consultation with an advisor from the geology department. An additional elective capstone course is:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 650</td>
<td>Geohydrology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 621</td>
<td>Geochemical Cycling</td>
</tr>
<tr>
<td>GEOL 640</td>
<td>Field Geology</td>
</tr>
<tr>
<td>GEOL 650</td>
<td>Geohydrology</td>
</tr>
<tr>
<td>GEOL 678</td>
<td>Geologic Perspectives on Climatic Change</td>
</tr>
</tbody>
</table>
Courses in History

Minor in History

A minor in history requires students to complete a total of 15 hours in history.

Select 15 credit hours in history. Only 6 of those credit hours may be lower-division (100- and 200-level) courses

Total Credit Hours 15

Students who complete the minor are limited to 3 hours of HIST 310.

Interdisciplinary Liberal Arts and Sciences Program (LASI)

Fairmount College is the home for interdisciplinary courses and programs. Among those are academic service courses such as Adult Seminar, Topics in Career Exploration, Global Issues, Introduction to Premedical Professions, and Application Process for Medical and Professional Schools. In these and other courses, students learn more about themselves, university life, preparation for careers, and the foundations of liberal arts and sciences. An interdisciplinary certificate program that enables students to focus coursework from several departments around a unique area — Great Plains Studies — is also offered through LASI. Further, the foundation courses for the Master of Arts in Liberal Studies are part of the LASI range of coursework. More information about LASI, its courses and its programs may be obtained through the LAS Advising Center, 115 Grace Wilkie Hall, or at the advising center webpage (http://wichita.edu/lasadvising).

Liberal Studies

WSU offers an interdisciplinary Master of Arts in Liberal Studies (MALS) degree program for people who wish to pursue a particular topical or interdisciplinary interest at the graduate level, but find the existing programs either too specialized or insufficiently individualized. The MALS program offers students an opportunity to design a program

<table>
<thead>
<tr>
<th>Required Supporting Sciences 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242 Calculus I</td>
<td>10</td>
</tr>
<tr>
<td>&amp; MATH 243 and Calculus II</td>
<td></td>
</tr>
<tr>
<td>STAT 370 Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 211 General Chemistry I</td>
<td>10</td>
</tr>
<tr>
<td>&amp; CHEM 212 and General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>Select one of the following combinations:</td>
<td>8-10</td>
</tr>
<tr>
<td>PHYS 213 General College Physics I</td>
<td></td>
</tr>
<tr>
<td>&amp; PHYS 214 and General College Physics II</td>
<td></td>
</tr>
<tr>
<td>PHYS 313 Physics for Scientists I</td>
<td></td>
</tr>
<tr>
<td>&amp; PHYS 314 and Physics for Scientists II</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 76-78

1 It is recommended that the required supporting sciences courses be taken prior to, or at least concurrently with, the required core courses in geology listed above.

Students interested in pursuing graduate degrees in environmental sciences should also consider taking BIOL 210 and BIOL 418. PC 105 is recommended for students with little experience with computers.

Minor in Geology

A minor in geology consists of at least 15 hours of geology including:

| GEOL 102 Earth Science and the Environment (with lab) | 4 |
| or GEOL 111 General Geology |    |
| Select at least 11 additional credit hours in GEOL | 11 |

Total Credit Hours 15

It is suggested that students minoring in geology consult with the department in selecting courses that would be most appropriate to their major field of study.

History

The purpose of WSU’s Department of History is to illuminate the forces that have shaped our world and to provide a historical perspective for the future. To accomplish those goals, the department offers a flexible program of study. While students may focus on a specific area of concentration, the program introduces them to a variety of classes that assures them a foundation for an integrated liberal education. Combined with courses in other disciplines, the history major prepares students for entrance into a wide variety of career opportunities, including business, government, law, journalism, teaching, communication and public affairs.

Teaching of History

Because Kansas Department of Education regulations governing the certification of secondary history teachers are very specific, students planning to be teachers of history should contact a secondary social studies advisor in the College of Education for program planning beyond the requirements of the history major.

Majors in History

- BA in History (p. 209)

Minors in History

- History (p. 209)

Courses in History

- History (HIST) (p. 362)
of study to answer their particular needs and interests in a focused, coherent manner. For more information, consult the WSU Graduate Catalog.

**Certificates in the Interdisciplinary Liberal Arts and Sciences Program**

- Asian Studies (p. 210)
- Global Competency (p. 210)
- Great Plains Studies (p. 211)
- Medieval and Renaissance Studies (p. 212)
- Tilford Diversity Studies (p. 213)

**Courses in Interdisciplinary Liberal Arts and Sciences**

- Liberal Arts and Sciences - Interdisciplinary (LASI) (p. 382)
- WSU General, First-Year Seminar (WSUA) (p. 457)

**Certificate in Asian Studies**

This certificate encourages a wide-ranging knowledge of Asia. This is accomplished by taking a variety of courses taught across the college and university. The certificate encourages students to study Asia through Asian languages, thereby gaining a better understanding of the history, society, culture and thought of peoples living in Asia. The certificate applies to the following languages currently taught at the university: Chinese, Japanese and Russian. It will be expanded to include other qualifying languages, histories and cultures, if and when they are added to the curriculum.

Students who have made the effort to attain language proficiency are most likely to profit from this enhanced background, as they are more likely to continue study of the languages and related cultures and to visit or do work which relates directly to Asian nations.

The certificate is based on a student’s study of one of three languages and five additional courses, for a total of 25 credit hours:

- 10 credit hours of Chinese, Japanese or Russian language. All courses counted must be in the same Asian language. Students are expected to include these classes among the first they take in fulfillment of certificate requirements.
- 15 credit hours of courses with significant Asian content (one-third or greater). Specific decisions about appropriateness of content is decided by certificate coordinators. Students are encouraged to take an interdisciplinary approach and will not be permitted to count more than two courses in this category offered by any one department. An interdisciplinary approach allows students to see how a variety of scholarly perspectives may be brought to bear on common issues.

Select 10 credit hours of Chinese, Japanese or Russian language as described above 10

Select 15 credit hours of courses with significant Asian content (one-third or greater) as described above. Courses with Asian content include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 312</td>
<td>Asia Pacific Cultures</td>
</tr>
<tr>
<td>ANTH 398</td>
<td>Travel Seminar</td>
</tr>
<tr>
<td>ANTH 515</td>
<td>China</td>
</tr>
<tr>
<td>ANTH 516</td>
<td>Japan: People and Culture</td>
</tr>
<tr>
<td>ANTH 690</td>
<td>Field Methods in Medicine</td>
</tr>
<tr>
<td>ENGL 345</td>
<td>Studies in Comparative Literature</td>
</tr>
<tr>
<td>HIST 110</td>
<td>Russian Studies</td>
</tr>
</tbody>
</table>

Total Credit Hours 25

For information and application procedures please contact Dr. Robert Feleppa (316) 978-3125, robert.feleppa@wichita.edu, or Dr. Helen Hundley (316) 978-7745, helen.hundley@wichita.edu.

**Certificate in Global Competency**

The Certificate in Global competency is a 15-credit-hour, interdisciplinary undergraduate program housed in Fairmount College of Liberal Arts and Sciences. The objective of the certificate program is to give students a multidisciplinary education that will augment their major fields of study with the introductory background knowledge

- to be a contributing member of globally diversified teams, and
- to understand the global diversity and the cultural, social, historical and international context of their professional activities.

Completion of this certificate program allows WSU students to acquire a basic understanding of global perspectives and cultures for augmenting their disciplinary education.

Employers of WSU graduates, particularly those of engineering, business and other professional disciplines, and WSU’s corporate partners have often stated the need for employees who can work in global teams, where teams are made up of members from different cultures, speaking different languages, following different religions, and living in different countries. These teams develop, design, produce, deploy and maintain products and services for all consumers and customers.

Completion of the proposed undergraduate certificate program allows WSU students to acquire a basic understanding of global perspectives and cultures for augmenting their disciplinary education.

**Expected Learning Outcomes of the Global Competency Certificate Program:**

- Demonstrate understanding of the complexity of another culture in relation to its history, values, politics, communication styles, economy, gender or beliefs and practices.
- Analyze connections between the world views, power structures, and experiences of multiple cultures to address a global problem.
- Examine the historical and contemporary roles, interconnections and differential effects of human organizations and actions on global systems within the human and natural worlds.
- Plan and evaluate more complex solutions to global challenges that are appropriate to their contexts using multiple disciplinary perspectives (such as cultural, historical and scientific).
• Initiate and develop interactions with people from different cultures. Recognize personal bias when interacting with culturally different others.

Admission Requirements

Students seeking the interdisciplinary global competency certificate must be admitted to WSU

• in a degree program, or
• in a nondegree status.

International students will not be issued an I-20 for certificate programs alone. They may obtain a certificate only while concurrently pursuing a WSU degree

Area professionals may be admitted as nondegree bound as long and they meet all WSU admission requirements.

Current WSU graduate students may also complete this certificate program but will not receive graduate credit for the courses taken as part of the certificate requirements.

Transfer hours are usually not acceptable for certificate programs. Students interested in the certificate program are encouraged to meet with their respective college/department advisors and/or visit the LAS certificates webpage (http://wichita.edu/LAScertificates).

Required Courses

The certificate consists of completing courses totaling 15 credit hours meeting the following disciplinary distributions and from the given list of approved courses:

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>HIST 100 - The Human Adventure: World Civilization Since 1500</td>
</tr>
<tr>
<td></td>
<td>HIST 104 - Topics in World History</td>
</tr>
<tr>
<td>Political science</td>
<td>POLS 220 - Introduction to International Relations</td>
</tr>
<tr>
<td></td>
<td>POLS 226 - Comparative Politics</td>
</tr>
<tr>
<td></td>
<td>POLS 340 - Global Challenges</td>
</tr>
<tr>
<td>Language/communication</td>
<td>LING 151 - Nature of Language</td>
</tr>
<tr>
<td></td>
<td>MCLL 351 - Linguistics and Foreign Languages</td>
</tr>
<tr>
<td></td>
<td>COMM 335 - International and Intercultural Communication</td>
</tr>
<tr>
<td></td>
<td>COMM 662I - Global Intercultural Communic</td>
</tr>
<tr>
<td>Culture</td>
<td>ANTH 200 - Intercultural Relations</td>
</tr>
<tr>
<td></td>
<td>ANTH 303 - World Cultures</td>
</tr>
<tr>
<td></td>
<td>WOMS 513 - Issues and Perspectives on African Women and Globalism</td>
</tr>
<tr>
<td></td>
<td>WOMS 514 - Women in the Middle East</td>
</tr>
<tr>
<td></td>
<td>WOMS 579 - Asian Women in Modern History</td>
</tr>
<tr>
<td></td>
<td>LASI 300 - Global Issues</td>
</tr>
</tbody>
</table>

Admission Requirements

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<td></td>
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<tr>
<td></td>
<td>WOMS 513 - Issues and Perspectives on African Women and Globalism</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>WOMS 579 - Asian Women in Modern History</td>
</tr>
<tr>
<td></td>
<td>LASI 300 - Global Issues</td>
</tr>
</tbody>
</table>

To be counted toward the certificate, courses must meet the above distribution requirements. One or more of these courses may be used to satisfy the general education requirements of the student's major as well (that is, double counting is allowed when possible).

Any substitution of the listed course must be approved by the Global Education Committee (GEC) and must meet the subject domain distribution requirement as well as promote the student's understanding of world/regional culture, history, geography, language/communication, and international issues.

Certificate Completion Requirements

Students are encouraged to meet with any GEC member to discuss interest and potential course selection prior to completing the certificate requirements. Any grade below 2.000 in any of the certificate courses will not be acceptable and the student will have to either retake that course or take an approved substitute course.

The certificate will be awarded when the student has:

1. Completed the required certificate courses, each with a 2.000 or higher grade, and
2. Obtained a signed Certificate Completion Form. The form must be signed-off by the GEC chair or a GEC member after the student has uploaded the required work samples and completed an exit survey.¹

¹ Check certificate Blackboard page for directions about what and how to upload work samples as well as how to complete the exit survey.

Certificate in Great Plains Studies

Fairmount College offers a certificate in Great Plains studies, an interdisciplinary program for undergraduate students. This certificate is for students interested in supplementing their major field of study with a concentration of courses from a number of disciplines focusing on a common topic, the Great Plains. Nondegree adults can earn the certificate for professional or personal enrichment.

Requirements

Undergraduate students must have a 2.500 overall GPA and sophomore standing. They must maintain at least a 2.500 cumulative grade point average with no grade below C in courses applied toward the certificate.

Students may transfer 3 credit hours of coursework from another institution. Exceptions for additional transfer credit or other exceptions to the certificate requirements will be reviewed by the Great Plains studies coordinator and committee.

The program consists of 15 credit hours.

Select 15 credit hours from the following courses, including at least two courses in each area

<table>
<thead>
<tr>
<th>Area</th>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>GEOL 235 - Meteorology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEOL 430 - Field Studies in Geology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEOL 560 - Geomorphology and Land Use</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>WOMS 510 - World Geography</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>WOMS 530 - Geography of Latin America</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>WOMS 542 - Geography of Europe</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
Courses whose content may emphasize the Great Plains, depending on instructor and semester, may be counted toward the certificate. One or more of these courses may be used to satisfy the general education requirements of the student’s major as well (that is, double counting is allowed when possible).

Any substitution of the listed course must be approved by the coordinator and must meet the subject domain distribution requirement.

Courses that do not meet the learning outcomes of the certificate will be taken off the approved course list.

For information and application procedures, please contact: Jay M. Price, coordinator, Great Plains Studies, (316) 978-7792.

Certificate in Medieval and Renaissance Studies

The Medieval and Renaissance studies certificate explores the diversity of European culture, drawing from WSU course offerings in art history, literature, music, languages, political science and history.

The undergraduate certificate may be earned by any undergraduate or graduate student and requires coursework from at least three departments including history, literature, language and another discipline. All grades for the certificate must be C or better.

The certificate may be combined with a major (e.g., English, history) or taken as an elective interest.

Students should be advised by a member of the coordinating committee. For more information and advising, contact coordinator, Francis X. Connor, (316) 978-6231, or francis.connor@wichita.edu.

Required Courses

Select a minimum of 18 credit hours in Medieval and Renaissance studies coursework (from at least three departments) from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 520</td>
<td>Seminar In Art History</td>
</tr>
<tr>
<td>ENGL 317</td>
<td>History of the English Language</td>
</tr>
<tr>
<td>ENGL 340</td>
<td>Shakespeare</td>
</tr>
<tr>
<td>ENGL 515</td>
<td>Studies in Shakespeare</td>
</tr>
<tr>
<td>ENGL 520</td>
<td>Epic and Romance</td>
</tr>
<tr>
<td>ENGL 521</td>
<td>Medieval Literature</td>
</tr>
<tr>
<td>ENGL 522</td>
<td>Renaissance Literature</td>
</tr>
<tr>
<td>ENGL 580/860</td>
<td>Special Studies</td>
</tr>
<tr>
<td>ENGL 715</td>
<td>Seminar in Chaucer</td>
</tr>
<tr>
<td>ENGL 720</td>
<td>Seminar in Old English</td>
</tr>
<tr>
<td>ENGL 721</td>
<td>Seminar in Medieval Literature</td>
</tr>
<tr>
<td>ENGL 722</td>
<td>Seminar in Renaissance Literature</td>
</tr>
<tr>
<td>HIST 566</td>
<td>Medieval History 500-1200</td>
</tr>
<tr>
<td>HIST 567</td>
<td>Medieval History 1200-1500</td>
</tr>
<tr>
<td>HIST 569</td>
<td>Medieval England</td>
</tr>
<tr>
<td>HIST 575</td>
<td>Italian Renaissance</td>
</tr>
<tr>
<td>HIST 576</td>
<td>The Reformation</td>
</tr>
<tr>
<td>HIST 577</td>
<td>Medieval Women</td>
</tr>
<tr>
<td>FREN 551</td>
<td>French Civilization: The Middle Ages to the Restoration</td>
</tr>
<tr>
<td>FREN 629</td>
<td>Medieval French Literature</td>
</tr>
<tr>
<td>FREN 630</td>
<td>Renaissance French Literature</td>
</tr>
<tr>
<td>LATN 111</td>
<td>Elementary Latin I</td>
</tr>
<tr>
<td>LATN 112</td>
<td>Elementary Latin II</td>
</tr>
<tr>
<td>LATN 223</td>
<td>Intermediate Latin</td>
</tr>
<tr>
<td>LATN 224</td>
<td>Intermediate Latin</td>
</tr>
<tr>
<td>LING 635</td>
<td>Introduction to Romance Linguistics</td>
</tr>
<tr>
<td>MUSC 334</td>
<td>History of Music I</td>
</tr>
<tr>
<td>POLS 345</td>
<td>Classical Medieval Political Theory</td>
</tr>
<tr>
<td>SPAN 532</td>
<td>Survey of Spanish Literature</td>
</tr>
<tr>
<td>SPAN 623</td>
<td>Seminar In Spanish</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

Notes:

- A total of 6 credit hours (in exceptional cases, 9 credit hours) from other universities may be applied toward the certificate with approval.
- A total of 6 credit hours (in exceptional cases, 9 credit hours) may be taken as independent study.
- Students must complete all work for the certificate within six (in exceptional cases, seven) years following admission to the program.
- New additions to the list of courses will be announced as they are approved.

Language Requirement

Students are required to complete a minimum of one course in a medieval language. However, those anticipating graduate work in a field within Medieval and Renaissance studies are strongly encouraged to take the Latin sequence (LATN 111–LATN 112, LATN 223–LATN 224). Students may choose from the following:

- Latin
- Old English
- Middle English
- Old French
- Medieval French
- Medieval Spanish
- Middle High German
- Old Norse
Final Project

The Final Project should be a substantial essay of not less than 20 pages of text (not including notes) that uses primary sources. The essay should be submitted to the program coordinator at least three months before the student graduates.

The student will present his or her essay at a final project review staffed by the coordinator, the professor who supervised the writing of the essay, and one other program faculty member. The coordinator will be responsible for scheduling the review.

Tilford Diversity Studies Certificate

The Tilford Diversity Studies certificate is an 18-credit hour program designed for undergraduate students whose academic interests and/or career goals could benefit from a focused but interdisciplinary exploration of diversity-related issues. Students who complete the Tilford Diversity Studies certificate will: acquire an appreciation for the world’s diversity and an understanding of the roots of privilege and oppression; learn to comprehend themselves and others beyond stereotypes; successfully interact with others in professional and personal settings; and be prepared to assume leadership roles in promoting diversity and inclusion. Students should complete one course (offered by any department) in each of the following three areas:

- Race or ethnicity studies;
- Gender or women’s studies; and
- The study of social or economic class.

In addition, three electives will be required, and students may, if they wish, use those electives to study aging, ability, biodiversity or other diversity-related fields. Of the six courses taken for the certificate, one must have an international focus. The 18 hours of coursework counted toward the certificate should be distributed from among at least three different academic departments or programs. One foreign language course at the intermediate level or above can count for the certificate.

Applicable courses are offered by a variety of departments and often can be applied to the student’s general education requirements. Courses taken before enrollment in the program can count toward the certificate if they are determined by the Tilford coordinator to meet the learning objectives of the program. Students must receive a final grade of C or better to apply a course toward the certificate.

Students in the program will design a plan of study with the Tilford coordinator, who will be responsible for approving all courses students take for the certificate. During their final semester in the program, students will submit a portfolio of work completed in certificate courses. The contents of the portfolio will vary depending on the coursework taken toward the certificate and will be determined by the student in consultation with the Tilford coordinator.

Students interested in pursuing the Tilford Diversity Studies certificate can get more information from the Tilford Diversity Studies Certificate webpage (http://wichita.edu/tilfordcertificate), or contact Dr. Jean Griffith, Tilford coordinator, at (316) 978-6276 or jean.griffith@wichita.edu.

Linguistics

There is no major in linguistics; however, an emphasis in linguistics is available through the general studies program or a Bachelor of Arts degree field major plan.

Linguistics courses fall into the following groups:

Group A — Basic Linguistic Theory

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 151</td>
<td>Nature of Language</td>
</tr>
<tr>
<td>LING 315</td>
<td>Introduction to English Linguistics</td>
</tr>
<tr>
<td>LING 316</td>
<td>English Sentence Structure</td>
</tr>
<tr>
<td>LING 317</td>
<td>History of the English Language</td>
</tr>
<tr>
<td>LING 318</td>
<td>Dialectology</td>
</tr>
<tr>
<td>LING 667</td>
<td>English Syntax</td>
</tr>
<tr>
<td>LING 672</td>
<td>Dialectology</td>
</tr>
</tbody>
</table>

Group B — Linguistic Study of Specific Languages or Language Groups

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 505A</td>
<td>Advanced French Phonetics and Diction</td>
</tr>
<tr>
<td>LING 505B</td>
<td>Russian Phonology</td>
</tr>
<tr>
<td>LING 505C</td>
<td>Spanish Phonetics</td>
</tr>
<tr>
<td>LING 635</td>
<td>Introduction to Romance Linguistics</td>
</tr>
<tr>
<td>LING 720</td>
<td>Seminar in Old English</td>
</tr>
</tbody>
</table>

Group C — Areas of Contact Between Linguistics and Other Disciplines

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 351</td>
<td>Linguistics and Foreign Languages</td>
</tr>
<tr>
<td>LING 651</td>
<td>Language &amp; Culture</td>
</tr>
<tr>
<td>LING 740</td>
<td>Graduate Studies in Linguistics</td>
</tr>
</tbody>
</table>

Others

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 292</td>
<td>Linguistics, Special Studies</td>
</tr>
<tr>
<td>LING 590</td>
<td>Special Studies in Linguistics</td>
</tr>
</tbody>
</table>

Minors in Linguistics

- Linguistics (p. 213)

Courses in Linguistics

- Linguistics (LING) (p. 384)

Minor in Linguistics

A minor in linguistics consists of 15 hours from the following courses.

Select 15 credit hours from the following (at least 6 credit hours must be from Group A):

Group A — Basic Linguistic Theory

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 151</td>
<td>Nature of Language</td>
</tr>
<tr>
<td>LING 315</td>
<td>Introduction to English Linguistics</td>
</tr>
<tr>
<td>LING 316</td>
<td>English Sentence Structure</td>
</tr>
<tr>
<td>LING 317</td>
<td>History of the English Language</td>
</tr>
<tr>
<td>LING 318</td>
<td>Dialectology</td>
</tr>
<tr>
<td>LING 667</td>
<td>English Syntax</td>
</tr>
<tr>
<td>LING 672</td>
<td>Dialectology</td>
</tr>
</tbody>
</table>

Group B — Linguistic Study of Specific Languages or Language Groups

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 505A</td>
<td>Advanced French Phonetics and Diction</td>
</tr>
<tr>
<td>LING 505B</td>
<td>Russian Phonology</td>
</tr>
<tr>
<td>LING 505C</td>
<td>Spanish Phonetics</td>
</tr>
</tbody>
</table>
LING 635  Introduction to Romance Linguistics
LING 720  Seminar in Old English
Group C—Areas of Contact Between Linguistics and Other Disciplines:
LING 351  Linguistics and Foreign Languages
LING 651  Language & Culture
LING 740  Graduate Studies in Linguistics

Total Credit Hours  15

Note: Courses applied toward another major or minor will not apply toward a minor in linguistics.

Mathematics, Statistics and Physics

The department of Mathematics, Statistics and Physics houses the following areas of study:

• Mathematics (p. 214)
• Personal Computing (p. 216)
• Physics (p. 216)
• Statistics (p. 218)

Mathematics

Mathematics is among the oldest disciplines. Throughout history, mathematics has spanned the spectrum from pure to applied areas. The ancient Greek mathematicians were interested in problems that ranged from properties of numbers to applications of mathematics to music and astronomy. The department of mathematics, statistics and physics fulfills its mission by offering a broad and representative collection of courses to give students the ability to select, with their advisors, a program that fits their needs and goals. The department of mathematics, statistics and physics offers bachelor's (BA and BS), master's (MS), and doctoral (PhD) degrees.

Note: For ease of description, certain courses in mathematics and statistics are categorized in the following groups (the courses in Group R are required of all majors):

Group R

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 415</td>
<td>An Introduction to Advanced Mathematics</td>
</tr>
<tr>
<td>MATH 511</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 547</td>
<td>Advanced Calculus I</td>
</tr>
<tr>
<td>MATH 551</td>
<td>Numerical Methods</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
</tr>
</tbody>
</table>

Group A

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 513</td>
<td>Fundamental Concepts of Algebra</td>
</tr>
<tr>
<td>MATH 525</td>
<td>Elementary Topology</td>
</tr>
<tr>
<td>MATH 615</td>
<td>Elementary Number Theory</td>
</tr>
<tr>
<td>MATH 621</td>
<td>Elementary Geometry</td>
</tr>
<tr>
<td>MATH 720</td>
<td>Modern Geometry</td>
</tr>
</tbody>
</table>

Group B

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 460</td>
<td>Elementary Probability and Mathematical Statistics</td>
</tr>
<tr>
<td>STAT 571</td>
<td>Statistical Methods I</td>
</tr>
<tr>
<td>STAT 572</td>
<td>Statistical Methods II</td>
</tr>
<tr>
<td>STAT 574</td>
<td>Elementary Survey Sampling</td>
</tr>
<tr>
<td>STAT 576</td>
<td>Applied Nonparametric Statistical Methods</td>
</tr>
<tr>
<td>STAT 763</td>
<td>Applied Regression Analysis</td>
</tr>
<tr>
<td>STAT 771</td>
<td>Theory of Statistics I</td>
</tr>
<tr>
<td>STAT 772</td>
<td>Theory of Statistics II</td>
</tr>
<tr>
<td>STAT 775</td>
<td>Applied Statistical Methods I</td>
</tr>
<tr>
<td>STAT 776</td>
<td>Applied Statistical Methods II</td>
</tr>
</tbody>
</table>

Group C

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 530</td>
<td>Applied Combinatorics</td>
</tr>
<tr>
<td>MATH 545</td>
<td>Integration Techniques and Applications</td>
</tr>
<tr>
<td>MATH 548</td>
<td>Introduction to Complex Variables</td>
</tr>
<tr>
<td>MATH 553</td>
<td>Mathematical Models</td>
</tr>
<tr>
<td>MATH 640</td>
<td>Advanced Calculus II</td>
</tr>
<tr>
<td>MATH 655</td>
<td>Differential Equations II</td>
</tr>
<tr>
<td>MATH 657</td>
<td>Optimization Theory</td>
</tr>
<tr>
<td>MATH 751</td>
<td>Numerical Linear Algebra</td>
</tr>
<tr>
<td>MATH 753</td>
<td>Ordinary Differential Equations</td>
</tr>
<tr>
<td>MATH 755</td>
<td>Partial Differential Equations I</td>
</tr>
</tbody>
</table>

Students majoring in mathematics should consult closely with their mathematics advisors on any of these programs.

Majors in Mathematics

• BA in Mathematics (p. 214)
• BS in Mathematics (p. 214)
• BS in Mathematics — Statistics Emphasis (p. 215)
• BS in Mathematics — Computing Emphasis (p. 215)
• Fast Track, Dual/Accelerated Bachelor's to Master's Program (p. 215)

Minors in Mathematics

• Mathematics (p. 216)

Courses in Mathematics

• Mathematics (MATH) (p. 388)

1 Courses numbered 000–099 do not count toward any degree program.

BA in Mathematics

For the Bachelor of Arts (BA) degree with a major in mathematics:

Complete all courses in Group R 1 15
MATH 531  Introduction to the History of Mathematics 3
Select two additional courses from those listed in Groups A, B and C (MATH 451 is recommended) 1 6

Total Credit Hours  24

1 See MATH courses listed by group (p. 214)

All bachelor’s degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

BS in Mathematics

For the Bachelor of Science (BS) degree in mathematics:

Complete all courses in Group R 1 15
Select one course each in Groups A, B and C 1 9
Select two additional courses from Groups B and/or C. MATH 451 is recommended.

Total Credit Hours 30

1 A list of courses in each group can be found here (p. 214).

All bachelor’s degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, MATH 547 and MATH 640 in their program, along with courses in one or more of French, German or Russian.

BS in Mathematics - Computing Emphasis
For the Bachelor of Science (BS) degree with emphasis in computing

Complete all courses in Group R 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 451</td>
<td>Computational Mathematics Using MATLAB</td>
</tr>
<tr>
<td>Select an additional higher level programming language course</td>
<td></td>
</tr>
<tr>
<td>CS 300</td>
<td>Data Structures</td>
</tr>
<tr>
<td>MATH 321</td>
<td>Discrete Structures I</td>
</tr>
<tr>
<td>MATH 322</td>
<td>Discrete Structures II</td>
</tr>
<tr>
<td>Select four of the following with at least three in computer science (CS): 6-12</td>
<td></td>
</tr>
<tr>
<td>MATH 553</td>
<td>Mathematical Models</td>
</tr>
<tr>
<td>MATH 657</td>
<td>Optimization Theory</td>
</tr>
<tr>
<td>MATH 751</td>
<td>Numerical Linear Algebra</td>
</tr>
<tr>
<td>STAT 774</td>
<td>Statistical Computing I</td>
</tr>
<tr>
<td>CS 194</td>
<td>Introduction to Digital Design</td>
</tr>
<tr>
<td>CS 238</td>
<td>Assembly Language Programming</td>
</tr>
<tr>
<td>CS 410</td>
<td>Programming Paradigms</td>
</tr>
<tr>
<td>CS 510</td>
<td>Programming Language Concepts</td>
</tr>
<tr>
<td>CS 540</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>CS 560</td>
<td>Design and Analysis of Algorithms</td>
</tr>
</tbody>
</table>

Total Credit Hours 34-40

1 A list of courses in group R can be found here (p. 214).

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, MATH 547 and MATH 640 in their program, along with courses in one or more of French, German or Russian.

BS in Mathematics - Statistics Emphasis
For the Bachelor of Science (BS) degree in mathematics with emphasis in statistics:

Complete all courses in Group R 1

Select one course in Group C 1

Select 12 additional credit hours of courses in Group B which must include one of the following sequences: 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 571 &amp; STAT 572</td>
<td>Statistical Methods I and Statistical Methods II</td>
</tr>
<tr>
<td>STAT 771 &amp; STAT 772</td>
<td>Theory of Statistics I and Theory of Statistics II</td>
</tr>
</tbody>
</table>

Total Credit Hours 33

1 A list of courses in each group can be found here (p. 214).

Bachelor of Science candidates must have a higher algorithmic computer language. MATH 451 is strongly recommended. Students under this option may select statistics courses from other departments with the approval of the department of mathematics, statistics and physics.

For students who are contemplating graduate work, it is highly recommended that they include MATH 513, MATH 547 and MATH 640 in their program, along with courses in one or more of French, German or Russian.

Fast Track, Dual/Accelerated Bachelor’s to Master’s Program
To be considered for admission to the program, the following must be satisfied:

1. An undergraduate GPA of 3.000 overall and 3.500 in math and statistics courses;
2. Completion of at least 60 credit hours of undergraduate study, with at least 18 credit hours remaining for completion of the undergraduate degree;
3. Completion of MATH 415, MATH 451 and MATH 511, and either completion of, or current enrollment in, MATH 513 or MATH 547; and
4. Positive recommendation from the student’s fast track advisor.

The student should apply for admission during the semester prior to the first semester in which he or she intends to enroll in a course for graduate credit. Students admitted to the dual/accelerated program will be allowed to enroll in courses for graduate credit, including 800-level courses, prior to completing undergraduate degree requirements. At most 9 credit hours may be joint degree hours — hours taken for graduate credit at the 700-level (or above) that are also applied to the bachelor’s degree. A course taken for joint credit must be so identified at the time of enrollment in that course.

The fast track, dual/accelerated bachelor’s to master’s program in mathematics and statistics is designed to prepare qualified students for graduate work in mathematics and statistics through a coordinated program leading to both degrees. A student in the program will be allowed to enroll in courses for graduate credit while completing undergraduate degree requirements.

Prior to application for admission to the program, a student interested in the program and receiving the recommendation of at least one faculty member, will be assigned a fast track advisor and advisory committee. Typically this should be done by the sophomore year, but may be done somewhat later. Being assigned a fast track advisor does not imply admission to the program.

After initial admission, continuation in the program requires a continuing WSU and undergraduate cumulative GPA of at least 3.000 and a GPA of at least 3.000 in courses taken for graduate credit. MATH 513 must be included in the undergraduate program of study for students in the dual/accelerated program. Otherwise requirements
for the BS or BA in mathematics and statistics are the same as for other students with a major in mathematics and statistics. Students admitted to the dual/accelerated program are expected to write a thesis as part of their master’s degree program of study. A student who has previously been admitted to a graduate degree program at Wichita State may not be admitted to the dual/accelerated program.

All bachelor’s degrees in mathematics require a high-level algorithmic computer language. The MATLAB course, MATH 451, is strongly recommended.

**Minor in Mathematics**

For a minor in mathematics:

<table>
<thead>
<tr>
<th>Calculus Sequence</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 242</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH 243</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Calculus III</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select at least one additional course at a level of 400 or above approved by both the department of mathematics, statistics and physics, and the student’s major</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 16

Students must take at least one upper-division course in residence. Students shall not be allowed credit toward a minor for coursework below 2.000.

**Personal Computing Courses in Personal Computing**

- Personal Computing (PC) (p. 419)

*Note: No major or minor in personal computing is available.*

**Physics**

Physics is a fundamental science — it is the study of matter, energy and their interactions. Physics is the basis for all sciences, applied science and engineering. Physicists study everything from elementary particles at the smallest scale to galaxies and the cosmos at the grandest scale, solid state physics such as semiconductors, and chaos.

Because physics is the basic underpinning for all of science and technology, physics majors have many career alternatives. Many continue their education at graduate and professional schools — in physics, chemistry, biology, geology, engineering, medicine, law or business. Those who enter the job market directly find their knowledge and technical skills, particularly in problem solving, modeling, computers and electronics, to be strong selling points.

**Majors in Physics**

- BA in Physics (p. 216)
- BA in Physics — Chemical Physics Option (p. 216)
- BA in Physics — Engineering Physics Option (p. 217)
- BS in Physics (p. 217)
- BS in Physics — Chemical Physics Option (p. 217)
- BS in Physics — Engineering Physics Option (p. 218)

**Other Options**

Other programs are available which provide the student an opportunity to combine the study of physics with an interest in another area. On an individual basis, students have included interests in mathematics, geology, computer science, biological sciences, business and education.
Select one of the following MATH courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 511</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 545</td>
<td>Integration Techniques and Applications</td>
</tr>
<tr>
<td>MATH 547</td>
<td>Advanced Calculus I</td>
</tr>
<tr>
<td>MATH 757</td>
<td>Partial Differential Equations for Engineers</td>
</tr>
</tbody>
</table>

Select 5 credit hours in chemistry

Select 2 additional hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 516</td>
<td>Advanced Physics Laboratory</td>
</tr>
<tr>
<td>PHYS 517</td>
<td>Electronics Laboratory</td>
</tr>
<tr>
<td>PHYS 616</td>
<td>Computational Physics Laboratory</td>
</tr>
</tbody>
</table>

Select four additional courses in chemistry beyond the 211–212 sequence

Total Credit Hours 38

With departmental approval, the chemistry courses could substitute for required courses covering similar topics.

**BA in Physics - Engineering Physics Option**

A student majoring in physics may select an engineering physics option. Select four courses approved by the physics department from a given engineering department

Select one of the following options: 10

**Option A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 213 &amp; PHYS 214</td>
<td>General College Physics I and General College Physics II</td>
</tr>
</tbody>
</table>

**Option B (preferred)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 313 &amp; PHYS 315</td>
<td>Physics for Scientists I and University Physics Lab I</td>
</tr>
<tr>
<td>PHYS 314 &amp; PHYS 316</td>
<td>Physics for Scientists II and University Physics Lab II</td>
</tr>
<tr>
<td>PHYS 551</td>
<td>Topics in Modern Physics</td>
</tr>
<tr>
<td>PHYS 621</td>
<td>Analytical Mechanics</td>
</tr>
<tr>
<td>PHYS 631</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 641</td>
<td>Thermophysics</td>
</tr>
<tr>
<td>PHYS 651</td>
<td>Quantum Mechanics I</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
</tr>
</tbody>
</table>

Select one of the following MATH courses 3

Select 10 credit hours in chemistry 10

Select three semesters from the following: 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 516</td>
<td>Advanced Physics Laboratory</td>
</tr>
<tr>
<td>PHYS 517</td>
<td>Electronics Laboratory</td>
</tr>
<tr>
<td>PHYS 616</td>
<td>Computational Physics Laboratory</td>
</tr>
</tbody>
</table>

Select 8 additional upper-division credit hours in physics (excluding PHYS 501 and PHYS 502) 8

Total Credit Hours 55

**BS in Physics - Chemical Physics Option**

A student majoring in physics may select a chemical physics option.

Select one of the following options: 10

**Option A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 213 &amp; PHYS 214</td>
<td>General College Physics I and General College Physics II</td>
</tr>
</tbody>
</table>

**Option B (preferred)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 313 &amp; PHYS 315</td>
<td>Physics for Scientists I and University Physics Lab I</td>
</tr>
<tr>
<td>PHYS 314 &amp; PHYS 316</td>
<td>Physics for Scientists II and University Physics Lab II</td>
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<td>Topics in Modern Physics</td>
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<td>PHYS 631</td>
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<td>PHYS 641</td>
<td>Thermophysics</td>
</tr>
<tr>
<td>PHYS 651</td>
<td>Quantum Mechanics I</td>
</tr>
<tr>
<td>MATH 555</td>
<td>Differential Equations I</td>
</tr>
</tbody>
</table>

Select one of the following MATH courses 3

Total Credit Hours 38

With departmental approval, the engineering courses could substitute for required courses covering similar topics.
MATH 545  Integration Techniques and Applications
MATH 547  Advanced Calculus I
MATH 757  Partial Differential Equations for Engineers

Select 10 credit hours in chemistry
Select three semesters from the following:

PHYS 516  Advanced Physics Laboratory
PHYS 517  Electronics Laboratory
PHYS 616  Computational Physics Laboratory

Select four additional courses in chemistry, beyond the 211–212 sequence

Total Credit Hours 47

With departmental approval, the chemistry courses could substitute for required courses covering similar topics.

BS in Physics - Engineering Physics Option

A student majoring in physics may select an engineering physics option.

Select one of the following options:

**Option A**
- PHYS 213
- & PHYS 214
- General College Physics I
- & General College Physics II

**Option B (preferred)**
- PHYS 313
- & PHYS 315
- Physics for Scientists I
- & University Physics Lab I
- PHYS 314
- & PHYS 316
- Physics for Scientists II
- & University Physics Lab II
- PHYS 551
- Topics in Modern Physics
- 3
- PHYS 621
- Analytical Mechanics
- 3
- PHYS 631
- Electricity and Magnetism
- 3
- PHYS 641
- Thermodynamics
- 3
- PHYS 651
- Quantum Mechanics I
- 3
- MATH 555
- Differential Equations I
- 3

Select one of the following MATH courses
- MATH 511  Linear Algebra
- MATH 545  Integration Techniques and Applications
- MATH 547  Advanced Calculus I
- MATH 757  Partial Differential Equations for Engineers

Select 10 credit hours in chemistry
Select three semesters from the following:

PHYS 516  Advanced Physics Laboratory
PHYS 517  Electronics Laboratory
PHYS 616  Computational Physics Laboratory

Select four courses approved by the physics department from a given engineering department

Total Credit Hours 47

With departmental approval, the engineering courses could substitute for required courses covering similar topics.

Minor in Physics

A minor in physics consists of:

Select one of the following options:

**Option A**
- PHYS 213
- & PHYS 214
- General College Physics I
- & General College Physics II

**Option B**
- PHYS 313
- & PHYS 315
- Physics for Scientists I
- & University Physics Lab I
- PHYS 314
- & PHYS 316
- Physics for Scientists II
- & University Physics Lab II

Select at least 6 additional credit hours of physics courses numbered above 500 (excluding PHYS 501 and PHYS 502)

Total Credit Hours 16

Statistics

No major or minor in statistics is available, but a BS degree with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 124 credit hours required for graduation, students may take up to 15 credit hours of statistics courses in addition to the 45 or 50 credit hours of coursework allowed in mathematics.

Courses in Statistics

- Statistics (STAT) (p. 446)

Modern and Classical Languages and Literatures (MCLL)

The department of modern and classical languages and literatures works to instill in students an awareness and appreciation of other languages and cultures. The department grants the Bachelor of Arts (BA) degree in modern and classical languages and literatures. Students can specialize in French, Latin or Spanish. Minors are also available in French, German, Greek, Latin, Russian and Spanish. Courses are also offered in Chinese, Italian and Japanese. The department also offers the Master of Arts (MA) in Spanish and participates in the Master of Arts in Liberal Studies (MALS) program, which may include graduate work in French, German, Greek, Latin, Russian or Spanish.

A wide range of courses in language, literature, civilization, translation and linguistics is offered on campus as well as in summer programs in Puebla, Mexico; Strasbourg and Orléans, France (Wichita’s sister city).

See Exchange and Study Abroad (p. 26) programs for more details.

Graduate students in Spanish interested in applying for teaching assistantships should consult with the graduate coordinator.

Scholarships

Various scholarships are available for study in French, German, Latin and Spanish, including Puebla, Mexico; and Strasbourg and Orléans, France.

Retroactive Credit Policy

WSU students may qualify for credit for previous foreign language experience. Language learning in courses prior to entering college, including high school language experience, can be validated by earning a grade of 2.000 or better in a WSU language course or courses beyond the first course in that language. For placement purposes, it is assumed that one year of high school language is equivalent to one semester.
of college-level language. The credit earned by validation of previous experience is called retroactive credit.

Retroactive credit hours are considered to be credit by examination and are posted on the student’s transcript with a grade of TC/E (credit by examination). Students pay for retroactive credit on a course-by-course basis.

Undergraduate students can apply for and earn a maximum of 16 credit hours of retroactive credit. Retroactive credit is not available for graduate students.

Students qualify for retroactive credit by completing the required validation course or courses, showing that a grade of 2.00 or better has been earned and posted to the student’s transcript for each required course, and completing the application process to claim the credit. Credit can be claimed at any time before graduation, allowing a reasonable time for processing.

A validation course is more advanced than the first course in that language. Validation courses are specified for each language and each level of retroactive credit. They must be taken at WSU. If a student fails to earn a grade of 2.00 in a required validation course, the student may retake the class and apply for retroactive credit once the grade of 2.00 or better is achieved and posted on the transcript.

International students for whom English is a second language cannot earn retroactive credit in their native language.

Credit earned at other college-level institutions, including community colleges, already appears on the student’s transcript and is therefore not eligible for retroactive credit.

Retroactive credit earned at WSU is not automatically transferable to other institutions. If planning to transfer to another school, consult with the institution regarding its retroactive credit transfer policies.

Applications, validation course listings, and further information are all available at the College of Liberal Arts and Sciences Advising Center, 115 Grace Wilkie Hall, and in the MCLL office, or online (http://wichita.edu/lasadvising) under the retroactive credit category.

Participation in this program is by application to the College of Liberal Arts and Sciences Advising Center, which retains authority for final approval.

Questions about retroactive credit should be referred to an academic advisor in the College of Liberal Arts and Sciences Advising Center in 115 Grace Wilkie Hall.

**Majors in Modern and Classical Languages and Literatures**
- BA in Modern and Classical Languages and Literatures - Bilingual Option (BI-OP) (p. 219)
- BA in Modern and Classical Languages and Literatures - French Specialization (p. 220)
- BA in Modern and Classical Languages and Literatures - Latin Specialization (p. 221)
- BA in Modern and Classical Languages and Literatures - Spanish Specialization (p. 221)

**Minors in Modern and Classical Languages and Literatures**
- French (p. 223)
- German (p. 223)
- Greek (p. 223)
- Latin (p. 223)
- Russian (p. 223)
- Spanish (p. 223)

**Certificates in Modern and Classical Languages and Literatures**
- Spanish for the Professions (p. 223)

**Courses in Modern and Classical Languages and Literatures**
- Arabic (ARAB) (p. 272)
- Chinese (CHIN) (p. 294)
- French (FREN) (p. 350)
- German (GERM) (p. 355)
- Greek (Ancient Classical) (GREK) (p. 357)
- Italian (ITAL) (p. 382)
- Japanese (JAPN) (p. 382)
- Latin (LATN) (p. 384)
- Modern and Classical Languages and Literatures (MCLL) (p. 398)
- Russian (RUSS) (p. 435)
- Spanish (SPAN) (p. 443)

**BA in Modern and Classical Languages and Literatures - Bilingual Option (BI-OP)**

A specialization in two languages (bilingual option) consists of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING/FREN/SPAN 635</td>
<td>Introduction to Romance Linguistics 1</td>
<td>3</td>
</tr>
<tr>
<td>LING/151</td>
<td>Nature of Language</td>
<td>3</td>
</tr>
<tr>
<td>XXXX 398</td>
<td>Travel Seminar (select from French, German, Latin, Russian, or Spanish)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Transfer credit**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 151</td>
<td>Nature of Language</td>
<td>3</td>
</tr>
<tr>
<td>LING/FREN/SPAN 635</td>
<td>Introduction to Romance Linguistics (whichever of these has not already been taken to fulfill the distribution requirement)</td>
<td>3</td>
</tr>
<tr>
<td>LING/MCLL 651</td>
<td>Language &amp; Culture</td>
<td>3</td>
</tr>
</tbody>
</table>

A workshop

A special- or directed-studies course

A literature course or a teaching option

**Total Credit Hours**: 33

1 Option available to students who choose French, Latin or Spanish as one of their languages.
Summary:

Language A beyond 210/220 or Latin 112 12
Language B beyond 210/220 or Latin 112 12
MCLL 351 Linguistics and Foreign Languages 3
LING/FREN/SPAN 635 Introduction to Romance Linguistics 3
or LING 151 Nature of Language
Language-related elective course 3

Total Credit Hours 33

Distribution Requirement

German
Select at least two of the following: 5-6
GERM 300 Intermediate German Readings
GERM 325 Intermediate German Conversation and Composition
GERM 526 Advanced German Grammar and Composition

Latin
Select at least two courses at the 500 level

French, Russian and Spanish
Select at least one 300-level and one 500-level course, or two 500-level courses

BA in Modern and Classical Languages and Literatures - French Specialization

General requirements for a bachelor's degree: 124 minimum credit hours; overall GPA 2.500; major content GPA 2.500.

Requirements for a Major: 30 credit hours beyond the FREN 210 level

FREN 223 Intermediate French Readings I 3
FREN 300 Intermediate French Readings II 3
FREN 324 Intermediate Conversation and Composition 3
MCLL 351 Linguistics and Foreign Languages 3
FREN 505 Advanced French Phonetics 3
FREN 525 Advanced French Conversation 3
FREN 526 Advanced French Composition and Grammar 3
FREN 552 Contemporary French Civilization 3

Choose two or three of the following courses for a minimum of 6 credit hours 6
FREN 623 Seminar in French
FREN 629 Medieval French Literature
FREN 630 Renaissance French Literature
FREN 631 17th Century French Literature
FREN 632 18th Century French Literature
FREN 633 19th Century French Literature
FREN 634 20th Century French Literature

FREN 636 Contemporary French Literature 30

Electives

Choose 16 credit hours (to complete 124 hours) 1 16

Total Credit Hours 16

1 It is strongly recommended that students specializing in French take courses in related fields such as other foreign languages, art history, English, history and philosophy.

CI 270 Introduction to the Education Profession 2 3

Teacher Education

Core I - Fall Only

CESP 334 Introduction to Diversity: Human Growth and Development
CI 320 Introduction to Diversity: Exceptionalities
CI 321 Introduction to Diversity: Cultural Issues
CI 325 Instructional Strategies, Assessment and Management: Middle/Secondary General Methods 2

CI 315 Core I Practicum 2 1

Core II - Spring Only

CESP 433 Learning Assessment and Evaluation Theory: Evidence-Based Instruction 3
CI 425E ISAM: Middle/Secondary Level Content-Specific Methods I - English 2
CI 426E Core II Practicum - English/Language Arts 2 1
CI 427 Philosophy, History and Ethics of Education 3

Core III - Concurrent Enrollment - Fall Only

MCLL 411F Preteaching Internship PreK-6 2 1
MCLL 413F Preteaching Internship 6-12 2 1
MCLL 454F ISAM: PreK-12 World Languages 2 3

CI 417 Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas 2

Core IV - Teaching Internship - Spring Only

MCLL 466 Teaching Internship PreK-12 in World Languages 2 12
MCLL 455F Teaching Internship Seminar in World Languages 2 1

Licensure Exams

PLT
ACTFL Advisory Oral Proficiency Interview (OPI) - Advanced Low level or higher
Praxis Content Knowledge Test
Total Credit Hours 40

2 B- or better.
If preferred, this class can be taken with Core III.

**Official Program Transition Point Requirements:**

1. Admission into teacher education - completed application packet.
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses, with the exception of a 2.000 grade requirement in CI 519,
   c. 2.500 GPA (overall, WSU and content), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed, and
   e. Licensure application.

Candidates completing this program are eligible to be certified to teach French — grades PreK–12.

**Student Teachers**

Students who plan to teach French should consult with the department’s professor in charge of teacher education early in their college career. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy. It is also recommended that future French teachers spend at least a summer in a French-speaking country before student teaching.

Requirements for entering this program are:

1. Grade point average of 3.000 or higher in French;
2. Special departmental approval based on demonstrated proficiency in the use of both oral and written French (based on certification and teacher education regulations issued by the Kansas State Department of Education); and
3. The professional foundation courses for education required by the teacher education program (see College of Education).

**Native Speakers**

Native speakers are those who have completed a substantial amount of their education in a French-speaking country. Native speakers of French normally are not permitted to receive credit for 100- or 200-level courses. To complete a specialization, the following are required:

- FREN 300 Intermediate French Readings II 3

Select one of the following: 3

- MCLL 351 Linguistics and Foreign Languages 3
- FREN 526 Advanced French Composition and Grammar 3
- FREN 635 Introduction to Romance Linguistics 3

Select 12 credit hours of upper-division work in French 12

Total Credit Hours 18

4 These students are advised to consult with a French professor before enrolling in French courses.

**High School French**

Students who have completed more than two units of high school French should consult with an advisor in the French department before enrolling in French courses.

**BA in Modern and Classical Languages and Literatures - Latin Specialization**

A specialization in Latin consists of a minimum of 30 credit hours beyond LATN 112 or its equivalent, and must include:

- LATN 526 Advanced Grammar and Composition 3
- MCLL 351 Linguistics and Foreign Languages 3
- Select at least 24 additional credit hours in Latin beyond LATN 112 or its equivalent 24

Total Credit Hours 30

LATN 398 does not count toward the specialization in Latin.

**Student Teachers**

Students who plan to teach Latin should consult with the department’s professor in charge of teacher education early in their Fairmount College career. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy.

Requirements for this program:

1. Grade point average of 3.000 or higher in Latin;
2. Special departmental approval based on demonstrated proficiency in the use of Latin (based on certification and teacher education regulations issued by the Kansas State Department of Education); and
3. The professional foundation courses for education required by the teacher education program (see College of Education).

**BA in Modern and Classical Languages and Literatures - Spanish Specialization**

General requirements for bachelor's degree: 124 minimum hours; overall GPA 2.500; major GPA 2.500.

Requirements for a Major: 33 credit hours beyond the SPAN 112 level

- SPAN 220 Intermediate Spanish Grammar and Composition 3
- SPAN 223 Selected Spanish Readings 1 3
- SPAN 300 Intermediate Spanish Readings 3

Select one of the following: 3
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 325</td>
<td>Intermediate Spanish Conversation</td>
<td>3</td>
</tr>
<tr>
<td>MCLL 351</td>
<td>Linguistics and Foreign Languages</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 505</td>
<td>Spanish Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 525</td>
<td>Advanced Spanish Conversation</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 526</td>
<td>Advanced Spanish Grammar and Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 531</td>
<td>Survey of Spanish Literature</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 621</td>
<td>Survey of Contemporary Latin-American Literature</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 626</td>
<td>Spanish Civilization</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 627</td>
<td>Latin-American Civilization</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 additional credit hours of upper-division Spanish</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 33

**Electives**

Select 13 credit hours of electives (to complete program of 124 credit hours)

**Total Credit Hours:** 13

1. **General Education**

2. It is strongly recommended that students specializing in Spanish take courses in related fields such as other foreign languages, art, history, English, history and philosophy.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 270</td>
<td>Introduction to the Education Profession</td>
<td>3</td>
</tr>
</tbody>
</table>

**Teacher Education**

**Core I - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 334</td>
<td>Introduction to Diversity: Human Growth and Development</td>
<td>2</td>
</tr>
<tr>
<td>CI 320</td>
<td>Introduction to Diversity: Exceptionalities</td>
<td>2</td>
</tr>
<tr>
<td>CI 321</td>
<td>Introduction to Diversity: Cultural Issues</td>
<td>2</td>
</tr>
<tr>
<td>CI 325</td>
<td>Instructional Strategies, Assessment and Management: Middle/Secondary General Methods</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 315</td>
<td>Core I Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

**Core II - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP 433</td>
<td>Learning Assessment and Evaluation Theory: Evidence-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>CI 425E</td>
<td>ISAM: Middle/Secondary Level Content-Specific Methods I - English</td>
<td>2</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 426E</td>
<td>Core II Practicum - English/ Language Arts</td>
<td>1</td>
</tr>
<tr>
<td>CI 427</td>
<td>Philosophy, History and Ethics of Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core III - Concurrent Enrollment - Fall Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCLL 411F</td>
<td>Preteaching Internship PreK-6</td>
<td>1</td>
</tr>
<tr>
<td>MCLL 413F</td>
<td>Preteaching Internship 6-12</td>
<td>1</td>
</tr>
<tr>
<td>MCLL 454F</td>
<td>ISAM: PreK-12 World Languages</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 417</td>
<td>Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas</td>
<td>2</td>
</tr>
</tbody>
</table>

**Core IV - Teaching Internship - Spring Only**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCLL 466</td>
<td>Teaching Internship PreK-12 in World Languages</td>
<td>12</td>
</tr>
<tr>
<td>MCLL 455F</td>
<td>Teaching Internship Seminar in World Languages</td>
<td>3</td>
</tr>
</tbody>
</table>

**Licensure Exams**

- PLT
- ACTFL Advisory Oral Proficiency Interview (OPI) - "Advanced Low" level or higher
- Praxis Content Knowledge Test

**Total Credit Hours:** 40

3. **B- or better.**

4. If preferred, this class can be taken with Core III.

**Official Program Transition Point Requirements:**

1. Admission into teacher education - completed application packet.
2. Admission to teacher internship:
   a. Satisfactory accomplishment of content-area, standard-driven assessments,
   b. B- or better in all professional teacher education courses,
   c. 2.500 GPA (overall, and WSU), and
   d. Completed teacher intern application.
3. Exit from teacher internship:
   a. B- or better in all professional courses,
   b. 2.500 GPA (overall and WSU),
   c. Successful completion of all degree requirements,
   d. Final university supervisor evaluation form.
4. Degree completion:
   a. 2.500 GPA (overall and WSU), and
   b. Meets all degree requirements.
5. Licensure recommendation:
   a. Passes common assessments,
   b. Passing score on Kansas Performance Teaching Portfolio,
   c. PLT passed,
   d. Praxis II content test(s) passed
   e. Licensure application, and
   f. ACTFL Advisory OPI passed.

Candidates completing this program are eligible to be certified to teach Spanish — grades PreK-12.

**Student Teachers**

Students who plan to teach Spanish should consult with the department’s professor in charge of teacher education early in their career. In addition to the requirements for specialization, it is recommended that future teachers take courses beyond the general education requirements in other foreign languages, history, art history, English or philosophy. It is also recommended that future Spanish teachers spend at least a summer in a Spanish-speaking country before student teaching.
Native Speakers
Native speakers are those who have completed a substantial amount of their education in a Spanish-speaking country. Native speakers of Spanish are normally not permitted to receive credit for 100- and 200-level courses, or SPAN 325. To complete a specialization the following are required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 300</td>
<td>Intermediate Spanish Readings</td>
<td>3</td>
</tr>
<tr>
<td>MCLL 351</td>
<td>Linguistics and Foreign Languages</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 526</td>
<td>Advanced Spanish Grammar and Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 635</td>
<td>Introduction to Romance Linguistics</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

Select 12 credit hours of upper-division work in Spanish

Total Credit Hours 18

5 These students are advised to consult with a Spanish professor before enrolling in Spanish courses.

High School Spanish
Students who have completed more than two units of high school Spanish should consult with an advisor in the Spanish department before enrolling in Spanish courses.

Certificate in Spanish for the Professions
The certificate in Spanish for the professions is designed to train both WSU students, as well as community members in nondegree programs, to become linguistically capable, knowledgeable and culturally sensitive individuals able to perform language services in professional settings where Spanish is used. Prerequisites: SPAN 220, SPAN 325. The Spanish for the Professions certificate consists of 15 credit hours from the courses listed below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 526</td>
<td>Advanced Spanish Grammar and Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 552</td>
<td>Business Spanish</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 557</td>
<td>Principles of Translation and Interpreting 1</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 558</td>
<td>Advanced Translation and Interpreting 1</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 626</td>
<td>Spanish Civilization</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 627</td>
<td>Latin-American Civilization</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 15

1 Must be taken in residency at WSU.

Minor in French
A minor in French consists of a minimum of 12 credit hours beyond FREN 210 and must include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 223</td>
<td>Intermediate French Readings I</td>
<td>3</td>
</tr>
<tr>
<td>FREN 300</td>
<td>Intermediate French Readings II</td>
<td>3</td>
</tr>
<tr>
<td>FREN 324</td>
<td>Intermediate Conversation and Composition</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one upper-division French course numbered 500 or above

Total Credit Hours 12

Minor in German
A minor in German consists of:

Select 11 credit hours beyond the 210 level

Total Credit Hours 11

Students are permitted to count GERM 341 for minor credit.

Minor in Greek
A minor in Greek consists of:

Select 11 credit hours beyond the 111–112 level

Total Credit Hours 11

Minor in Latin
A minor in Latin consists of:

Select a minimum of 8 additional credit hours beyond the 112 level

Select at least one 500-level course

Total Credit Hours 11

LATN 398 does not count toward the minor in Latin.

Minor in Russian
A minor in Russian consists of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSS 300</td>
<td>Intermediate Russian Readings</td>
<td>3</td>
</tr>
<tr>
<td>or RUSS 325</td>
<td>Intermediate Russian Conversation and Composition</td>
<td>3</td>
</tr>
</tbody>
</table>

Select at least one 500-level course

Select a minimum of 5 additional credit hours beyond the RUSS 210 level

Total Credit Hours 11

Minor in Spanish
A minor in Spanish consists of a minimum of 12 credit hours beyond the SPAN 210 level and must include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 220</td>
<td>Intermediate Spanish Grammar and Composition</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 221</td>
<td>Spanish Grammar and Composition for Heritage Speakers</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 223</td>
<td>Selected Spanish Readings</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 325</td>
<td>Intermediate Spanish Conversation</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives - select 3 credit hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 215</td>
<td>Spanish Study Abroad</td>
<td></td>
</tr>
<tr>
<td>SPAN 300</td>
<td>Intermediate Spanish Readings</td>
<td></td>
</tr>
</tbody>
</table>

Any class at the 500-level or above

Total Credit Hours 12

Philosophy
The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct
itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of subatomic particles, the existence of God, the criteria of aesthetic evaluation, the structure of logical reasoning, and the foundations (if any) of morality. Because of the breadth of the philosophical enterprise, the study of philosophy can be approached from many directions and need not involve a hierarchy of prerequisites. Philosophy majors pursue many careers — teaching, law, medicine, city management, communication and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

**Majors in Philosophy**
- BA in Philosophy (p. 224)

**Minors in Philosophy**
- Philosophy (p. 224)

**Courses in Philosophy**
- Philosophy (PHIL) (p. 419)

**BA in Philosophy**
A major requires a minimum of 27 credit hours of philosophy courses, at least 15 of which must be in courses numbered 300 or above. Each philosophy major must meet with a departmental advisor at least once a semester to plan or review a program of study. These programs are designed in terms of the individual student’s interests and future plans. Up to 12 credit hours of philosophy courses taken before the decision to major in philosophy may count toward a major. Additional hours may be counted with the advisor’s consent.

**Minor in Philosophy**
A minor consists of 15 credit hours of philosophy courses, selected in consultation with a departmental advisor, that orient students to the philosophic aspects of their major fields.

**Political Science**
Political science is the study of governments, public policies and political behavior. Political science uses both humanistic perspectives and scientific skills to examine the United States and all countries and regions of the world.

Students enrolled in political science courses explore American politics, international affairs, comparative politics, and urban and minority affairs. Students address critical issues such as public policy, globalization, terrorism, the environment, civil rights, political development and foreign policy. Political science examines theories concerning the ideal government and how power and resources are allocated in society.

As political science majors, students hone writing, communication, analytical and computer skills that are critical to a liberal arts education. This kind of education prepares students to think critically and independently, with tolerance for others and concern for current affairs. Today, students can reasonably expect to change jobs more than once and even to have more than one career. An undergraduate education in the liberal arts and sciences is excellent preparation for the flexibility in employment that students are likely to encounter.

Majoring in political science can prepare a student for many different careers in private for-profit and nonprofit organizations, as well as public sector organizations. A political science major can qualify students for graduate studies and an eventual career in business, law, consulting, state, local and federal government, journalism and communication, international organization, finance, polling and campaign management, lobbying, community service, nongovernmental organizations, and precollege and college teaching.

Political science education also provides valuable preparation for participating in community organizations, electoral politics, movements on behalf of specific policies, and for seeking elective or administrative positions in government. While many of these are voluntary activities, participation in them develops skills and creates opportunities for career success.

**Majors in Political Science**
- BA in Political Science (p. 224)

**Minors in Political Science**
- Political Science (p. 225)

**Courses in Political Science**
- Political Science (POLS) (p. 424)

**BA in Political Science**
A major consists of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 121</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 220</td>
<td>Introduction to International Relations</td>
<td>3</td>
</tr>
<tr>
<td>POLS 226</td>
<td>Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 332</td>
<td>Political Theory &amp; Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>POLS 365</td>
<td>Political Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>POLS 600</td>
<td>Senior Thesis</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 15 additional credit hours of study distributed in the following fashion:

**Electives in the major (9-15 credit hours):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 310</td>
<td>Latin American Politics</td>
</tr>
<tr>
<td>POLS 315</td>
<td>The Presidency</td>
</tr>
<tr>
<td>POLS 316</td>
<td>The Congress</td>
</tr>
<tr>
<td>POLS 317</td>
<td>Urban Politics</td>
</tr>
<tr>
<td>POLS 318</td>
<td>Political Parties</td>
</tr>
<tr>
<td>POLS 319</td>
<td>State Government</td>
</tr>
<tr>
<td>POLS 320</td>
<td>Developing World</td>
</tr>
<tr>
<td>POLS 321</td>
<td>Introduction to Public Administration</td>
</tr>
<tr>
<td>POLS 325</td>
<td>Women In Political System</td>
</tr>
<tr>
<td>POLS 330</td>
<td>Post-Communist Europe</td>
</tr>
<tr>
<td>POLS 336</td>
<td>International Organizations</td>
</tr>
<tr>
<td>POLS 337</td>
<td>Conflict Analysis</td>
</tr>
<tr>
<td>POLS 340</td>
<td>Global Challenges</td>
</tr>
<tr>
<td>POLS 345</td>
<td>Classical Medieval Political Theory</td>
</tr>
<tr>
<td>POLS 352</td>
<td>Law and Political Power</td>
</tr>
<tr>
<td>POLS 356</td>
<td>Civil Liberties</td>
</tr>
<tr>
<td>POLS 358</td>
<td>American Political Thought</td>
</tr>
<tr>
<td>POLS 360</td>
<td>Human Rights</td>
</tr>
<tr>
<td>POLS 370</td>
<td>European Politics</td>
</tr>
<tr>
<td>POLS 380</td>
<td>Campaigns and Elections</td>
</tr>
<tr>
<td>POLS 385</td>
<td>Global Democracy</td>
</tr>
<tr>
<td>POLS 390</td>
<td>Special Topics in Political Science</td>
</tr>
<tr>
<td>POLS 395</td>
<td>U.S. Foreign Policy</td>
</tr>
<tr>
<td>POLS 396</td>
<td>Comparative Foreign Policy</td>
</tr>
<tr>
<td>POLS 444</td>
<td>Modern Political Theory</td>
</tr>
</tbody>
</table>
POLS 524  Politics of Modern China
POLS 570  International Political Economy
POLS 580  Administration and the Policy-Making Process

Total Credit Hours 33

Departmental Honors Track
The department offers the option for majors to graduate with honors in political science if they meet the following requirements:

• obtain a 3.500 average or greater for the five core courses;
  - POLS 121  American Politics 3
  - POLS 220  Introduction to International Relations 3
  - POLS 226  Comparative Politics 3
  - POLS 232  Political Theory & Philosophy 3
  - POLS 365  Political Data Analysis 3

• take an additional course beyond the introductory one in each of the four sub-fields (American politics, international politics, comparative politics, political theory);

• take an additional 6 credit hours of political science courses beyond the 33 hours required for a major;

• maintain a 3.500 GPA for all political science courses; and

• receive an A or A- for the Senior Seminar capstone course.

Students who would like to be admitted to the honors track should contact the department chair.

Minor in Political Science
A minor consists of:

POLS 121  American Politics 3
Select 12 additional credit hours, at least 6 of which must be in upper-division courses 12

Total Credit Hours 15

Psychology
The course of study is designed to provide a breadth of knowledge in the field of psychology.

The program is designed to prepare students for postgraduate work in psychology but is flexible enough to accommodate the interests of students who do not intend to pursue graduate study in psychology. Such students may be career oriented (e.g., social work, management training) or simply have an interest in learning more about why we behave as we do.

Majors in Psychology
• BA in Psychology (p. 225)

Minors in Psychology
• Psychology (p. 225)

Certificates in Psychology
• Community Psychology (p. 225)
• Human Factors Psychology (p. 226)

Courses in Psychology
• Psychology (PSY) (p. 429)

BA in Psychology
The major for the Bachelor of Arts (BA) degree consists of a minimum of 31 credit hours in psychology, at least 9 of which are earned at Wichita State:

General Survey Course
- PSY 111  General Psychology 3

Research Methods Core Courses
- PSY 301  Psychological Statistics 3
- PSY 311  Research Methods in Psychology 4

Core Content Courses
Select 15 credit hours from the following:
- PSY 320  Biological Psychology 3
- PSY 321  Psychology of Learning 3
- PSY 322  Cognitive Psychology 3
- PSY 323  Social Psychology 3
- PSY 324  Psychology of Personality 3
- PSY 325  Developmental Psychology 3
- PSY 327  Systems and Theories in Psychology 3
- PSY 328  Psychological Testing and Measurement 3

Electives
Select an additional 6 credit hours of electives from courses numbered 300 or above (excluding PSY 481) 6

Total Credit Hours 31

Eligible students need not be psychology majors, but must have a WSU GPA, both overall and in their psychology courses, of at least 3.000.

Minor in Psychology
The minor consists of a minimum of 15 credit hours selected in consultation with the student’s major advisor.

Certificate Program in Community Psychology
This certificate program is designed to provide specialized skill training in community psychology for bachelor’s-level students planning to enter the workforce or enter graduate school after graduation. It provides specialized information that will improve employability or chances of advancement within their current job. The certificate program consists of six courses: five required and one optional. The curriculum is designed to equip students with the skills necessary to function within a community psychology setting, such as a nonprofit organization seeking a technical assistant. The five required courses (16 credit hours) in their preferred sequence are:

- PSY 323  Social Psychology 3
- PSY 301  Psychological Statistics 3
- PSY 311  Research Methods in Psychology 4
- PSY 406  Introduction to Community Psychology 3
- PSY 428  Field Work in Psychology 3

Optional:
- PSY 608  Special Investigation 3

Total Credit Hours 16

Eligible students need not be psychology majors, but must have a WSU GPA, both overall and in their psychology courses, of at least 3.000.
Eligible students must apply to the community psychology coordinator upon completion of or current enrollment in:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 301</td>
<td>Psychological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 311</td>
<td>Research Methods in Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 322</td>
<td>Cognitive Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 405</td>
<td>Human Factors Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 409</td>
<td>Psychology of Perception</td>
<td>3</td>
</tr>
<tr>
<td>PSY 608</td>
<td>Special Investigation</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Acceptance into the certificate program will allow enrollment in PSY 428.

**Certificate Program in Human Factors Psychology**

This certificate program is designed to provide background and experience in human factors psychology for undergraduate students preparing for graduate study or entrance into the workforce. The program is designed to provide undergraduate students with the appropriate background and training to conduct research in a human factors laboratory within the psychology department. The certificate program consists of six required courses, one of which is repeatable for additional credit. The special investigations course (PSY 608) will involve a research project in one of the human factors laboratories in the psychology department. The curriculum is designed to equip students with the skills necessary to function within a human factors, cognitive psychology, perceptual psychology, experimental psychology, or business setting. The six required courses (17–19 credit hours) are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 301</td>
<td>Psychological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 311</td>
<td>Research Methods in Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 322</td>
<td>Cognitive Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 405</td>
<td>Human Factors Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 409</td>
<td>Psychology of Perception</td>
<td>3</td>
</tr>
<tr>
<td>PSY 608</td>
<td>Special Investigation</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 17-19

Eligible students need not be psychology majors, but must have a WSU GPA, both overall and in their psychology courses, of at least 3.00. Eligible students must apply to the human factors psychology coordinator upon completion of, or current enrollment in:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 301</td>
<td>Psychological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 311</td>
<td>Research Methods in Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 322</td>
<td>Cognitive Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 405</td>
<td>Human Factors Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 409</td>
<td>Psychology of Perception</td>
<td>3</td>
</tr>
</tbody>
</table>

Acceptance into the certificate program will guide enrollment in PSY 608 with one of the human factors laboratories in the department.

**Gainful Employment**

This certificate has been reviewed and is not a gainful employment program per U.S. Department of Education rules and regulations.

**Public Affairs, Hugo Wall School of**

The Hugo Wall School of Public Affairs advances excellence in public service through integrated instruction, research and community service. This focus results not only in an excellent graduate education for students, but also allows a special connection with the community’s needs through research and professional service. By integrating teaching, research and service, the school makes a distinctive contribution to Wichita State University’s long-standing commitment of service to Wichita, the surrounding communities, the state of Kansas, and the region.

The school serves as the academic home for the Master of Public Administration degree, the Public Policy and Management Center, Environmental Finance Center and the Kansas Public Finance Center. Through these units, faculty, staff and students blend teaching, research and community engagement in the interdisciplinary field of public affairs. Students completing the Master of Public Administration degree gain experience through hands-on research, and network with practitioners in the fields of public and nonprofit administration.

**Financial Assistance**

The school has two forms of financial aid available that provide recipients opportunities to be directly involved with research and service projects. Financial aid in the form of graduate assistantships and fellowships is awarded competitively on the recommendation of the faculty in the Hugo Wall School of Public Affairs.

Graduate assistants work directly with faculty and professional staff on research and community service projects through the Public Policy and Management Center, Environmental Finance Center, and the Kansas Public Finance Center. Graduate assistants work 20 hours per week with faculty and staff in the school’s research and public service activities.

The Hugo Wall School has four endowed fellowships available for financial assistance to qualifying graduate students enrolled in the Master of Public Administration degree. Preference is given to graduate assistants. These fellowships — the Hugo Wall, George Pyle, Mike Hill, and George Van Riper — are awarded on a competitive basis to students with exemplary records and specific career interests in the field of public administration.

**Courses in the Hugo Wall School of Public Affairs**

- Public Administration (PADM) (p. 432)

**Religion**

The study of religion offers students an opportunity to inform themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion, and methods of studying religion.

There is no major in religion but an emphasis in religion is available through the general studies program and a minor in religion is also possible.

Students contemplating an emphasis or minor in religion should discuss their academic program with a member of the department. A Bachelor of Arts degree field major provides an additional option.

**Minors in Religion**

- Religion (p. 227)

**Courses in Religion**

- Religion (REL) (p. 434)
### Minor in Religion
A minor in religion requires a minimum of 15 credit hours. A maximum of 6 credit hours may be taken at the 100 level.

### School of Social Work
The undergraduate social work program in WSU’s School of Social Work offers courses leading to a Bachelor of Social Work (BSW) degree. The BSW program prepares students for foundation-level professional social work practice.

Social work majors must complete 45 credit hours of required social work courses. In addition, social work majors must complete another 6 credit hours of approved human diversity credits, 3 of which must be upper division. Students must be formally admitted to the major in order to take 400-level classes. Progression in the social work program has two key stages: initial admission into the program and application and acceptance into the practicum.

Requirements for program admission include a 2.000 overall GPA, completion of premajor and prerequisite courses, and satisfactory completion of a noncredit orientation session. Students who receive a grade lower than C (2.000) in a required social work course must repeat that course and earn a C (2.000) or above. Provisional admissions may be granted before final grades are received, but enrollment in required upper-division social work courses is dependent upon meeting these admission standards.

The second stage of admission is application into supervised field practicums. This process is completed the year before admission into field practicums. Information and application materials for admission into both the major and to the field practicums are available from the social work office and online at the School of Social Work website (http://wichita.edu/socialwork).

Students should consult the academic probation and dismissal standards (p. 185) for Fairmount College of Liberal Arts and Sciences at the beginning of this section and the requirements for retention stated in the BSW Student Manual found online at the School of Social Work website (http://wichita.edu/socialwork). There will be no credit toward the social work degree for prior life or work experiences.

### Accreditation Status
The BSW program is accredited by the Council on Social Work Education. Students graduating from an accredited BSW program are eligible for professional social work licensure in Kansas.

### Certificates in Social Work
- Social Work and Addiction (p. 227)

### Courses in the School of Social Work
- Social Work (SCWK) (p. 436)

### Certificate in Social Work and Addiction
This certificate program is designed to provide specialized knowledge and skills in addiction for bachelor’s-level students planning to enter the workforce or to enter graduate school after graduation. The certificate program consists of five courses. The curriculum is designed to equip students with the ability to be effective as social workers within a substance abuse arena, with prevention, interventions and evaluation. The five required courses (17 credit hours) in their preferred sequence are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCWK 531</td>
<td>Social Work Practice in Addictions</td>
<td>3</td>
</tr>
<tr>
<td>SCWK 402</td>
<td>Practicum I</td>
<td>4</td>
</tr>
<tr>
<td>SCWK 532</td>
<td>Pharmacology and Drug Classification in Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SCWK 404</td>
<td>Practicum II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

Eligible students are required to be social work majors, accepted into the Bachelor of Social Work program, or have received a prior BSW degree. Students must have a WSU GPA of 2.500, and in their social work courses, at least a 3.000 GPA.

Students are allowed to apply to the certificate program, and the program deadline is set for the spring semester for admission consideration into the certificate program for the following academic year. Once accepted, students meet with the certificate coordinator each semester to review program progress, engage in mentoring activities, and plan for the next semester’s learning.

Students must maintain a WSU GPA of 2.500 and a 3.000 GPA in their social work classes. Students must receive a B or better in the undergraduate certificate program classes to remain in the certificate program.

If a student does not meet the requirements to remain in the certificate program, the student and certificate coordinator request a review of the student’s continued participation by the faculty student concerns committee. This group determines, along with the student and coordinator, whether there is a merited reason to remain a certificate program student, and if so, develops a plan forward accordingly.

If a student is dismissed from the certificate program due to failure to achieve the academic success in the certificate coursework, the student will be notified in writing by the coordinator and faculty student concerns committee within 10 business days of the meeting.

### Gainful Employment
This certificate has been reviewed and is not a gainful employment program per U.S. Department of Education rules and regulations.

### Sociology
Sociology is the scientific study of the organization of society and social relationships. Sociology students learn not only about themselves but also about how their experiences and life trajectories are affected by their social environments. A major in sociology provides students unique perspectives and skills that are applicable to a broad range of careers — including research, social services, business, education, policy and healthcare — making them well prepared to succeed in a diverse and changing society.

Through various opportunities within and outside of the classroom environment, sociology students develop insights about the effects of social structures on individual lives, communities and the broader society, learning to use scientific research methods to address complex social issues. The sociology department emphasizes a social justice perspective through research and teaching related to economic issues.
inequality, gender, race and ethnicity and aging, as well as social institutions such as the family, education and work.

**Majors in Sociology**
- BA in Sociology (p. 228)

Students interested in specializing in sociology but wanting the opportunity to more specifically tailor an interdisciplinary degree program may want to consider the Bachelor of General Studies (BGS) (p. 187) program with an emphasis in sociology, which can be completed either on campus or online (http://webs.wichita.edu/?u=onlineed&p=/program_pages/fieldmajors).

**Minors in Sociology**
- Sociology (p. 228)

**Courses in Sociology**
- Sociology (SOC) (p. 439)

**BA in Sociology**
The study of society mandates specific skills for interpreting information and observations. Therefore, students majoring in sociology are required to enroll in the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 312</td>
<td>Introduction to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 501</td>
<td>Sociological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 512</td>
<td>Measurement &amp; Analysis</td>
<td>4</td>
</tr>
<tr>
<td>SOC 545</td>
<td>Sociological Theory</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select 15 credit hours of electives</td>
<td>15</td>
</tr>
</tbody>
</table>

Total Credit Hours: 31

Outside of the required courses listed above, students have flexibility in selecting content specific areas of concentration such as deviant behavior, intimate relations and family life, social stratification and inequality, gender and sexuality, aging studies, social organization, urban sociology and the social determinants of health — or some combination of these specialties. Depending on a student’s interests and goals, certain courses in related departments that meet their particular needs, if approved by the Sociology Department’s undergraduate advisor, may be counted toward a sociology major, though no more than 6 credit hours of such courses may be included. Transfer students should note that at least 9 credit hours of sociology coursework must be earned at Wichita State.

**Minor in Sociology**
A minor in sociology consists of at least 15 credit hours, including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>At least 3 credit hours of courses 500+</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>An additional 9 credit hours in sociology electives</td>
<td>9</td>
</tr>
</tbody>
</table>

Total Credit Hours: 15

Students can complete the minor through traditional face-to-face courses, a combination of face-to-face and online coursework, or completely online.

**Women’s Studies**
As a department in Fairmount College of Liberal Arts and Sciences, the Center for Women’s Studies offers a major and minor in women’s studies. Students receive academic training and leadership skills with the goal of improving women’s lives in domestic and professional arenas. The analysis of gender, race/ethnicity, class and sexuality is central to the major. Cross-cultural and international perspectives represent the department’s commitment to move beyond culturally and nationally parochial understanding of women’s identities and struggles. Women’s studies is interdisciplinary in approach, and the major reflects a thematic rather than disciplinary focus. The four core areas — internationalism, representation and media, social issues, and religion and thought — provide critical understanding of women, culture and society. Students may elect to double-major in women’s studies and other fields in the liberal arts and sciences or other colleges. The major prepares students for careers in a variety of fields.

**Majors in Women's Studies**
- BA in Women's Studies (p. 228)

**Minors in Women's Studies**
- Women’s Studies (WOMS) (p. 451)

**Courses in Women's Studies**
- Women’s Studies (WOMS) (p. 439)

**BA in Women's Studies**
The major in women’s studies consists of 30 hours:

**Required Core**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMS 190</td>
<td>Diverse Women in Popular Culture</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 287</td>
<td>Women in Society: Social Issues</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 387</td>
<td>Women in Society: Cultural Images</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 587</td>
<td>Theories of Feminism</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core Area**
Select 9 credit hours (three courses) taken within a core area listed below

**Electives**
Select 9 credit hours (three courses) in any of the four core areas, taken in any combination

Total Credit Hours: 30

One course must be a diversity course such as:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMS 334</td>
<td>Islam</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 370</td>
<td>Women in World Religions</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 385</td>
<td>Lesbian, Gay, Bisexual, Transgender Studies</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 482</td>
<td>Latinas in Culture and Society</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 513</td>
<td>Issues and Perspectives on African Women and Globalism</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 514</td>
<td>Women in the Middle East</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 532</td>
<td>Women in Ethnic America</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 542</td>
<td>Women in Other Cultures</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 579</td>
<td>Asian Women in Modern History</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 588</td>
<td>Gender, Race and the West/ East Divide</td>
<td>3</td>
</tr>
</tbody>
</table>

Of the 30 credit hours, no more than 3 hours in courses numbered 100–199 may be counted toward the major except WOMS 190, REL 110 and REL 115. Students are strongly encouraged to take WOMS 190 and WOMS 287 as early as possible in the major.
Core Areas

Some courses may appear in two core areas if course content is appropriate.

**Core Area I: Internationalism**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMS/REL 334</td>
<td>Islam</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/REL 370</td>
<td>Women in World Religions</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 482</td>
<td>Latinas in Culture and Society</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 513</td>
<td>Issues and Perspectives on African Women and Globalism</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 514</td>
<td>Women in the Middle East</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/HIST 532</td>
<td>Women in Ethnic America</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/ANTH 542</td>
<td>Women in Other Cultures</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/HIST/ETHS 579</td>
<td>Asian Women in Modern History</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 588</td>
<td>Gender, Race and the West/ East Divide</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core Area II: Representation and Media**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMS 330/ENGL 336</td>
<td>Women's Personal Narrative</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 382</td>
<td>Feminism and Girl Culture</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 385</td>
<td>Lesbian, Gay, Bisexual, Transgender Studies</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 510</td>
<td>Hollywood Melodrama: The Woman's Film</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 523</td>
<td>Feminist Film Criticism</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/ENGL 536</td>
<td>Writing by Women</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 537</td>
<td>Contemporary Women's Drama</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 585</td>
<td>The Femme Fatale In Film Noir</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core Area III: Social Issues**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMS/SOC 306</td>
<td>Introduction to Gender Studies</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/SOC 316</td>
<td>Men and Masculinities</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/POLS 325</td>
<td>Women in the Political System</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/SCWK 340</td>
<td>Human Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 345</td>
<td>Gender, Alcohol and Addictions</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 380</td>
<td>Special Topics</td>
<td>1-3</td>
</tr>
<tr>
<td>WOMS 385</td>
<td>Lesbian, Gay, Bisexual, Transgender Studies</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 386</td>
<td>Women and Sports</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 533</td>
<td>Women and the Law</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/PSY 534</td>
<td>Psychology of Women</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/SCWK 541</td>
<td>Women, Children and Poverty</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core Area IV: Religion and Thought**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL 110</td>
<td>Old Testament</td>
<td>3</td>
</tr>
<tr>
<td>REL 115</td>
<td>New Testament</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 345</td>
<td>Philosophy of Sex &amp; Love</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/REL 334</td>
<td>Islam</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/PHIL 338</td>
<td>Philosophy of Feminism</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/REL 370</td>
<td>Women in World Religions</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/REL 384</td>
<td>Paul</td>
<td>3</td>
</tr>
<tr>
<td>WOMS/REL 420</td>
<td>Women and the Bible</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 586</td>
<td>Gender, Race, Knowledge</td>
<td>3</td>
</tr>
</tbody>
</table>

**Minor in Women's Studies**

The minor in women’s studies consists of a minimum of 15 credit hours of women’s studies courses, including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMS 287</td>
<td>Women in Society: Social Issues</td>
<td>3</td>
</tr>
<tr>
<td>WOMS 387</td>
<td>Women in Society: Cultural Images</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Select 9 additional credit hours in women's studies courses</td>
<td>9</td>
</tr>
<tr>
<td>15</td>
<td>Total Credit Hours</td>
<td></td>
</tr>
</tbody>
</table>

Restrictions on 100-level courses in the major also apply to the minor. (No more than 3 credit hours in courses numbered 100–199 may be counted toward the minor except WOMS 190, REL 110 and REL 115.)
University Faculty
(as of January 31, 2017)

A
Abbott, Terilyn. Fairmount Lecturer and Director of Spanish Language, Department of Modern and Classical Languages (2011). BA, Brigham Young University, 2003; MA, Wichita State University, 2010.

Abdinnoor, Suhaier H., Omer Professor in Business, Department of Finance, Real Estate, and Decision Sciences (1998). BS, Birzeit University, 1983; MS, Southampton University, 1988; PhD, Indiana University, 1994.

Ackerman, Paul D.., Assistant Professor and Assistant Chairperson, Department of Psychology (1968). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.

Adler, Edward T., Associate Professor, Graduate Coordinator and Associate Director, School of Art, Design and Creative Industries (2005). BA, Lewis and Clark College, 1993; MFA, Ohio University, 2002.

Adler, Michelle D., Assistant Professor, Department of Curriculum and Instruction (2015). BS, Emporia State University, 1993; MEd, Wichita State University, 1998; EdD, Liberty University, 2015.

Ahmed, Ikramuddin, Associate Professor, Department of Mechanical Engineering (2000). BSME, Bangladesh University of Engineering and Technology, 1988; MSME, University of Texas-Austin, 1993; PhD, 1997.

Alagic, Mara. Associate Professor, Department of Curriculum and Instruction (1993). BS, University of Belgrade, 1970; MS, 1975; PhD, 1985.

Aldoss, Taha K., Engineering Educator, Department of Mechanical Engineering (2015). MS, Case Western Reserve University, 1980; PhD, 1982.

Allen, Neal R., Assistant Professor, Department of Political Science (2011). BA, DePauw University, 1998; MA, University of Texas-Austin, 2001; PhD, 2009.

Alliston, Kevin. Senior Lecturer, Department of Chemistry (2005). BS, Wichita State University, 1991; PhD, 1999.

Alloway, Laurie B., Clinical Educator, Department of Medical Laboratory Sciences (2012). BA, Newman University, 1996; BS, Wichita State University, 1996; MS, Friends University, 2010.

Amick, Ryan Z., Assistant Professor, Department of Human Performance Studies (2016). BA, Wichita State University, 2005; MEd, 2007; PhD, 2014.


Aravinthan, Visvakumar. Assistant Professor, Department of Electrical Engineering and Computer Science (2011). BS, University of Moratuwa-Sri Lanka, 2002; MS, 2005; MS, Wichita State University, 2006; PhD, 2010.

Armstrong, Richard N., Associate Professor and Director of Basic Oral Communication Program, Elliott School of Communication (1987). BA, Southern Utah University, 1972; MA, Brigham Young University, 1974; PhD, Bowling Green State University, 1978.

Arnold, Stephen D., Associate Dean for Academic and Student Affairs, College of Health Professions; Professor, Department of Public Health Sciences (2011). BS, New Mexico State University, 1984; PhD, Colorado State University Fort-Collins, 1989.


Asaduzzaman, Abu, Associate Professor, Department of Electrical Engineering and Computer Science (2010). BS, Bangladesh University of Engineering and Technology, 1993; MS, Florida Atlantic University, 1997; PhD, 2009.


Askari, Davood. Assistant Professor, Department of Mechanical Engineering (2013). MS, Eastern Mediterranean University, 2002; PhD, University of Hawaii-Manoa, 2009.

Asmatulu, Eylem, Engineering Educator, Department of Mechanical Engineering (2015). BS, Cukurova University, institute of Science and Technology, 2002; MS, 2004; PhD, Wichita State University, 2013.

Asmatulu, Ramazan., Associate Professor, Department of Mechanical Engineering (2006). BS, Istanbul Technical University, 1992; MS, 1995; PhD, Virginia Polytechnic Institute and State University, 2001.


B
Babnich, Judith. Professor, School of Performing Arts (1984). BA, Xavier University, 1974; MA, University of Cincinnati, 1975; PhD, University of California-Los Angeles, 1981.

Badgett, Barry T., Associate Professor, School of Art, Design and Creative Industries (1993). BFA, Virginia Commonwealth University-Richmond, 1985; MFA, Syracuse University, 1990.

Bagai, Rajiv. Associate Professor, Department of Electrical Engineering and Computer Science (1990). MS, Birla Institute of Technology and Science, 1983; MS, University of Victoria, 1987; PhD, 1990.

Bailey, Whitney A., Athletic Training Clinical Faculty, Department of Human Performance Studies (2016). BS, North Georgia College and State University, 2009; MEd, Georgia College State University, 2011.

Baker, Carl E., Associate Professor and Technical Director, School of Performing Arts (2005). BA, Wichita State University, 1988; MFA, Ohio University, 1991.

Baldridge, Wilson R., Professor and Department Chair, Department of Modern and Classical Languages and Literatures (1984). BA, Denison University, 1973; PhD, State University of New York-Buffalo, 1982.

Ballard-Reisch, Deborah S., Professor and Kansas Health Foundation Distinguished Chair in Strategic Communication, Elliott School of Communication (2007). BA, Bowling Green State University, 1979; MA, Ohio State University, 1980; PhD, Bowling Green State University, 1983.


Bann, James G., Associate Professor, Department of Chemistry (2004). BS, Ft. Lewis College, 1993; PhD, Oregon Health Sciences University, 2000.


Bard, John W., President and Professor (1973). BA, University of Cincinnati, 1970; MA, Ohio University, 1971; PhD, Ohio State University, 1973.

Barut, Mehmet, Professor, Department of Finance, Real Estate, and Decision Sciences (2000). BS, Istanbul Technical University, 1988; MS, 1991; PhD, Clemson University, 1999.


Bechtold, Rebecca B., Assistant Professor and Graduate Studies Coordinator, Department of English (2013). BA, Knox College, 2005; MA, University of Illinois Urbana-Champaign, 2007; PhD, 2012.

Beck, James, Assistant Professor, Department of Biological Sciences (2013). BS, Eastern Kentucky University, 1999; PhD, Washington University, 2007.

Beck, Moriah R., Assistant Professor, Department of Chemistry (2011). BS, Eastern Kentucky University, 1999; PhD, Washington University, 2007.

Bees, Julie L., Professor, School of Music (1986). BM, Peabody Conservatory, 1974; DMA, University of Colorado, 1982.

Beeson, Jodie G., Assistant Professor, School of Community Affairs (2009). BA, Bethel College 1989; MA, Wichita State University, 2006; PhD, 2009.


Belt, Lisa D., Director, BSDH Completion Degree Program; Senior Clinical Educator, Department of Dental Hygiene (2004). AS, Seward Community College, 1980; AS, Wichita State University, 1982; BHS, 1982; MS, Idaho State University, 2013.

Bergman, Daniel J., Associate Professor, Department of Curriculum and Instruction (2007). BS, University of Nebraska-Lincoln, 1999; MA, 2002; MA, University of Nebraska-Kearney, 2004; PhD, Iowa State University, 2007.


Bhattacharya, Debswapna, Assistant Professor, Department of Electrical Engineering and Computer Science (2016). MS, University of Missouri-Columbia, 2014; PhD, 2016.

Bibb, Sandra C., Dean, College of Health Professions; Professor, School of Nursing (2014). BSN, University of San Diego, 1983; MSN, 1991; DNSC, 1999.

Billingham, Chase M., Assistant Professor, Department of Sociology (2013). BA, Tulane University, 2006; MA, Northeastern University, 2008; PhD, 2013.

Birondo, Noell N., Associate Professor, Department of Philosophy (2013). BA, University of California-Berkeley, 1995; MA, University of Notre Dame, 1999; PhD, 2004.

Birzer, Michael L., Professor, Director and Graduate Coordinator, School of Community Affairs (1996). BS, Wichita State University, 1989; MS 1994; EdD, Oklahoma State University, 2000.

Bischoff, William D., Professor, Department of Geology (1984). BA, DePauw University, 1979; MS, Northwestern University, 1982; PhD, 1985.

Black, Phillip C., Assistant Professor, School of Music (1986). BS, Ball State University, 1977; MM, University of New Mexico, 1980.

Blakeslee, Donald J., Professor, Department of Anthropology (1976). BA, University of Nebraska-Lincoln, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.

Boehme, Rodney, Associate Professor, Department of Finance, Real Estate, and Decision Sciences (2004). BS, Texas AM, 1984; MBA, Baylor University, 1993; PhD, University of Houston, 1998.


Bomgardner, Richard K., Assistant Professor and Program Director, Department of Human Performance Studies (2003). BAED, Wichita State University, 1987; MS, Fort Hays State University, 1991; EdD, Liberty Baptist College, 2014.

Bousfield, George R., Jones Distinguished Professor, Department of Biological Sciences (1991). BS, Saginaw Valley State University, 1974; MA, Indiana University, 1976, PhD, 1981.

Bowden, Royce O. Jr., Dean, College of Engineering; Professor, Department of Industrial and Manufacturing Engineering (2014).
BS, University of Southern Mississippi, 1984; MS, Mississippi State University, 1989; PhD, 1992.

Bowen, Aaron S., Assistant Professor and Instruction and Research Services Librarian, University Libraries (2015). BA, College of Wooster, 2001; MA, University of Washington, 2006; MLS, 2015.

Boynton, Thomas J., Assistant Professor, Department of English (2014). BA, Monmouth College, 2002; MA, University of Illinois, 2005; PhD, 2011.

Bradfield, Katherine A., Fairmount Lecturer, Department of Philosophy (2012). BA, Wichita State University, 1993; MA, Washington University-St. Louis, 2001.

Brady, Stephen W., Associate Professor and Director of College Algebra Program, Department of Mathematics, Statistics and Physics (1967). BA Indiana University 1963; MA, 1965; PhD, 1968.

Bray, Susan S., Assistant Professor, Department of Counseling, Educational Leadership, Educational and School Psychology (2012). BS, Louisiana State University-Shreveport, 1984; MA, Louisiana Tech University, 1996; MS, Louisiana State University-Shreveport, 2012; PhD, Texas AM University, 2009.

Broberg, John C., Associate Professor, Department of Management (2008). BA, Brigham Young University, 1995; MBA, University of Arizona, 1998; PhD, Texas Tech University, 2010.

Brooking, Gary D., Engineering Educator, Department of Biomedical Engineering (2014). BS, University of Cape Town, 1985; MS, Clemson University, 1990; PhD, University of Virginia, 1996.

Brooks, Christopher K., Professor, Department of English (1989). BA, Indiana University, 1977; MA, Indiana State University, 1979; PhD, Purdue University, 1987.

Brown, Gina R., Assistant Professor and Graduate Coordinator, Department of Physical Assistant (2009). BS, Wichita State University, 2004; MPA, University of Nebraska-Omaha, 2009.

Brown, Samuel L., Professor and Director, Hugo Wall School of Public Affairs and Public Policy and Management Center (2016). PhD, University of Maryland-Baltimore, 1998.

Bryant, Jeffrey J., Professor and BKD Faculty Fellow, School of Accountancy (1985). BA, Wichita State University, 1977; JD, Washburn University School of Law, 1980; PhD, Texas Tech University, 1994. CPA-Kansas.

Bubp, Robert, Associate Professor, School of Art, Design and Creative Industries (2002). BFA, University of Georgia, 1993; MFA, Georgia State University, 2002.


Bukhgeym, Alexander L., Professor, Department of Mathematics, Statistics and Physics (2002). MS, Novosibirsk State University, 1971; Candidate of Sciences (PhD), Russian Academy of Sciences Computing Center-Siberian Division, 1974; Doctor of Sciences (PhD), 1984.

Bukonda, Ngoyi K., Professor, Department of Public Health Sciences (2007). BS, National University of Kinshasa, 1981; MPH, University of Minnesota, 1989; PhD, 1994.

Burdasal, Charles A., Professor, Department of Psychology; Director, Social Science Research Laboratory (1970). BA, Texas Tech University, 1966; PhD, 1971.


Burke, Collette D., Associate Professor, Department of Geology (1983). BA, St. Mary of the Woods College, 1973; MA, Akron University, 1981; PhD, University of Wisconsin-Milwaukee, 1983.

Burkett, Gail E., Fairmount Lecturer and Undergraduate Coordinator, Department of Modern and Classical Languages and Literatures (1999). BA, Wichita State University, 1975.

Burns, Dennis H., Professor, Department of Chemistry (1989). BS, University of California-Los Angeles, 1981; PhD, University of California-Davis, 1986.

Buyuktahtakin, I. Esra, Assistant Professor, Department of Industrial and Manufacturing Engineering (2011). BS, Fatih University, 2002; MS, Bilkent University, 2005; MS, Lehigh University, 2007; PhD, University of Florida-Gainesville, 2009.

Byun, JaeHwan, Assistant Professor, Department of Curriculum and Instruction (2015). BA, Hanyang University, 2001; MA, 2004; PhD, Southern Illinois University Carbondale, 2012.

C

Campbell, Betty L., Professor, School of Nursing (1998). BSN, University of Michigan, 1980; MN, University of Kansas, 1987; PhD, University of Colorado, 1996.

Carlson, Brandi N., Clinical Educator, Department of Dental Hygiene (2014). BA, Pittsburg State University, 2001; MS, 2002; BS, Wichita State University, 2010.


Castro, Susan V., Assistant Professor, Department of Philosophy (2012). BS, University of California-Los Angeles, 1993; MA, 1998; PhD, 2006.


Celso, Jennifer E., Director of Clinical Education, Department of Physical Therapy (2011). BS, Wichita State University, 1999; MPT, 2001; DPT, Northeastern University, 2009.

Chakravarthy, Animesh, Assistant Professor, Departments of Electrical Engineering and Computer Science and Aerospace Engineering (2010). BS, Bangladesh University-India, 1990; MS, Indian Institute of Science, 1994; PhD, Massachusetts Institute of Technology, 2007.

Chand, Masud, Associate Professor, Department of Management (2009). BBA, University of Dhaka, 2000; MBA, Simon Fraser University, 2004; PhD, 2010.
Chandler, Gaylen N., Professor and Barton Distinguished Chair in Entrepreneurship, Department of Management (2007). BS, Brigham Young University, 1980; MBA, University of Utah, 1989; PhD, 1990.

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Ho, James C.
Hoag, Maureen T.
Hodson, Barbara W.
Hogan, Linda S.
Holmes, Ellen C.
Holmstrom, Wayne L.
Holt, Nelda B.
Horn, Walter J.
Hoyer, Elmer A.
Hughes, Eugene M.
Humphrey, Bobbye J.
Hunter, Ann P.
Iacovetta, Ronald G.
Ingmire, Bruce D.
Iorio Pearl S.
Jackson, James A.
Jacobs, Phyllis M.
Jarnagin, Bill D.
Johnson, Judith R.
Johnson, M. Claradine
Johns, Buddy A.
Johnson, John P.
Jones, W. James
Kastor, Frank S.
Kear, Dennis J.
Kehoe, Patrick E.
Kelley, James W.
Killian, Donald G.
Kiralyfalvi, Bela
Knapp, Robert K.
Kneil, Thomas R.
Konek, Carol W.
Kopita, Ronald R.
Koppenhaver, John H.
Kovar, Susan K.
Kraft, Frederic B.
Kruger, Susan F.
Kukral, Dean K.
Jarnagin, Bill D.
Lane, Robert L.
Lansing, Jean A.
Laptad, Richard E.
Lary, Marvis J.
Lause, Timothy W.
Leavitt, Wendell W.
Leslie, John H.
Levi, Donald R.
Levine, William R.
Liera-Schwichteberg, Ramona
Long, Michael J.
Loper, Gerald D., Jr.
Lounsberry, Elinor J.
Lowe, Roger D.
Lyra, Naomi L.
Mallory, J. William
Markovich, Victor A.
Mathis, William E.
May, Phillip T.
McBride, John D.
McCormick, B. Jack
Merriam, Daniel F.
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Miller, Dorothy C.
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Millett, Nancy C.
Monroe, Betty R.
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Murdock, Katherine A.
Murphrey, Dwight D.
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O’Loughlin, John B.
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Owens, Melva M.
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Paske, Gerald H.
Payne, Joe D.
Petersen, Dixie L.
Pfannestiel, Maurice R.
Pisciotta, Joe P.
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Quantic, Diane D.
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Riordan, Janice M.
Ritchie, Gisela F.
Robarchek, Clayton A.
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St. John, Richard W.
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Sarachek, Alvin
Sawan, Mahmoud Edwin
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Schneider, Philip H.
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Scudder, Rosalind R.
Shawver, Martha M.
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Sherman, Twyla G.
Shore, Elysie R.
Short, Lois M.
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Skokan, Donald E.
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Spilman, Richard S.
Strecker, Joseph L.
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Turk, Randall L.
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Unrau, Mildred C.
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Unruh, Henry
Vahdat, Pari
Vargo, Albert J.
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Wahlbeck, Phillip G.
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Wilhelm, William J.
Williamson, L. Keith
Wilson, John H.
Wirth, Karen A.
Wolfe, Donna Hawley
Wood, Michael A.
Woods, William F.
Yenne, Vernon L.
Yeotis, Catherine G.
Yoon, Lee N.
York, Paul K.
Youngman, Arthur L.
Zoller, Peter T.
### Key to Abbreviations and Symbols

**Symbols**
The number of hours of credit for each course is indicated following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work usually are required for 1 hour of credit. In courses involving meetings other than lectures, the following symbols are used:

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<td>P</td>
<td>Practicum/Cl</td>
</tr>
<tr>
<td>T</td>
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1. P, practicum/clinical, with the hours of practicum/clinical per week given in front of the letter (6–8P means six to eight hours of practicum/clinical per week).

### Abbreviations

The following abbreviations of academic departments and subject areas are used in references to courses offered by those departments.

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### Degrees and Academic Majors

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1. Real Estate emphasis available in these areas
2. LAS Field Majors and General Studies available online: Aging Studies, Anthropology, Criminal Justice, English, Political Science, Psychology, Sociology, Women’s Studies; and Associate degree
Courses A - Z

Accounting (ACCT)

School of Accountancy

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ACCT 190. Selected Topics  1-3 credit hours
Repeatable with departmental consent.

ACCT 210. Financial Accounting  3 credit hours
The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasizes concepts and principles underlying the measurement of income and financial position and how this information may be used to evaluate the progress of a firm. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisites: MATH 111, BADM 160.

ACCT 220. Managerial Accounting  3 credit hours
The study of accounting in terms of management's information requirements. Emphasizes the use of accounting information to assist management in planning, analyzing and implementing business decisions and activities. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisites: ACCT 210, MATH 111, BADM 160.

ACCT 310. Financial Accounting and Reporting: Assets  3 credit hours
An in-depth study of the conceptual and technical aspects of financial accounting. Emphasizes recognition and measurement problems of income determination and balance sheet presentation. Covers asset accounting in depth. Prerequisites: completion of ACCT 210 with a minimum grade of B- (2.700), ACCT 220 with a minimum grade of C+ (2.300), MATH 111, BADM 160, advanced standing.

ACCT 320. Accounting for Decision Making and Control  3 credit hours
The use of accounting information to assist management in planning, analyzing and implementing processes for decision making and control. Focus is operational control in contemporary business contexts. Prerequisites: completion of ACCT 220 with a minimum grade of B- (2.700), ACCT 210 with a minimum grade of C+ (2.300), MATH 111, BADM 160, advanced standing.

ACCT 410. Financial Accounting and Reporting: Equities  3 credit hours
A continuation of ACCT 310. Emphasizes liabilities and equity. Prerequisites: completion of ACCT 310 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 430. Introduction to Federal Income Tax  3 credit hours
An overview of the federal tax law and those laws specifically applicable to individuals and sole proprietors. Also introduces tax research techniques. Prerequisites: completion of ACCT 310 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 481. Cooperative Education  1-3 credit hours
Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing and 2.250 GPA.

ACCT 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ACCT 491. Independent Study/Project  1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in accounting, junior standing, advanced standing, School of Accountancy consent.

ACCT 560. Accounting Information Systems  3 credit hours
A study of the content, design and controls of accounting systems, emphasizing the use of computers for processing financial data. Prerequisites: completion of ACCT 310, BADM 160, each with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 610. Financial Accounting and Reporting: Special Entities and Complex Issues  3 credit hours
A study of the auditor's attest function, emphasizing auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisites: completion of ACCT 410 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 620. Accounting for Strategic Support and Performance Evaluation  3 credit hours
The use of accounting information to assist management in developing and identifying superior strategies to produce and sustain comparative and/or competitive advantages. Focuses on goal-congruent strategies and incentives. Prerequisites: completion of ACCT 310, 320 with a grade of C (2.000) or better in each course, advanced standing, junior standing.

ACCT 630. Taxation of Business Entities  3 credit hours
Studies the federal tax law as it applies to corporations, partnerships and other business entities. Examines the effect of taxation on business decisions. Prerequisites: completion of ACCT 410 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 640. Principles of Auditing  3-4 credit hours
A study of the auditor's attest function, emphasizing auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisites: completion of ACCT 410 and 560 with a grade of C (2.000) or better, advanced standing, junior standing.

ACCT 690. Seminar in Selected Topics  1-3 credit hours
Repeatable for credit with School of Accountancy consent. Prerequisites: junior standing, advanced standing.

ACCT 781. Cooperative Education  1 credit hour
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Programs must be formulated in consultation with appropriate graduate faculty. May be repeated for credit up to 3 hours. May not be used to fulfill degree requirements. Graded Cr/NCr.
Aerospace Engineering (AE)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = graduate/undergraduate.

AE 223. Statics 3 credit hours
Studies the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames and machines. Considers both two- and three-dimensional bodies. Also studies centroids, centers of gravity and moments of inertia. Prerequisite: PHYS 313. Corequisite: MATH 243.

AE 227. Engineering Digital Computation 3 credit hours
2 Classroom hours; 2 Lab hours. MATLAB and Visual-Basic programming; introduction to linear algebra and matrix methods for engineers, selected numerical methods for approximating functions, solution of systems of equations, numerical integration, and numerical determination of the roots of polynomials. Corequisite: MATH 243.

AE 281I. Noncredit Internship 0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

AE 324. Fundamentals of Atmospheric Flight 3 credit hours
Studies the atmosphere, aircraft and aerodynamic nomenclature. Introduction to aerodynamic theory, airfoils, wings, aircraft performance, stability and control, and propulsion. Prerequisite: AE 223 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course). Corequisite: AE 227.

AE 333. Mechanics of Materials 3 credit hours
Studies the mechanical properties of materials, transformation of stresses and strains, stresses and deformations in structural elements of various shapes and loading, statically indeterminate structures, and buckling. Prerequisite: AE 223 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course). Corequisite: MATH 344.

AE 373. Dynamics 3 credit hours
A study of the kinematics and kinetics of particles and rigid bodies. Includes force-mass-acceleration, work-energy and impulse-momentum methods. Prerequisites: AE 223 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course), and MATH 344.

AE 415. Introduction to Space Dynamics 3 credit hours
Fundamentals of orbital mechanics and rigid body dynamics, two-body problems, orbital maneuvers and orbital determination, rigid body kinematics, and kinetics. Prerequisites: AE 227 and AE 373 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for AE 373). Corequisite: MATH 555.

AE 424. Aerodynamics 1 3 credit hours
Studies the dynamics of incompressible potential flow, governing equations of motion in control volume form and differential form, rotation and vorticity, stream function and velocity potential, singularities and superposition, introduction to panel methods, various two-dimensional airfoil theories, finite wing theory, flow over axisymmetric bodies, application tools for aerodynamic design and analysis. Prerequisites: MATH 555, AE 324 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for these courses), and AE 373.

AE 460. Selected Topics 1-3 credit hours
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: instructor's consent.

AE 460A. Aerospace Colloquium 0 credit hours
A zero credit hour course specifically for freshmen aerospace engineering students. Includes faculty and industry engineer seminars and activities that promote academic success, hands-on aerospace relevant experiences, and career achievement. Prerequisite: freshman standing.

AE 460H. Selected Topics in Design - Honors 3 credit hours
An experiential based aerospace design course for honors students. Includes an introduction to basic Unmanned Air Vehicle (UAV) design methods, construction, and testing. The course meets concurrently with and includes interactions with seniors enrolled in the AE 528 aerospace design class. Includes design, construction and testing of a small UAV. Prerequisites: admitted to honors program, sophomore or junior standing, aerospace engineering major.

AE 481A. Cooperative Education 1 credit hour
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as a technical elective. May be repeated. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

AE 481I. Noncredit Internship 0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

AE 481N. Internship 1 credit hour
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

AE 481P. Cooperative Education 1 credit hour
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Graded Cr/NCr unless student has received permission before enrolling for course to be used as a technical elective. May be repeated. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

AE 502. Aerospace Propulsion 1 3 credit hours

AE 512. Experimental Methods in Aerospace 3 credit hours
A study of experimental methods and test planning, error analysis and propagation, model design, instrumentation and flow visualization. Uses electromechanical testing machines, subsonic and supersonic wind tunnels. Prerequisites: AE 333, 424.
AE 514. Flight Dynamics and Control 3 credit hours

AE 524. Aerodynamics II 3 credit hours
Continues the discussion of potential flow from AE 424. Introduces energy equation, fundamental concepts of high speed flow, normal and oblique shock waves, Prandtl-Meyer flow, nozzles and diffusers, linearized high speed potential flow, airfoils and wings in subsonic and supersonic flow, Navier-Stokes equation, boundary layer flow, momentum integral approximation and various laminar and turbulent flow solutions, introduction to convective heat transfer. Prerequisite: AE 424.

AE 525. Flight Structures I 3 credit hours
2 Classroom hours; 2 Lab hours. Stress analysis of flight vehicle components. Prerequisite: AE 333 (no grade lower than one that generates 2.000 or more credit points per credit hour will be accepted for this course). Corequisite: MATH 555.

AE 527. Numerical Methods in Engineering 3 credit hours

AE 528. Aerospace Design I 4 credit hours
2 Classroom hours; 4 Lab hours. Methodology of flight vehicle design; mission objectives, regulations and standards; use of hand and computer methods for configuration development and component sizing, ethics, and liability in design. Prerequisites: AE 502, 514, 525.

AE 607. Flight Control Systems 3 credit hours
Classical design methods for stability and control augmentation and guidance systems specifically for aerospace vehicles, including block diagrams, root locus and frequency response. Sensors used in aerospace systems. Flying qualities and performance specifications for closed loop systems. Includes a review of the aircraft and spacecraft dynamic model derivation. Prerequisite: AE 514.

AE 625. Flight Structures II 3 credit hours
2 Classroom hours; 3 Lab hours. Strength analysis and design of flight vehicle components. Introduction to energy methods and variational principles. Application of finite element method to the analysis of flight vehicle structures. Special projects in structural analysis and design. Prerequisites: AE 333, 525.

AE 628. Aerospace Design II 4 credit hours
2 Classroom hours; 4 Lab hours. Preliminary design of flight vehicles, design iteration, sensitivity studies, optimization, economic considerations and introduction to project management. Prerequisite: AE 528.

AE 660. Selected Topics 1-3 credit hours
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: instructor's consent.

AE 690. Independent Study 1-3 credit hours
Arranged individual independent study in specialized areas of aerospace engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: consent of supervising faculty member.

AE 702. Aerospace Propulsion II 3 credit hours
In-depth study of rocket and jet propulsion. Turbojet and rocket engine components. Effect of operating variables on turbojet cycles and rocket performance. Prerequisite: AE 502 or instructor's consent.

AE 703. Rotor Aerodynamics 3 credit hours
Aerodynamics of rotors, including propellers, wind turbines and helicopters; momentum, blade element and potential flow analysis methods; helicopter dynamics, control and performance. Prerequisite: AE 424.

AE 707. Modern Flight Control System Design I 3 credit hours
Modern multi-loop design methods for stability and control augmentation and guidance systems, specifically for aerospace vehicles. State variable model. Optimal state feedback gains and Riccati's equation, tracking systems, sensors and actuator, discretization of continuous dynamic systems, optimal design for digital controls, and effect of nonlinearities and trim conditions on design considerations. Prerequisites: AE 514 or 714, and AE 607 or EE 684 or ME 659.

AE 711. Intermediate Aerodynamics 3 credit hours
Studies potential flow equations of motion, singularity solutions, principle of superposition, conformal mapping, thin airfoil theory, finite wing theory, effects of fluid inertia, three-dimensional singularities, swept wing theory, delta wing theory, introduction to panel methods and an introduction to automobile aerodynamics. Prerequisite: AE 424 or ME 521.

AE 712. Advanced Aerodynamics Laboratory 3 credit hours
2 Classroom hours; 2 Lab hours. Advanced topics in wind tunnel testing, including analysis and sensitivity, modeling techniques, flexure design and calibration, control surface loads and moments, laser velocimetry, hot film anemometry, dynamic signal processing, flow measurement probes, flow visualization using smoke tunnels and water tunnel. Prerequisite: AE 512 or instructor's consent.

AE 714. Advanced Flight Dynamics I 3 credit hours
Review of the equations of motion for aircraft. Nonlinear effects and aircraft response. Stability and control of elastic aircraft. Response to turbulence. Prerequisite: AE 514 or instructor's consent.

AE 715. Intermediate Space Dynamics 3 credit hours
Advanced topics in orbital mechanics-vector mechanics perspective of the two-body problem; fast transfers; interplanetary missions including gravity assist maneuver and intercept problem; atmospheric entry. Prerequisite: AE 415 or instructor's consent.

AE 716. Compressible Fluid Flow 3 credit hours
Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, one-dimensional flow with friction and heat addition, linearized potential equation, method of characteristics, conical shocks and subsonic similarity laws. Prerequisites: AE 424, ME 521 or equivalent.

AE 719. Introduction to Computational Fluid Dynamics 3 credit hours
Classification of partial differential equations, numerical solution of parabolic, elliptic and hyperbolic differential equations, stability analysis, boundary conditions, scalar representation of the Navier-Stokes equations, incompressible Navier-Stokes equations. Prerequisite: AE 424 or ME 521.

AE 722. Finite Element Analysis of Structures I 3 credit hours
Advanced treatment of the theoretical concepts and principles necessary for the application of the finite element method in the solution of differential equations in engineering. Prerequisites: AE 333, 625 or equivalent, or instructor's consent.
AE 731. Theory of Elasticity 3 credit hours
Develops the equations of the theory of elasticity and uses them to determine stress and displacement fields in linear elastic isotropic bodies; uses Airy stress functions to obtain solutions, and introduces energy principles and variational methods. Prerequisite: instructor’s consent.

AE 733. Advanced Mechanics of Materials 3 credit hours
An extension of AE 333. Includes transformation of stress and strain in three dimensions, noncircular torsional members, curved beams, beams with unsymmetric cross sections, energy methods and the finite element method of analysis, stress concentration, theories of failure and fracture mechanics. Prerequisite: AE 333.

AE 737. Mechanics of Damage Tolerance 3 credit hours
An introduction to the mechanics of damage tolerance emphasizing stress analysis oriented fracture mechanics. Includes stress intensity, fracture toughness, residual strength, fatigue crack growth rate, fatigue crack propagation and damage tolerance concepts. Prerequisite: AE 525 or instructor’s consent.

AE 753. Mechanics of Laminated Composites 3 credit hours
A descriptive classification of advanced composite materials and their constituents; mechanics of lamina and laminates, testing for material properties, lamina and laminate failure criteria, laminate strain allowances, structural analysis (beams and axially loaded members), design guidelines, introduction to manufacturing methods, repair and nondestructive testing. Prerequisites: AE 333, senior standing.

AE 759. Neural Networks for System Modeling and Control 3 credit hours
Introduces specific neural network architectures used for dynamic system modeling and intelligent control. Includes theory of feed-forward, recurrent, and Hopfield networks; applications in robotics, aircraft and vehicle guidance, chemical processes and optimal control. Prerequisite: AE 607 or ME 659 or EE 684 or instructor’s consent.

AE 760. Selected Topics 1-3 credit hours
Prerequisite: instructor’s consent.

AE 760AA. Micromechanics and Multi-Scale Modeling 3 credit hours
Many materials and structures consist of multiple phases. Micromechanics models can be used to homogenize a structure at some appropriate scale for more practical modeling. Course covers the classical mean-field homogenization models. Explores several state-of-the-art numerical techniques used in micromechanics modeling, such as the method of cells, variational methods and Fourier transforms in addition to finite element techniques for periodicity.

AE 770BA. Badge: Composite Manufacturing Technology Safety Awareness - I 0.5 credit hours
Students are provided with composite materials technologies basic knowledge, an overview of different forms of composites manufacturing, various factory workflows, and the associated regulatory guidance documents. Repeatable for credit. Graded Bg/NBg. Prerequisite: none.

AE 770BB. Badge: Composite Manufacturing Technology Safety Awareness - II 0.5 credit hours
Educates students on the issues related to raw material manufacturing, its transport, incoming quality control and storage of composite materials. The preparation of tooling, cutting of composite preforms, layup and bagging of composite parts, and curing are discussed in detail. The use of procurement specifications and process control documents are emphasized. Repeatable for credit. Graded Bg/NBg. Prerequisite: AE 770BA.

AE 770BC. Badge: Composite Manufacturing Technology Safety Awareness - III 0.5 credit hours
Topics include technical aspects related to trimming and drilling of composites, defects in composites, adhesive bonding and assembly, nondestructive and destructive inspection. Repeatable for credit. Graded Bg/NBg. Prerequisite: AE 770BD.

AE 770BD. Badge: Composite Manufacturing Technology Safety Awareness - IV 0.5 credit hours
Topics include technical aspects related to painting and finishing of composites, handling and storage, manufacturing defects and their root cause analysis, and scarf repair of composites. Repeatable for credit. Graded Bg/NBg. Prerequisite: AE 770BC.

AE 770BE. Badge: Composite Manufacturing Technology Safety Awareness - V 0.5 credit hours
Lab course provides students with hands-on experience on prepreg cutting, manual layup and bagging of simple laminated composite parts, nondestructive inspection and scarf repair. Repeatable for credit. Graded Bg/NBg. Prerequisite: AE 770BD or instructor’s consent.

AE 773. Intermediate Dynamics 3 credit hours
An extension of AE 373. Studies the kinematics and kinetics of particles and rigid bodies for two- and three-dimensional motion. Includes an introduction to vibratory motion, dynamic stability of linear systems and Lagrange's equations. Prerequisite: AE 373.

AE 777. Vibration Analysis 3 credit hours
A study of free, forced, damped and undamped vibrations for one and two degrees of freedom, as well as classical, numerical and energy solutions of multi-degree freedom systems. Introduces continuous systems. Prerequisites: MATH 555, AE 333, 373.

Aging Studies (AGE)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

AGE 100. Introduction to Gerontology 3 credit hours
A multidisciplinary overview of the field of aging, with attention to cultural, social, psychological, biological and economic factors which influence the circumstances of the elderly. Course includes diversity content.

AGE 150. Workshop in Gerontology 1-3 credit hours
Provides specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit.

AGE 404. Psychology of Aging 3 credit hours
General education advanced further study course. Cross-listed as PSY 404. An examination of the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly, and the psychological issues of extending human life. Emphasizes the strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: PSY 111.

AGE 405. Sociology of Aging 3 credit hours
General education advanced further study course. Cross-listed as SOC 405. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

AGE 408. Biology of Aging 3 credit hours
Cross-listed as BIOL 408. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Prerequisite: a basic course in biology that satisfies the general education requirements.
and marketing tactics influence and reflect the images of older people about aging are influenced by mass media as well as how the media. Students examine several ways in which our experiences and beliefs systems of older people. Emphasizes demographic and historical health care issues.

Examines the basic implications of population aging on work life and retirement opportunities, now and in the future. Explores factors that may place individuals at risk for economic insecurity as they grow older. Topics covered include the current situation in the United States and other countries, examines the economic status of older Americans, addresses retirement policies in the private sector, social security and health care issues.

Cross-listed as SOC 520. An analysis of the families and family systems of older people. Emphasizes demographic and historical changes, widowhood, caregiving and intergenerational relationships as these relate to the family life of older people. Course includes diversity content. Prerequisite: AGE 100, SOC 111, or junior standing.

Explores the link between media and aging issues in the United States. Students examine several ways in which our experiences and beliefs about aging are influenced by mass media as well as how the media and marketing tactics influence and reflect the images of older people in society today. The theoretical and practical aspects of aging in the context of the media are addressed.

A broad overview of the psychological aspects of death and dying in our society. Topics include attitudes toward and preparation for death, the understanding of and care for terminally ill patients, funeral rituals, burial, mourning and grief practices; suicide and euthanasia. The class involves experiential learning activities such as personal preparation for death and field trips such as visiting a funeral home. These learning activities are designed to help the student be better equipped to help those who must make such preparations for themselves or loved ones.

Focuses on all aspects of sexuality and aging and the issues that arise with respect to sexual behavior as humans age. Examines human sexuality over the life course, focused on the experiences of those 65 and older and the impact of chronic disease, cognitive decline and physical disabilities on sexual attitudes and behaviors. Addresses key concerns regarding sexuality and aging, including misconceptions about sexuality and aging as well as the problems with sexuality that members of the aging population sometimes face. It also looks at solutions, treatments and techniques that can be applied to help address some of those problems. The course perspective is interdisciplinary, taking into account the physiological, psychological, interpersonal and social influences which shape our understanding of sexuality in the aged.

Explores caregivers' gender roles, cost of caregiving, managing stress, respite care, finding resources, financial and legal matters, emerging caregiving trends, and long distance caregiving. Caregiving is often stressful to the caregiver. Attention is given to caring for the caregiver, informal versus formal caregiving, the importance of various services for the health of the caregivers themselves, working with professional caregivers, and emerging trends in caregiving.

Cross-listed as SOC 543. Seminar-style course explores the impact of an aging population on social institutions, covers the history of American aging policies, the organization and financing of health care for the elderly, and discusses policy analysis as an evaluation tool for comparing public approaches to responding to the needs of an increasingly diverse aging population. Considers the process of policy formation, identifies key players and interest groups and contrasts political ideologies regarding federal, state and private responsibilities for older people. Emphasizes Social Security, the Older Americans Act, Medicare and Medicaid as policy examples. Also looks at the potential contributions of the older population to society (volunteer services, provision of family care, etc.) as affecting and affected by policy. Course includes diversity content. Prerequisite: SOC 111 or AGE 100 or junior standing.

Study in a specialized area of aging studies with the focus upon preprofessional programs and current issues in the field of aging. Emphasizing knowledge and skills in applied areas of aging studies as they relate to an emerging area of research and application. Repeatable up to 6 hours. Prerequisite: instructor's consent.

Builds a solid foundation in human resource management principles for professionals working in long-term care. Intended for students who need a skillset in HR management principles for an administrative role, or who will be managing HR professionals. Key human resources functions covered include HR’s role as a strategic partner, employment law, recruitment, compensation and payroll, training
and development, discipline and termination, and labor relations. Case studies, contemporary issues and discussions focus heavily on becoming an employer of choice in a long-term care environment.

**AGE 550P. Long-Term Care Management & Operations  3 credit hours**

Designed to broaden the understanding of operating and managing a long-term care community — specifically assisted living communities. Students gain an understanding of human capital demands, cross-functional departmental dependences, financial and budgetary requirements, as well as the relationship between operational excellence and quality of life for the resident.

**AGE 559. Successful Aging: Theory, Research & Practice  3 credit hours**

Cross-listed as PSY 559, SCWK 559, and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology is featured. Intended for students in the Colleges of Health Professions, Liberal Arts & Sciences and Engineering. *Course includes diversity content.* Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

**AGE 560. Aging Network Seminar  3 credit hours**

An overview of federal, state and local programs concerned with planning, managing or direct delivery of services to the older population. Prerequisite: 9 hours of aging studies credit or instructor's consent.

**AGE 562. Public Health and Aging  3 credit hours**

Explores the study of aging and the range of health issues that older persons, their families, their providers and society will face in the next decade. Presents an overview on aging from different perspectives: demography, biology, epidemiology of disease, physical and mental health disorders, functional capacity and disability, social aspects of aging and ethical issues in the care of older individuals.

**AGE 5600. Administrator-in-Training Long-Term Care Practicum  3-6 credit hours**

An academic long-term care administrator training program. Develops a professional competency and personal code of ethics for the field of long-term care administration. Gives students the practical experience required by the state of Kansas in order to sit for the state and national nursing home administrator licensure examination. The required text is the study guide for the national exam. It is the student's responsibility to work through the study materials and seek guidance from their preceptor regarding questions over the material. The 480-clock-hour practicum is completed in a licensed long-term care facility under the guidance of an approved preceptor. Repeatable for a total of 6 hours credit. Prerequisite: instructor's consent.

**AGE 563. Economic Insecurity  3 credit hours**

Cross-listed as ECON 663. Personal economic insecurity, such as unemployment, old age, health care, disablement and erratic economic fluctuations. Includes costs and benefits of government action to aid in meeting such insecurities. *Course includes diversity content.* Prerequisites: ECON 202 or instructor's consent, and junior standing.

**AGE 5702. Research Methods  3 credit hours**

Cross-listed as PADM 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising and using both primary and secondary sources of data of the type used in policy, planning and administrative research. Students must complete several short research projects. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership.

**AGE 710. Systems in Long-Term Care  3 credit hours**

Analyzes long-term care in the U.S. as a response to chronic illness and disability emphasizing the diversity of long-term care systems and addressing the needs of persons of all ages. Addresses system and organizational aspects that affect organizational outcomes and quality of long-term care services. Considers long-term care policy and management issues. It explicitly applies a trajectory model of chronic illness, conceptualizing formal long-term care services as one series of responses to chronic illness and disability.

**AGE 715. Adult Development and Aging  3 credit hours**

Explores theory and research related to the development of adults and to the aging process. Using an interactive, interdisciplinary perspective, the course examines the process of change, transition, growth and development across the adult life span. Prerequisite: AGE 798 or 6 hours of aging studies.

**AGE 717. Health Communications and Aging  3 credit hours**

A multidisciplinary, empirically-based consideration of emotions, behaviors, beliefs and attitudes related to aging and the process of communicating with older adults. Topics include: approaches to communication and aging, current evidence about communication and the aging population, interpersonal and intergenerational communication, mass communication and aging, health and health care interactions (patient-physician communication, etc.), older adults and technology, and cultural change. Students develop applied skills and critical thinking. Applications to public health are explored throughout the course.

**AGE 720. Independent Readings  1-3 credit hours**

Supervised study of special topics and problems relating to older adults. Repeatable up to 6 hours. Prerequisite: program consent.

**AGE 765. The Medicare System  3 credit hours**

Designed to explore the many intricacies of the Medicare and Medicaid programs. Emphasizes the application of course material to the development of the student's understanding of how these two programs affect the use of medical services among covered populations. Course format includes lecture, group and individual examination of the literature, and analysis of case studies.

**AGE 780. Physical Dimensions of Aging  3 credit hours**

Cross-listed as HPS 780. Designed to assist the student in developing an understanding of the complex physiological changes that accompany advancing age and the effects of physical activity on these factors. In addition, the student develops an appreciation for how functional consequences affect mental and social dimensions of life. Attention is given to sensory, motor, cognitive and psychological changes. Special emphasis is placed on factors associated with the preparation, implementation and evaluation of research projects involving older adult populations.

**AGE 781. Cooperative Education  3-6 credit hours**

Provides practical field experience, under academic supervision, that is suitable for graduate credit and complements and enhances the student's academic program. Repeatable up to 6 hours. These 3 to 6 hours may meet degree requirements (if approved by the academic adviser) in place of AGE 810. AGE 781 is graded Cr/NCr, while AGE 810 is letter graded. Prerequisites: 12 hours of aging studies and instructor's consent.

**AGE 798. Interprofessional Perspectives on Aging  3 credit hours**

Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Not open to students with an undergraduate major or minor in aging studies. Prerequisite: admission to Graduate School.
**Anthropology (ANTH)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**ANTH 100. Modern America: Understanding Diversity  3 credit hours**

*General education introductory course.* Introduces the concept of culture and its role in shaping and patterning human behavior. Students learn to apply tools and methods of anthropology in studying the culture of the United States. The concept of diversity is examined in order to understand multiculturalism in both the campus experience and as an important concept for functioning in a global community. *Course includes diversity content.*

**ANTH 101. Biological Anthropology  3 credit hours**

*General education introductory course.* Provides an introduction to the understanding of biological evolution and behavioral development of humans. Introduces the history and basic concepts of biological/evolutionary thought, genetics and cell biology, human origins, ecology and culture, along with the types of data and modes of analysis currently used in biological anthropology. Formulates explanations of physical and cultural developments of human and nonhuman primates in the last 70 million years. Explores patterns of human variation in biological and behavioral traits among present-day populations and discusses current issues (e.g., the social and biological meaning of variations). *Course includes diversity content.*

**ANTH 102. Cultural Anthropology  3 credit hours**

*General education introductory course.* The meaning of culture, its significance for human beings and its diverse forms among peoples of the world, past and present. *Course includes diversity content.*

**ANTH 103. Introduction to Archaeology  3 credit hours**

*General education introductory course.* Introduces the philosophy, theory, tools and techniques of the practicing archaeologist. Illustrates the role of archaeology in understanding cultural change through time, and explains how archaeological method draws on natural sciences and humanities to demonstrate how students learn about past cultures from the material they left behind.

**ANTH 105. World Archaeology  3 credit hours**

*General education introductory course.* A comparative study of prehistoric cultures of North America north of Mexico from the earliest habitation to the time of European colonization. Emphasizes the role of culture and its role in shaping and patterning human behavior. Students learn to apply tools and methods of anthropology in studying the culture of the United States. The concept of diversity is examined in order to understand multiculturalism in both the campus experience and as an important concept for functioning in a global community. *Course includes diversity content.*

**ANTH 106. Biological Anthropology Lab  1 credit hour**

Students collect and analyze data while learning to apply current techniques to the study of human and/or nonhuman primate skeletal, dental and biological specimens. Pre- or corequisite: ANTH 101.

**ANTH 107. Cultural Anthropology Laboratory  1 credit hour**

Students participate in organizing, collecting and analyzing data derived from cultural anthropological investigations. Pre- or corequisite: ANTH 102.

**ANTH 150. Workshop in Anthropology  1-3 credit hours**

Provides specialized instruction using a variable format in an anthropologically relevant subject. Repeatable for credit.

**ANTH 165. The Blues: Arts and Culture  3 credit hours**

The blues is a uniquely American musical form that has made an immense contribution to world popular culture. The history of the blues is also the history of Black America from the late 19th century to the present day. Focuses on major blues artists, both rural and urban, to trace the history and development of the blues as a folk art form that expresses both the joy and the despair of the people who created it.

**ANTH 200. Intercultural Relations  3 credit hours**

*General education advanced further study course.* Examines anthropological perspectives on the contact of individuals and societies which have different cultural histories. Examples are drawn widely from varied contemporary contexts: family life, international business, health and health care, the movement of populations, education in formal and informal contexts, and cultural strategies for survival in the global village. *Course includes diversity content.*

**ANTH 303. World Cultures  3 credit hours**

*General education advanced further study course.* Comparative case studies of the cultures of existing societies of varying types, including nonliterate peoples, Third World nations and modern industrialized countries. *Course includes diversity content.*

**ANTH 305. World Archaeology  3 credit hours**

*General education advanced further study course.* Introduces the basic concepts, methods, techniques and modes of analysis of scientific archaeology. These are applied to a series of problems of increasing complexity: the emergence of human culture, the development of domestic plants and animals, and the evolution of cities and complex societies.

**ANTH 307. Peoples of Africa  3 credit hours**

*General education advanced further study course.* Describes and analyzes the culture areas of Africa south of the Sahara Desert from ethnohistoric and ethnographic sources. *Course includes diversity content.*

**ANTH 312. Asia Pacific Cultures  3 credit hours**

*General education advanced further study course.* Studies the cultures and nations in Eastern Asia bordering the Pacific Ocean, focusing on historical background, cultural beliefs and practices, and the distinctive patterns of each. *Course includes diversity content.*

**ANTH 318. Psychological Anthropology  3 credit hours**

*General education advanced further study course.* The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context.

**ANTH 327. Magic, Witchcraft and Religion  3 credit hours**

*General education advanced further study course.* Cross-listed as REL 327. An examination of various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors. *Course includes diversity content.*

**ANTH 335. Archaeology of North America  3 credit hours**

*General education advanced further study course.* A survey of the prehistoric cultures of North America north of Mexico from the earliest peopling of the continent to the time of European colonization.

**ANTH 344. Ecological Anthropology  3 credit hours**

*General education advanced further study course.* Investigates the relationships of people both to their physical and sociocultural environments, including the effects of these relationships on economic activities, social organizations, and beliefs and behaviors emphasizing the evolutionary development of survival strategies.

**ANTH 351. Linguistics and Foreign Languages  3 credit hours**

Cross-listed as MCLL 351 and LING 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g., phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and identity). Prerequisite: LING 151 or any third-semester foreign language course.

**ANTH 352. Anthropological Linguistics  3 credit hours**

*General education advanced further study course.* Provides a learning experience engaging students in a more refined understanding of the linguistic dimensions of human culture through the exploration of the most important methods and theories in linguistics. Students are engaged in case studies taken from various social and cultural contexts. Covers basic elements of the study of various aspects of language.
including phonology, morphology, syntax, semantics and pragmatics. Prerequisite: ANTH 102 or a social sciences or humanities introductory course, or instructor's consent.

ANTH 356. Human Variability and Adaptation  3 credit hours
General education advanced further study course. A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. Course includes diversity content. Prerequisite: ANTH 101 or BIOL 210 or equivalent.

ANTH 361. Law, Politics and Society  3 credit hours
Studies legal and political systems in non-Western societies. Includes the origin of the state, precollonial law and politics, the impact of colonialism, and problems in state building.

ANTH 370. Uncovering Race and Class in the American Past  3 credit hours
General education advanced further study course. Survey of the history and experience of ethnic groups in the United States through the study of material remains. Attention is focused on the presentation and/or exclusion of ethnic groups in depictions of American history and the birth of ethnic groups in the American context.

ANTH 388. Cognitive Anthropology  3 credit hours
General education advanced further study course. Concentrates on a trans-cultural comparison of the cognitive constructions of life-space, social reality and world view in foraging, agricultural and industrial societies focusing on the socioculturally conditioned aspects of intellectual functioning and perceptually based behavior.

ANTH 397. Topics In Anthropology  3 credit hours
Studies current issues in anthropology. Content varies with interests of instructor. Consult current Schedule of Courses for topics.

ANTH 397AJ. Introduction to Human Osteology  2 credit hours
Course introduces the student to the human skeleton, including basic recognition and identification of skeletal elements, sex and size estimation. Taught in a lab setting giving students access to a hands-on experience working with the human skeleton. Students learn how to complete a skeletal inventory and write a technical report documenting the contents of the skeletal materials assigned to them.

ANTH 398. Travel Seminar  1-4 credit hours
An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science and economics while visiting historic places of interest. Uses the archaeological, biological, linguistic and sociocultural perspectives to better understand overseas cultures. Prerequisite: departmental consent.

ANTH 481. Cooperative Education in Anthropology  1-4 credit hours
Provides practical experience that complements the student's academic program. Consultation with, and approval by, an appropriate faculty sponsor are necessary. Graded Cr/NCr.

ANTH 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ANTH 498. Readings In Anthropology  1-3 credit hours
Repeatable up to 6 hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology.

ANTH 502. Introduction to Archaeological Laboratory Techniques  1-3 credit hours
Introduction to the laboratory processing of archaeology materials. Direct experience in all phases of preparing excavated materials for analysis, including cleaning, restoring, preserving, numbering and cataloging ceramic and lithic artifacts and other remains. Repeatable to a maximum of 3 credit hours. Prerequisite: ANTH 305.

ANTH 506. Peoples of the Pacific  3 credit hours
General education advanced further study course. A survey of the populations, languages and cultures of nonliterate peoples of Polynesia, Micronesia and Indonesia. Course includes diversity content.

ANTH 508. Ancient Civilizations of the Americas  3 credit hours
General education advanced further study course. A cultural survey of the Aztec, Maya and Inca. Prerequisite: instructor's consent.

ANTH 509. Cultures of Ancient Mexico  3 credit hours
Archaeological and ethnohistoric survey of the numerous civilizations of ancient Mexico from earliest inhabitants to the period of the Spanish invasion. The cultures covered include Olmec, Teotihuacan, Zapotec and Aztec. Explores the environmental, social and political conditions that led to the rise and fall of societies across Mexico. Prerequisite: ANTH 103.

ANTH 510. Archeology of the Ancient Maya  3 credit hours
Development of the tropical Lowland Maya civilization in Mesoamerica from the origins of agriculture through the Spanish Conquest. Topics include the rise of divine kingship, the Maya calendar and hieroglyphic writing, interstate conflict and warfare, and Maya religion. Explores archaeological, ethno-historical and linguistic data and accounts. Prerequisite: ANTH 103.

ANTH 511. The Indians of North America  3 credit hours
General education advanced further study course. A survey of tribal societies and native confederations north of Mexico from the protohistoric through the historic period. Course includes diversity content. Prerequisite: ANTH 102.

ANTH 515. China  3 credit hours
General education advanced further study course. An introduction to the people of China and aspects of their culture: economy, government, society, religion and the arts. Historical attention on the many adjustments the Chinese made during the 20th century following political revolutions, industrialization and expanding trade relations. Course includes diversity content.

ANTH 516. Japan: People and Culture  3 credit hours
General education advanced further study course. An introduction to the culture of Japan including its history and prehistory, aspects of traditional culture, and 20th century Japan, its economy, politics and social organization. Course includes diversity content.

ANTH 517. Anthropology of Islam  3 credit hours
Designed to enhance undergraduate and graduate studies in the diversity of Islamic traditions as they are practiced in various geographic areas and social settings around the world. Covers some of the most prominent theoretical approaches in social and cultural anthropology, which are scrutinized by in-depth ethnographic accounts of Islamic practices in various sociopolitical contexts. Course includes diversity content. Prerequisite: ANTH 102.

ANTH 519. Applied Anthropology  3 credit hours
The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite: ANTH 102.

ANTH 522. Art and Culture  3 credit hours
General education advanced further study course. A survey of the visual and performing arts of non-Western peoples with special attention to their relationships in the cultural setting. Course includes diversity content. Prerequisite: ANTH 102.
ANTH 526. Social Organization  3 credit hours
A survey of the varieties of social organization among peoples throughout the world. Deals with family systems, kinship, residence patterns; and lineage, clan and tribal organizations. Course includes diversity content. Prerequisite: 6 hours of anthropology.

ANTH 528. Medical Anthropology  3 credit hours
General education advanced further study course. Studies the health and behaviors of various human societies, especially in, but not limited to, those inside the Western scientific tradition. Covers attitudes toward the etiology of disease, the techniques of healing, the use of curative drugs and other agents, the roles of healers and therapists, and the attitudes of the community toward the ill. A library or field research project is required. Prerequisite: 3 hours of nursing or 3 hours of anthropology or instructor's consent.

ANTH 538. Early Man in the New World  3 credit hours
A critical examination of facts and theories concerning early man in the New World from the peopling of the continent to the beginning of the Archaic Tradition, and of the role of cultural contacts between Eastern Asia and North America. Prerequisite: ANTH 305.

ANTH 540. The Indians of the United States: Conquest and Survival  3 credit hours
An anthropological inquiry into four centuries of cultural contact, conflict, resistance and renascence. Prerequisite: ANTH 102 or instructor's consent.

ANTH 542. Women in Other Cultures  3 credit hours
Cross-listed as WOMS 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies. Course includes diversity content.

ANTH 555. Paleoanthropology and Human Paleontology  3 credit hours
General education advanced further study course. A detailed examination of human evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: ANTH 101 or BIOL 210 or equivalent.

ANTH 557. Human Osteology  3 credit hours
Deals with human skeletal and dental materials, with applications to both physical anthropology and archaeology. Lecture and extensive laboratory sessions; includes bone and tooth identifications, measurement and analysis, and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: ANTH 101 or equivalent.

ANTH 562. Introduction to GIS  3 credit hours
A skills and techniques course that introduces elementary concepts and tools of geographic information systems and the particular tools available in the program ArcGIS Desktop. Application of GIS tools and concepts to data analysis and interpretation, to behavioral pattern interpretation, and management decisions in using the data available from the WSU City Archeologist program and from the Sedgwick County GIS department are emphasized.

ANTH 597AF. The Preservation of Artifacts in Relation to Exhibition  3 credit hours
Explores preservation techniques for artifacts on exhibit and the preparation of artifacts to go on exhibit. Techniques include general conservation, lighting and temperature. Students work independently on a project and work with artifacts to prepare for exhibit.

ANTH 600. Forensic Anthropology  3 credit hours
Cross-listed as CJ 600. Encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition and skeletal system. Covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification and identification emphasizing anthropological interpretation. Prerequisite: ANTH 101 or equivalent.

ANTH 602. Archaeological Laboratory Analysis  1-3 credit hours
Students analyze archaeological materials, including ceramic, lithic, faunal and vegetal remains according to accepted methods. Students learn to apply standard methods of identification and modes of interpretation to the materials to produce an acceptable archaeological report. Prerequisites: ANTH 502 and instructor's consent.

ANTH 606. Museum Methods  3 credit hours
An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation and storage. Emphasizes current trends in museological philosophy concerning purpose, function and relevance of museums, as well as career opportunities. Prerequisite: instructor's consent.

ANTH 607. Museum Exhibition  3 credit hours
Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite: ANTH 606 or instructor's consent.

ANTH 609. Biological Anthropology Laboratory Analysis  1-3 credit hours
Analyzes biological anthropology materials including human and nonhuman skeletal material of both forensic contemporary or prehistoric origin according to standardized methods for recording and collecting data in biological anthropology. Learn methods of identification, analysis and interpretation and prepare a standard technical report. Repeatable up to 6 credit hours. Prerequisites: ANTH 101, 106, 356 or 557.

ANTH 611. Southwestern Archaeology  3 credit hours
General education advanced further study course. A comprehensive survey of the prehistoric, historic and living cultures of the American Southwest particularly emphasizing the cultural continuities and changes covering 11,000 years. Prerequisite: one introductory course in anthropology or departmental consent.

ANTH 612. Indians of the Great Plains  3 credit hours
An investigation of the cultural dynamics of the Great Plains area from the protohistoric period to the present. Course includes diversity content. Prerequisites: 6 hours of anthropology and departmental consent.

ANTH 613. Archaeology of the Great Plains  3 credit hours
General education advanced further study course. The archaeology of the Great Plains area from earliest evidence to the historic period. Prerequisite: one introductory course in anthropology or departmental consent.

ANTH 647. Theories of Culture  3 credit hours
A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of anthropology.

ANTH 651. Language & Culture  3 credit hours
Cross-listed as LING 651 and MCLL 651. An introduction to the major themes in the interactions of language and society, and language and culture, including ethnography of communication, linguistic
relativity and determinism; types of language contact, the linguistic repertoire, and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

ANTH 662. Topics in Spatial Analysis 3 credit hours
Explores ways, means, techniques and methods to analyze geospatial data. Geographic analysis with GIS can identify patterns, relationships and trends that lead to better decision making. The class begins with six of the most common geographic analysis tasks: mapping where things are, mapping the most and least, mapping density, finding a boundary and what is inside the boundary, finding what is nearby, and mapping what has changed. The second half of the class covers analytical topics that range from identifying patterns and clusters, to analyzing geographic relationships. Prerequisites: grade of C or better in the elementary GIS course or instructor's consent. Knowledge of the Microsoft Windows operating system and Microsoft Office software suite is also a must.

ANTH 680. CRM Archaeology 3 credit hours
A review of the major federal and selected state laws and regulations affecting the practice of archaeology and anthropology in the area of Cultural Resources Management and historic preservation in the United States. Discussion focuses on the public concern with historic and cultural resources and archaeology, balancing research and planning needs, and interaction between clients and agencies.

ANTH 690. Field Methods in Anthropology 1-8 credit hours
Instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific summer session and varies from year to year. A maximum of 6 credit hours can be counted toward either the BA or MA degree in anthropology. Prerequisite: instructor's consent.

ANTH 736. Advanced Studies in Archaeology and Ethnohistory 3 credit hours
Special area and theory problems in a historical approach to culture. Prerequisites: graduate standing and 6 hours of anthropology.

ANTH 746. Advanced Studies in Cultural Anthropology 3 credit hours
Entails an in-depth coverage of selected topics in cultural anthropology, including social structure, economic and political organization, religion, personality, arts and knowledge systems, and current research methods. Prerequisites: graduate standing and 6 hours of anthropology, including ANTH 647 or equivalent as determined by the graduate coordinator.

ANTH 750. Workshop 1-4 credit hours
Short-term courses focusing on anthropological problems. Prerequisite: instructor's consent.

ANTH 756. Advanced Studies in Biological Anthropology 1-3 credit hours
In-depth coverage of selected topics in biological anthropology, including the history of evolutionary thought, human variation, growth and development, population dynamics, paleoanthropology and primatology. Focuses on current issues, method and theory in biological anthropology. Prerequisites: graduate standing and 6 hours of anthropology (must include ANTH 101 or instructor's consent).

ANTH 770. Advanced Readings 1-3 credit hours
Provides opportunities for additional student research and reading on concepts and topics covered in the core graduate courses, ANTH 736, Advanced Studies in Archaeology and Ethnohistory; ANTH 746, Advanced Studies in Cultural Anthropology; and ANTH 756, Advanced Studies in Biological Anthropology. Repeatable up to 6 hours. Prerequisites: full graduate standing, completion of one core course (ANTH 736, 746 or 756), departmental consent.

ANTH 781. Cooperative Education 1-4 credit hours
Provides practical experience that complements the student's academic program. Requires consultation with, and approval by, an appropriate faculty sponsor. May not be used to satisfy degree requirements. Repeatable for credit. Graded Cr/NCr. Prerequisite: graduate status.

ANTH 798. Introduction to Research 3 credit hours
Research methodology in anthropology, including bibliography, research design and the philosophy of research. Prerequisites: full graduate standing and completion of at least one of the following core courses: ANTH 736, 746, or 756.

Arabic (ARAB)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ARAB 111. Elementary Arabic I 5 credit hours
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work.

ARAB 112. Elementary Arabic II 5 credit hours
Further develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite: one unit of high school Arabic, ARAB 111 or departmental consent.

ARAB 210. Intermediate Arabic 5 credit hours
Continues to develop the four fundamental skills in language learning: listening, speaking, reading and writing; emphasizes conversation and cultural readings. Prerequisite: two units of high school Arabic, ARAB 112 or departmental consent.

Art Education (ARTE)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ARTE 302. Jewelry Design/Construction 3 credit hours
Emphasizes metal working processes (forging, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry.

ARTE 303. Stimulating Creative Behavior 3 credit hours
General education advanced issues and perspectives course. Includes theories of creativity; strategies for problem finding and problem solving; identifying various external and internal blocks to creativity; testing for creativity; the relationships of creativity, cognition, and visual thinking; creative challenges; and stimuli. Emphasizes methods to elicit creative behavior. Repeatable once for credit.

ARTE 310. ISAM: Elementary Art Education and Literacy 3 credit hours
An introduction to the practices of art educators for the young student, PreK-6, including goals, both philosophical and historical, emphasizing the content of the visual arts, objectives/evaluation strategies in planning lessons. Principles used in effective instruction that integrate the visual arts with other subjects are incorporated with ways to develop skills in thinking, comprehension, reading, writing and vocabulary, both visual and verbal. Students further understand instruction, assessment and management (ISAM) in the context of teaching the visual arts and receive training to use the six-trait Analytical Writing Guide for assessing writing, which is the method used to score the Kansas State Writing Assessment. Prerequisite: art education major and successful completion of Mid-Program Review or instructor's consent.
ARTE 311. Art Education Curriculum in Elementary School  2 credit hours
Studies developmental characteristics of the elementary-age student and the development of the art program with respect to materials, skills and knowledge content.

ARTE 313. Fiber Exploration  3 credit hours
Focuses on fiber experiences appropriate for the classroom on the intermediate or secondary level. Explores various kinds of looms weaving, braiding and twisting techniques that result in a fabric or web. Explores simple dye techniques.

ARTE 410. ISAM: Preteaching Internship: Middle  3 credit hours
Teacher candidates attend class on campus and participate in a 12-week, daily experience in one middle school art classroom in order to apply knowledge to plan and assess a 10-day showcase unit of study. Interns should allow 90 minutes daily for this experience. Students further understand instruction, assessment and management in the context of teaching the visual arts. Includes overview of the philosophy, psychology and artistic development of the middle school student. Emphasizes content, objectives, methods and evaluation principles used in effective instruction that integrates the visual arts with other subjects that are incorporated with ways to develop skills in thinking, reading, comprehension, writing and vocabulary, both visual and verbal. Successful completion precedes enrollment in internship courses ARTE 459, 462, 517. A grade of B- or higher is required to continue in the program. Prerequisites: acceptance into the art education program, including grades of B- or higher in ARTE 310, 414.

ARTE 413. Independent Study  1-3 credit hours
Directed independent study in art education not normally covered in other coursework. Prerequisite: instructor's consent.

ARTE 414. ISAM: Secondary Art Education  3 credit hours
An introduction to the practices of art educators for students enrolled in both middle and high schools. Philosophical and historical goals for teaching art in the secondary level are included as is the content of the visual arts, objectives in planning lessons, methods and evaluation strategies. Principles used in effective instruction that integrate the visual arts with other subjects are incorporated with ways to develop skills in thinking, reading, comprehension, writing and vocabulary, both visual and verbal. The students further understand instruction, assessment and management (ISAM) in the context of teaching the visual arts and practice using the six-trait Analytical Writing Guide for assessing writing, which is the method used to score the Kansas State Writing Assessment. Prerequisite: ARTE 310, or instructor's consent.

ARTE 459. Teaching Internship: Elementary Art  4 credit hours
During a seven-week period, the art intern spends all day in a professional setting in an elementary school. The intern gradually assumes art teaching responsibilities and uses curriculum plans that meet district standards and the needs of the elementary-age student. Prerequisites: acceptance into Core III internship, including grades of B- or above in ARTE 310, 410, 414, CI 427, CESP 433 and overall GPA of 2.500, or higher. Corequisites: ARTE 462, 459.

ARTE 462. Teaching Internship: Secondary Art  4 credit hours
Eight-week engagement in a professional setting in a selected high school. Student intern gradually assumes art teaching responsibilities and designs curriculum plans that meet district standards and the needs of the high school-age student. Intern prepares, teaches, and assesses a unit of study as a document to submit as part of the license application. Cooperating teacher, with the approval of course faculty, plans for designated start and end dates for this unit. Prerequisites: acceptance into Core III student teaching semester, including grades of B- or better in ARTE 310, 410, 414, CI 427, CESP 433; 2.500 overall GPA. Corequisites: ARTE 459, 517.

ARTE 481. Cooperative Education  1-8 credit hours
Allows students to participate in the cooperative education program. Graded Cr/NCr.

ARTE 48IN. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ARTE 514. Aesthetic Inquiry  3 credit hours
Focuses on contemporary trends in aesthetics relative to the visual arts. Students write critical observations and interpretations in response to artwork. Prerequisite: upper-division art major.

ARTE 515. Developing Visual Materials for Art Education  3 credit hours
A production laboratory that emphasizes the integration and selection of appropriate visual media for art instruction. Prerequisite: ARTE 310 or equivalent.

ARTE 517. Teaching Internship Seminar: Art  1 credit hour
Analyzes problems encountered in the art classroom during the second semester of the internship. For undergraduate students only. Prerequisites: acceptance into Core III internship, including grades of B- or above in ARTE 310, 410, 414, CI 427, CESP 433 and overall GPA of 2.500, or higher. Corequisites: ARTE 462, 459.

ARTE 550. Art Workshop  1-3 credit hours
Repeatable for credit. Area covered is determined at the time the course is offered.

ARTE 702. Metal Processes for Jewelry Construction  3 credit hours
Emphasizes fabrication techniques, design analysis and function of jewelry designed and produced by students and acknowledged craftsmen. Repeatable once for credit. Prerequisite: ARTE 302 or instructor's consent.

ARTE 710. Creative Behavior and Visual Thinking  3 credit hours
Identification and application of theories for creative and critical thinking. Emphasizes strategies for problem solving and visual thinking and procedures to implement those strategies. Student identifies an area for individual investigation. Repeatable once for credit.

ARTE 711. Seminar In Art Education  1-3 credit hours
Supervised study and research of contemporary issues in art education. Repeatable for credit with adviser's consent.

ARTE 713. Fiber & Fabric Processes  1-3 credit hours
Fiber processes using traditional and experimental techniques in woven forms and other structural techniques using natural and man-made fibers. Repeatable once for credit. Prerequisite: instructor's consent.

ARTE 714. Aesthetics for Classroom  3 credit hours
Focuses on applying the issues and theories of aesthetics to the K-12 classroom. Students participate in discussions and demonstrations of these theories through critical and reflective writing as well as curricular planning. Students consider aesthetic development and construct lessons to integrate strategies involving aesthetic concepts into their teaching.

ARTE 719. Electronic Imaging  1-3 credit hours
Emphasizes Macintosh and other computer processes and their application to art and art education. Students generate computer images using digitizing, scanning, and animation with a variety of software and hardware. Makes application of this technology to problems of design, art history, and art criticism. Develops curriculum materials
for art instruction employing computer graphic instruction. The graduate student prepares a research paper on a selected topic related to computer graphics and art learning.

**Art Foundation (ARTF)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**ARTF 102. Introduction to Art and Design  3 credit hours**

Introduces fundamental concepts in analyzing and interpreting visual art and resources available in the university and community. Employs lectures and collaborative and/or experiential modes of learning. Written assignments introduce students to various interpretive and analytical models for determining meaning and cultural value in art. Attendance at art exhibitions, receptions and lectures is required.

**ARTF 136. Foundation 2-D Design  3 credit hours**

An introduction to design for visual communication. A study of the elements of art and the principles of design relating to formal, Gestalt and conceptual organization of the two-dimensional surface. Includes elements of line, shape, space, texture and value. Instructional process includes lecture, critique and supervised studio practice.

**ARTF 145. Foundation Drawing  3 credit hours**

Introduction to visual arts concepts, vocabulary, tools, materials, basic drawing skills and attitudes through the drawing experience. Teaches perceptual skills and the ability to represent objects in space and organize them into a coherent pictorial statement along with technical and expressive competence with a limited range of media. Structured homework assignments.

**ARTF 189. Foundation 3-D Design  3 credit hours**

Lectures, research and studio methods on the evolutionary role of three-dimensional design in contemporary society using a variety of combination of materials, techniques, forms and concepts. Also emphasizes learning to handle equipment and tools properly.

**ARTF 202. Mid-Program Review  1 credit hour**

Students receive information about degree options and career choices in art and design; prepare a plan of study for upper-division coursework; exhibit a portfolio or dossier for faculty evaluation of readiness for upper-division coursework; and apply to one of the majors in the school with portfolio and plan of study. Graded Cr/NCr. Prerequisites: completion of ARTF 102, 136, 145, 189; completion of three of the general education foundation courses; completion of/concurrent enrollment in 6 credit hours of ARTH 125_; completion of/concurrent enrollment in any two 200+ courses from ARTE, ARTS and/or ARTG.

**Art History (ARTH)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**ARTH 103. Art Appreciation  3 credit hours**

General education introductory course. Introduction to art as a philosophical expression simultaneously reflecting and influencing contemporary culture. Introduction to terms and tools, physical and psychological aspects of seeing, interpretive methods, value of art and design in culture, prevalence of art and design in everyday environment. Required attendance at lectures and art events.

**ARTH 125. Introduction to Visual and Material Culture  3 credit hours**

General education introductory course. Examines selected themes, ideas and concepts that have informed visual and material practices across time and across cultures. Beginning with terms that are likely familiar to students and instructors alike, this class traces the ways in which these concepts have informed artists, designers and other creative minds to create their works and change their thinking about their medium, their philosophies of making and doing, and their views of self and the world. Repeatable for credit when taken with different alpha designators (i.e., ARTH 125A, 125B, 125C, etc.).

**ARTH 125A. Introduction to Visual and Material Culture: Play  3 credit hours**

General education introductory course. Using play as a lens, students explore artistic, popular culture, and design practices, as they intersect across eras, cultures, and media. Focuses on articulations of play as a critical and diverse form of human expression, related to, but not limited to entertainment.

**ARTH 125B. Introduction to Visual and Material Culture: Bodies  3 credit hours**

General education introductory course. Using a thematic approach, this course introduces students to the discipline of art history. Students engage with a variety of cultures and historical periods in which the human body was the primary vehicle of artistic expression (including ancient Egypt, classical Greece, revolutionary France and more) in order to understand the range of meanings the body can hold, and to explore the historical underpinnings of our contemporary culture’s obsession with the body.

**ARTH 125C. Introduction to Visual and Material Culture: Power and Propaganda  3 credit hours**

General education introductory course.

**ARTH 321. Avant Garde Art, Film, Rock Music & Subcultures  3 credit hours**

General education advanced issues and perspectives course. Exploration of 20th century avant-garde art and film movements and their influence on late 20th century popular music, visual culture, and countercultures and subcultures such as mod, glam, punk, hacker, goth, rave, and others. Required attendance at art exhibitions, film screenings, lectures.

**ARTH 346. Modernisms I  3 credit hours**

General education advanced further study course. Explores the changing array of social, cultural, political and medium-specific issues that have impacted the development of modern art and design and the notion of modernism as an important theoretical term. Themes, topics and artistic/design-based references in this class change and respond to current debates and dialogues informing art and design practices. Prerequisites: 3 credit hours of ARTH 125 for non-SADCI majors; 6 credit hours of ARTH 125 for SADCI majors; or instructor’s consent.

**ARTH 347. Themes in Contemporary Art and Design I  3 credit hours**

General education advanced further study course. Explores the historical foundations of contemporary art and design, as well as the various social, cultural, political and medium-specific issues that influence creative citizenship, contemporary practices, theories of postmodernism and globalization, existing and emerging exhibition strategies, and changing audiences and environments. Themes, topics and artistic/design-based references of this class change and respond to current debates and dialogues. Prerequisites: 3 credit hours of ARTH 125 for non-SADCI majors; 6 credit hours of ARTH 125 for SADCI majors; or instructor’s consent.

**ARTH 349. Architecture and the Built Environment  3 credit hours**

General education advanced issues and perspectives course. Analyzes architecture and the built environment through historical investigations, theoretical debates, and applied learning opportunities. Architecture and the built environment are explored as practices reflective of social,
cultural, economic, aesthetic and material conditions and changes — as well as forms of civic engagement and individual and collective expression. Other associated topics addressed include public policy, tourism, transportation, walkability and bikability, environmentalism, green initiatives and sustainability, material technologies and studies in everyday life. Prerequisites: 3 credit hours of ARTH 125 for non-SADCI majors; 6 credit hours of ARTH 125 for SADCI majors; or instructor's consent.

ARTH 387. Theories of Art History and Culture 3 credit hours
General education advanced further study course. Explores a range of theoretical models from various cultures and periods that have been used to better understand, contextualize, interpret and analyze visual culture and a range of art and design practices. Structuralism, poststructuralism, modernism, postmodernism, cultural theory (including postcolonial theory, queer theory and feminism), material theory, aesthetics, and theories of connoisseurship are discussed as contributing influences to successful creative practice and useful tools for its subsequent interpretation. Prerequisites: credit hours of ARTH 125 for non-SADCI majors; credit hours of ARTH 125 for SADCI majors; or instructor's consent.

ARTH 390. QuickFire Topics 1-3 credit hours
QuickFire courses are special courses of variable duration that emphasize highly focused learning opportunities in art, design and creative industries. QuickFire courses may involve travel opportunities, study with visiting artists and designers, specialized engagement with current events or issues, or collaborative partnerships within and outside the university. QuickFire topics are announced the semester preceding enrollment. Repeatable for credit, provided course content of each ARTH 390 class is different. Prerequisite: ARTH 125 or instructor's consent.

ARTH 390A. QuickFire: Digital Culture and Artistic Resistance 1 credit hour
Explores the work of contemporary artists using a variety of digital media to articulate alternatives to discourses and forms of technological culture. Focus is on work exploring body-technology relationships in global contexts.

ARTH 390B. QuickFire: Art and Films of Lynn-Hershman Leeson 1 credit hour
Leeson's work, spanning photography, digital installation, and film, serves as a lens to consider significant developments and issues in the media arts from the vantage point of a woman artist recognized for helping shape and articulate this genre since the 1970s.

ARTH 390C. QuickFire: Virtually Gendered Spaces 1 credit hour
Explores the concept of gendered spaces through artistic, discursive, and architectural projects in Europe, the United States, Turkey and India. Considers how aesthetics and built environments, physical and simulated, intersect, reflect, determine or challenge gender relations and norms.

ARTH 390D. QuickFire: Street Photography of the 1950s & 1960s 1 credit hour
Explores the rich American documentary photography of the 1950s and 1960s and focuses on seminal artists like Robert Frank, Gary Winograd, Lee Friedlander, and Diane Arbus. There is a special emphasis on Gordon Parks, in conjunction with the upcoming exhibition of his works at the Ulrich Museum of Art.

ARTH 390E. QuickFire: Blockbuster Biopics 1 credit hour
Centers around two highly successful films depicting the lives of artists Jackson Pollock and Frida Kahlo. Compares the artists' biographies and work to their representation in the movies, and critically examines the movies' aims, execution and portrayal of these well-known artists.

ARTH 390F. QuickFire: "Sensation" and the Young British Artists 1 credit hour
Course delves into contemporary British art, from diamond-encrusted skulls to self-portraits in blood. Engages the controversies caused by the so-called "Brit Pack" and discovers why their debut caused such a sensation.

ARTH 390G. QuickFire: Surveillance: The Body 1 credit hour
Students consider how the concept of The Body intersects with surveillance. Focuses on how artists have responded to old and new surveillance methods that codify our ideas of gender/sexuality, race/ethnicity, and religion. Examines related cultural theory and contemporary issues. Students engage with these ideas through a final creative project. Students working in any artistic discipline are welcome; no photo experience required.

ARTH 390I. QuickFire: Surveillance: Space and Place 1 credit hour
Considers how the concepts of Space and Place intersect with surveillance. Focus is on how artists have responded to old and new surveillance methods that shape our relationship with space in its various forms including public/private, national/international/transnational, and digital environments. Examines related cultural theory and contemporary issues. Students engage with these ideas through a final creative project. Students working in any artistic discipline are welcome; no photo experience required.

ARTH 390J. QuickFire: Surveillance: The Archive 1 credit hour
Considers how the concept of the Archive intersects with surveillance. Focus is on how artists have addressed personal, institutional, military and governmental archives as forms of surveillance. Examines related cultural theory and contemporary issues. Students engage with these ideas through a final creative project. Students working in any artistic discipline are welcome; no photo experience required.

ARTH 390K. QuickFire: Modern and Contemporary Kansas Art and Collections 1 credit hour
Designed to introduce students to a range of modern and contemporary works by Kansas artists — all of which form part of the collection of Emprise Bank and course instructor, Mike Michaelis. Students meet on-site in downtown Wichita and discuss the paintings, prints, sculptures and ceramic works that form part of this important collection. Other topics include different collection priorities, different interactions between artists and collectors, issues specific to Kansas artists and their work, presidential painters, and various trends in modern and contemporary Kansas art.

ARTH 390N. QuickFire: Riverfest with Harvester Arts 1 credit hour
Students work closely with the organization Harvester Arts, and ultimately have the chance to meet with acclaimed artist Michael Jones McKean. Discussion topics include how to conduct productive critiques, and the process of making critically engaged art that resonates with many segments of the community.

ARTH 391. Topics in Art History 3 credit hours
Lecture course with selected readings on various topics in art history. Course content varies but individual areas are not repeatable for credit. Prerequisites: ARTH 121, 122.

ARTH 391E. History of Graphic Design 3 credit hours
Explores graphic design as a key element in the development of visual culture across a variety of historical periods and geographical locations. Emphasis is given to important artists, developing technology, and design movements, covered in a roughly chronological fashion. Historical periods discussed include Northern Renaissance and Baroque with special attention paid to printmaking, France and Spain during the
Revolution, Russia after the fall of the Czars, American modernism, and more.

ARTH 395. SlowBurn Topics - 1st Semester  3 credit hours
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the first semester course typically devoted to research and planning. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Topics vary. Repeatable for credit. Graded Cr/NCr. Prerequisite: 6 credit hours of ARTH 125 or instructor's consent.

ARTH 395A. SlowBurn Topics - 1st Semester: Curation and Installation of "Do It"  3 credit hours
This hands-on, applied learning course explores all the possibilities for working in a museum environment. Students collaborate closely with the staff of the Ulrich Museum of Art to curate the upcoming Do It exhibition, choosing works, installing the show, designing publicity materials and helping with events planning.

ARTH 396. SlowBurn Topics - 2nd Semester  3 credit hours
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the second semester course typically devoted to the experience researched and planned in the first semester SlowBurn Topics course. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Topics vary. Repeatable for credit. Graded Cr/NCr. Prerequisites: 6 credit hours of ARTH 125, approved ARTH 395 in sequence; or instructor's consent.

ARTH 396A. Slow Burn Topics - 2nd Semester: Curation and Installation of "Do It" II  3 credit hours
This hands-on, applied learning course explores all the possibilities for working in a museum environment. Students collaborate closely with the staff of the Ulrich Museum of Art to curate the upcoming Do It exhibition, choosing works, installing the show, designing publicity materials and helping with events planning. Course is the second part of a two-semester SlowBurn course.

ARTH 426. Seminar: Techniques in Art History  3 credit hours
A culminating study for senior art history majors which considers the history of the discipline, its research methods, and theory. Requires extensive readings and reports. Prerequisite: instructor's consent.

ARTH 520. Seminar In Art History  1-3 credit hours
Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit.

ARTH 526. Art Since 1945  3 credit hours
General education advanced further study course. Art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism, theory, and artistic practice. Prerequisite: ARTH 124 or instructor's consent.

ARTH 532. Independent Study in Art History  1-3 credit hours
Work in a specialized area of the study of art history. Directed readings and projects. Prerequisite: instructor's consent.

ARTH 533. Seminar: Topics in Modern Art  3 credit hours
Selected readings and problems in art of the modern era. Course content varies but individual areas are not repeatable for credit.

ARTH 533AA. Themes in Contemporary Art and Design II  3 credit hours
Explores the historical foundations of contemporary art and design, as well as the various social, cultural, political and medium-specific issues that influence creative citizenship, contemporary practices, theories of postmodernism and globalization, existing and emerging exhibition strategies, and changing audiences and environments. Requires in-depth research and analysis in oral and written communication. Prerequisites: ARTH 347, graduate standing, or instructor's consent.

ARTH 533AB. Islamic Art  3 credit hours
Explores the relationship between the Islamic faith and various art forms. Muslim societies have produced artworks of extraordinary vitality and diversity across three continents over the course of 1500 years. Course examines this art thematically. Topics include: introduction to Islam, mosque architecture, calligraphy, Islamic ornament, ceramics, contemporary video/performance art, and more. Students gain a greater familiarity with the vibrant Islamic community in Wichita through guest speakers, field trips, and cultural exchanges.

ARTH 533AC. Curation and Installation of “Do It” Exhibition  3 credit hours
This hands-on, applied learning course explores all the possibilities for working in a museum environment. Students collaborate closely with the staff of the Ulrich Museum of Art to curate the upcoming Do It exhibition, choosing works, installing the show, designing publicity materials and helping with events planning.

ARTH 533AF. Realism/Activism/Prints  3 credit hours
Working closely with the director of the Ulrich Museum of Art and the museum's notable collection of works on paper, students explore regional and national printmakers of the past century who engaged in social activism. Students have the opportunity to view firsthand the works discussed in the class, and to research and write critically about those works for an exhibition at the Ulrich Museum of Art the following semester.

ARTH 540A. Concepts in Creative Industries: Planning and Preparatorship  3 credit hours
Working closely with cultural institutions and other partner organizations, students in this course work on the installation and/or deinstallation of a show or exhibition. They learn about the practical and conceptual aspects of working with art objects, from restrictions on light level, humidity and temperature, to proper handling procedures and hanging methods. Students experience collaboration within an arts organization first-hand, and learn the fundamentals of collections storage and display. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 540B. Concepts in Creative Industries: Research and Interpretation  3 credit hours
Focuses on hands-on learning through partnerships with on- and off-campus arts and cultural organizations. Working closely with their partner organizations, students explore the role of curator by participating in a show or exhibition during its planning and execution, or by helping an organization fulfill its research needs related to exhibition planning and collection management. In addition to engaging directly with actual artworks, students have the opportunity to practice critical thinking and writing skills, including authorship or essays and didactics that may be used in exhibitions or published in the partner organization's materials. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 540C. Concepts in Creative Industries: Audiences and Outreach  3 credit hours
Focuses on applied learning through partnerships with on- and off-campus arts and cultural organizations. Working closely with their partner organizations, students study the dynamics of diverse audiences, explore the ways in which cultural institutions engage with communities, and contribute to efforts surrounding audience outreach. Students consider how diverse audiences may interact with didactics and other materials, engage in outreach activities in neglected or underserved communities, analyze the institution's primary patrons and
supports, and participate in conversations surrounding new audience cultivation. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 540D. Concepts in Creative Industries: Funding and Promotion 3 credit hours
Focuses on applied learning through partnerships with on- and off-campus arts and cultural organizations. Working closely with their partner organizations, students learn the basics of funding and resource management for those organizations, such as grant writing, discovering alternative revenue streams, and collaborating with existing and prospective donors or commercial sponsors. Students also learn about promotional strategies by participating in the venues' publicity and marketing efforts and by helping to create promotional materials, to plan events, to find advertising opportunities, and more. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 546. Modernism II 3 credit hours
Explores a changing array of social, cultural, political and medium-specific issues that have impacted the development of modern art and design and the notion of modernism as an important theoretical term. Themes, topics and artistic/design-based references in this class change and respond to current debates and dialogues informing art and design practice. Requires in-depth research and analysis in oral and written communication. Prerequisites: ARTH 346, graduate standing, or instructor's consent.

ARTH 550A. Art, Gender and the Body 3 credit hours
Explores how women and transgender artists intervene in the art world through self-representation and artistic expression, and engages a wide range of critical debates about subjectivity, feminism, narrative and representation. Explores a variety of self-representative strategies that women artists have used to help shape the history of art and women's movements. Students examine a spectrum of visual and textual genres, such as women's self-portraiture, performance art, artist statements, visual-textual hybrid projects, queer culture, scholarly texts by feminist and queer critics and more. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 550B. Contemporary Art & Technology 3 credit hours
Examines the role of mechanical, electronic and digital technologies in the creative practices of the late 20th and 21st centuries with emphasis on Europe and North America. Beginning with kinetic and moving to cybernetically inspired art, this course explores early uses of computer technology, including early experiments in synthetic video and interactivity. Critical investigations of new media art such as computer games, bio and sound art, and art for mobile devices, as well as examinations of new media arts beyond Western traditions are integral parts of the course. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 550C. Media, Innovation and Social Impact 3 credit hours
Investigates technological innovation and its social impact through a range of media theories and historical and contemporary practices. Also examines a range of emerging expressive forms and their intersections within creative practice, including radio, film, the internet, software innovations, electronic objects, biotechnologies, video games, social media platforms, sound/music integration and more. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 550D. Spaces, Borders & Transitions 3 credit hours
Investigates the relationships between technology, perception, and the built environment broadly conceived. Explores a variety of practices, including architecture, digital art, design, social media, social networking, emerging technologies, user-generated content, and other structures that use borders, indeterminacy and transition as expressive strategies. Students examine inbetweeness, interstitial space and flux as inherent elements of contemporary practice, and apply this learning through group projects and discussions. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 560A. Global Art Now 3 credit hours
Examines the theoretical, conceptual and technical trends that underpin global contemporary art and design practices, as well as their changing relationships to various art historical models and events. Some of the topics addressed include globalization, emerging media and interdisciplinarity, the growth of festival and biennale culture, the Culture Wars, gender and sexuality, and the fluid relationships between artists, works, viewing environments and audiences. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 560B. Contemporary Theory and Criticism 3 credit hours
Examines a range of contemporary theoretical models, as they apply to the study and execution of art and design. Through intensive readings and classroom discussion, students learn ways in which to approach art and design critically and to use a range of theories for the sound interpretation, analysis and evaluation of visual culture. Topics addressed may include structuralism and poststructuralism, deconstruction, semiotics, abjection, Foucauldian theory, postcolonial theory, queer theory, feminism and cyber theory. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 560C. Festivals and Biennales 3 credit hours
Course explores a diverse range of large-scale exhibitions, art fairs and biennales, and speculates on their importance and relevance within the changing world of contemporary art and design. Beginning with a survey of large global exhibitions such as the Great Exhibition of 1851 and the Venice Biennale, the course explores the economic, social, cultural, political and artistic implications of large-scale exhibitions and their impact on contemporary art history and individual creative practice. Course may include national or international travel to visit one or more exhibitions. Prerequisites: ARTH 125 and at least one 300-level ARTH course; or instructor's consent.

ARTH 560D. Contemporary Art of the Americas 3 credit hours
Explores the various ways in which American identity — in its broadest possible sense — has been articulated through and contested within contemporary art and design practices of North, Central and South America, as well as the Caribbean. Examines a range of topics including Latin American modernism and postmodernism and its relationship to its Western counterparts, art and (post-) coloniality, indigenous identity and culture, public and site-specific art, Bolivarian theory and the concept of revolution in artistic practice, developing art traditions and models, as well as other current topics. Prerequisites: ARTH 125 and at least one 300-level ARTH course, or instructor's consent.

ARTH 560E. Contemporary Asian and Pacific Art 3 credit hours
Explores contemporary art and design practices in the Australasian region and explores their unique relationships to and differences from Western art history and the canon. Topics include Australasian modernism and postmodernism, indigenous art practices, anime, Orientalism and Occidentalism as theoretical models, cultural hybridization, Australasia's relationship to globalization, and other relevant debates and dialogues. Prerequisites: ARTH 125 and at least one 300-level ARTH course, or instructor's consent.

ARTH 560F. Islamic Art 3 credit hours
Islamic artists working in diverse cultures have produced works of art, design and architecture of exceptional vitality over the past 1500
years. The geographic purview of these artistic ventures spans the Near East to Spain, Africa and Asia, and their artistic production encompasses textiles, ceramics, manuscript production, metalwork and other media. Introduces students to the major themes of Islamic art (both iconographic and stylistic) and situates those works within their religious, political and cultural contexts, as well as providing opportunity for community engagement with local, regional and national Islamic cultural institutions. Prerequisites: ARTH 125 and at least one 300-level ARTH course, or instructor's consent.

ARTH 560G. Art and Surveillance 3 credit hours
Considers how the concept of The Body, Space and Place as well as Archive intersect with surveillance. Course comprises three key components. First, how artists have responded to old and new surveillance methods that codify our ideas of gender/sexuality, race/ethnicity, and religion. Second, how artists have responded to old and new surveillance methods that shape our relationship with space in its various forms including public/private, national/international/transnational, and digital environments. Third, how artists have addressed personal, institutional, military and governmental archives as forms of surveillance. Also examines related cultural theory and contemporary issues. Students engage with these ideas through three creative projects—one for each of the focal areas of this course. Students working in any artistic discipline are welcome; no photo experience required.

ARTH 732. Independent Study in Art History 1-3 credit hours
Work in specialized area of the study of art history. Directed readings and projects for graduate students in all disciplines. Prerequisite: instructor's consent.

Art, Studio (ARTS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ARTS 105. Beginning Drawing for Nonmajors 3 credit hours
A beginning drawing course for students not enrolled in art and design degree programs: presents elements of design, skills, media, and techniques of observational drawing. Students graded on individual progress. Lecture/Studio/Lab. Fee.

ARTS 195. Studio Tools Workshop 1 credit hour
Introduction to fundamental tools of studio artmaking, including wood shop training, documenting artwork/digital camera operations, computer software basics.

ARTS 211. Introduction to Community & Social Practice 3 credit hours
General education introductory course. Led by study of socially engaged artists and theories, students explore artists and methods of art practice that extend into specific communities and the "social" realm. Topics include (but are not limited to) art and commodity, the art market, the politics of audience, art as object or action, art as labor, and art as social justice. Lectures, readings, writings and project(s) based on these themes. Course includes diversity content.

ARTS 232. Introduction to Photography 3 credit hours
Introduces students with little or no formal experience to fundamentals of the medium, its history and its relationship to contemporary culture. First half covers exposure, 35mm B&W film developing and silver gelatin darkroom printing; second half covers digital capture with DSLR cameras, image correction in Lightroom, and inkjet printing.

ARTS 240. Introduction to Life Drawing 3 credit hours
Introduction to drawing the human form through analytical observation. Students develop accuracy in rendering and understanding the skeletal and muscular structure of the figure. Opportunities to explore the figure's expressive potential through materials, varied scale, anatomical studies and application of visual principles such as contour, line, shape and value.

ARTS 245. Digital Studio 3 credit hours
Introduction to processes, tools, history and contemporary practice of creating artworks with and for computers and software. Includes drawing, printing, video and web-based media.

ARTS 252. Introduction to Painting Media 3 credit hours
Exploration of fundamental painting methods using a variety of painting media and application techniques. Considers historical and contemporary styles and painting's role in media and culture.

ARTS 261. Introduction to Printmaking 3 credit hours
Focus on intaglio, relief, silkscreen and simplified lithography. Overview of established processes with emphasis on experimental approaches to print media and connections between printmaking and drawing.

ARTS 270. Introduction to Ceramics 3 credit hours
General education introductory course. Offers experience with basic practices in ceramics. Students have the opportunity to explore creative thinking by solving problems in the design, craftsmanship and content in ceramic art. Builds experience in hand building, wheel throwing, glazing/decorating methods. Lecture periods involve general knowledge of clays, glazes, kilns, historical ceramics and pottery of the world. Repeatable for credit as studio art elective.

ARTS 282. Introduction to Sculpture and Extended Media 3 credit hours
Introduction to processes, tools, history and contemporary practice of creating three-dimensional art. Introduction to wood and steel fabrication, mold making, aluminum casting; incorporation of nontraditional materials. Creative problem solving is emphasized.

ARTS 283. Digital 3-D Tools in Sculpture 3 credit hours
Introduction to computer-assisted design and computer controlled equipment to create sculpture. Students are instructed in the basics of CAD computer programs and how to use a CNC router and 3-D printer to create objects. Emphasis on using technology to expand options for artmaking.

ARTS 312. Community Arts Engagement 3 credit hours
General education advanced issues and perspectives course. Exploration of possible connections between art and communities through making, collaboration, discussion, essays and socially-engaged projects. Students take part in one or more semester-long community-based projects and work collaboratively as they explore the intersection of community activism and art as social responsibility, often with a goal of facilitating the creativity of community participants. Course includes diversity content.

ARTS 322. Video, Sound & Performance 3 credit hours
General education advanced issues and perspectives course. Topics include electronic media techniques for artmaking or other forms of visual communication along with the historical and contemporary context of video, sound, performance, and their interrelationships through assigned artworks, readings and discussion.

ARTS 324. Art and Social Media 3 credit hours
General education advanced issues and perspectives course. Study and practice of designing and creating and/or distributing artwork that uses social media in its various forms and formats. Considerations require an understanding of target audience, target space, target message, culture jamming, art as activism, and media theory. Along with a clear understanding of the social context of the work, the practical parameters of creation or distribution are considered. Lectures, discussion,
readings, written essay requirements. Digital media are used along with physical materials.

ARTS 326. The Moving Image 3 credit hours
Introduction to processes, tools, history and contemporary practice of creating moving images/animations using traditional and digital materials and resources for final presentation and discussion. Exploration and consideration is placed upon formal and conceptual concerns, including how traditional art studio materials and practices might play a role in the development process and final understanding of the digital media. Includes experimental film, video art practices, and social communication and personas. Prerequisites: ARTS 249; concurrent enrollment in or completion of ARTF 202.

ARTS 330. Analog Photographic Techniques 3 credit hours
Designed for students who already have a basic understanding of fundamental aspects of photography using manual cameras and proficiency with silver gelatin printing. Continued development in traditional darkroom printing; experimentation with alternative photographic processes; emphasis on challenging the boundaries of the medium. Students make their own cameras, film, printing paper and chemistry; processes covered include cyanotypes, chlorophyll prints, van dyke brown and liquid light. Additionally, working with a partner, students learn an additional technique and present it to the class as a demonstration. Prerequisites: ARTS 232; concurrent enrollment in or completion of ARTF 202.

ARTS 331. Digital Photographic Techniques 3 credit hours
Designed for students who already have a solid understanding of fundamental aspects of photography and using manual SLR and DSLR cameras. Photoshop, Bridge and Lightroom are used for digital capture, scanning (film, prints and objects), proper workflow and file management, studio lighting, manipulation of the photographic image, and exhibition quality inkjet printing. Considers history of the digital photographic image, discusses how technical advancements have changed culture and art, and considers various means of presentation and output (projection, video, installation, web-based). Students gain a broad range of technical skills, yet are also encouraged to work experimentally and produce work that exists off the wall. Prerequisites: ARTS 232; concurrent enrollment in or completion of ARTF 202.

ARTS 334. Photo Media Topics 3 credit hours
Offers opportunities for engaging deeply with photography from a variety of standpoints through specific topics varying semester-to-semester. Topics include contemporary documentary, appropriated imagery, community-oriented projects, professional practices, 19th century processes, and cross-disciplinary photographic practices. Prerequisites: ARTS 232; concurrent enrollment in or completion of ARTF 202.

ARTS 334A. Contemporary Documentary 3 credit hours
Offers opportunities for students to engage deeply with photography from a variety of standpoints. Students reconsider documentary practices - how we define documentary, its ethics, and its possibilities. Work is expected to reflect those evaluations. Includes opportunities to conduct community-oriented projects.

ARTS 334B. Photo Media Topics: Influence of the Vernacular 3 credit hours
Explores the effect of the common snapshot on photographers in the 20th and 21st centuries. Course is a lecture/studio, both looking at historical work and emulating contemporary artists including Garry Winogrand, Diane Arbus, Lee Friedlander, Cindy Sherman, Martin Parr, Nikki S. Lee, Sally Mann, Nan Goldin and others.

ARTS 335. Contemporary Photography Studio 3 credit hours
Builds on analog and digital techniques covered in previous courses to enable refined, conceptually oriented work using medium/large format cameras, large-scale printing, hybrid processes, and experimental presentation methods. Discusses the cultural significance of photography today and the ways artists are reacting to the changing medium. Students generally have great latitude regarding their methods of approaching projects; emphasis on working toward an individual artistic voice. Keystone course for proceeding to advanced photo courses. Prerequisites: ARTS 232; concurrent enrollment in or completion of ARTF 202.

ARTS 341. Life Drawing Studio 3 credit hours
Advanced analysis and interpretation of the human figure through individualized projects and assignments in multiple art and design applications. Emphasizes individual development, technical advancement and personalized interpretation. Repeatable for credit. Prerequisites: ARTS 240; completion of or concurrent enrollment in ARTF 202, or instructor's consent.

ARTS 345. Intermediate Drawing 3 credit hours
Drawing projects including problems of style, suites of related works, and media, materials and technical exploration. History of drawing techniques and materials. Prerequisites: ARTS 240; completion of or concurrent enrollment in ARTF 202 or instructor's consent.

ARTS 347. Mixed Media in Drawing 3 credit hours
Utilizes visualization, color, collage, abstraction, digital manipulation, invented processes, and varied sources for artmaking. Students experiment with traditional and nontraditional drawing methods and materials toward development of a personal visual language. Prerequisites: Completion of concurrent enrollment in ARTF 202 or instructor's consent.

ARTS 350. Workshop 1-5 credit hours
Intensive study of topics related to studio arts. Differing topics are denoted by a letter following the course number (i.e., ARTS 350C, ARTS 350P, etc.).

ARTS 350AA. The Moving Image 3 credit hours
Examination of the concept and delivery systems for time-based media. Focus is on creative and alternate approaches to the editing, manipulation and animation of linear digital media. Exploration and consideration are placed upon formal and conceptual concerns, including how traditional art studio materials and practices might play a role in the development process and final understanding of the digital media.

ARTS 350AB. Art & Community Engagement 3 credit hours
Explores the ways in which ideas and artistic expression interface with community needs and interests, as well as the many ways in which art can assist with the processes of community engagement, revitalization, and collaboration. Through dialogue with the City of Wichita, Wichita State University, community members, and fellow artists, students work on a collaborative public art project within the vibrant Fairmount community directly across from the university.

ARTS 351. Intermediate Watercolor Studio 1-3 credit hours
Emphasizes individual development, personal interpretation, and creativity. Repeatable for credit. Prerequisites: completion of the foundation program and ARTS 251, or departmental consent.

ARTS 354. Painting Materials & Processes 3 credit hours
Exploration of varied materials, methods, surfaces and processes in painting. Considers historical and contemporary styles and painting's role in media and culture. Prerequisites: ARTS 252; concurrent enrollment in or completion of ARTF 202.
ARTS 356. Painting with Narrative & Sequence  3 credit hours
Exploration of painting in relationship to sequential and narrative forms and media, including time-based and extended media applications. Lectures and research. Prerequisites: ARTS 252; concurrent enrollment in or completion of ARTF 202.

ARTS 358. Painting in the Expanded Field  3 credit hours
Exploration of painting as a concept and a form through its relationship to installation, sculpture, performance, community arts and other creative possibilities. Lectures and research. Prerequisites: ARTS 252; concurrent enrollment in or completion of ARTF 202.

ARTS 360. Intaglio  3 credit hours
Investigation of various processes of drawing, coloring, etching and printing images from metal substrates on paper. Includes examination of historical and contemporary approaches and relevance to contemporary culture. Prerequisites: ARTS 261; concurrent enrollment in or completion of ARTF 202.

ARTS 361. Lithography  3 credit hours
Investigation of various processes of drawing, coloring, etching and printing images from lithographic stone and aluminum plates to paper. Includes examination of historical and contemporary approaches and relevance to contemporary culture. Prerequisites: ARTS 261; concurrent enrollment in or completion of ARTF 202.

ARTS 366. Silkscreen  3 credit hours
Investigation of various means of creating images by printing through silkscreens with stencils, hand drawn, photo and digital imagery on paper. Includes examination of historical and contemporary approaches and relevance to contemporary culture. Prerequisites: ARTS 261; concurrent enrollment in or completion of ARTF 202.

ARTS 367. Relief  3 credit hours
Investigation of the various processes of linocut, woodcut and wood engraving. Students create images by cutting into various materials and print from the remaining raised surfaces. Includes examination of historical and contemporary approaches and relevance to contemporary culture. Prerequisites: ARTS 261; concurrent enrollment in or completion of ARTF 202.

ARTS 369. Intermediate Printmaking Studio  3 credit hours
Exploration of concepts and aesthetic development in print media. Investigates the historical and contemporary application of the multiple, while developing an understanding of both its function and aesthetics within our culture. Repeatable for credit. Prerequisites: ARTS 261; concurrent enrollment in or completion of ARTF 202.

ARTS 370. Studio Pottery  3 credit hours
Explores the use of the potter's wheel to develop a vocabulary of functional forms that express personal creativity and vision. Contemporary approaches to form, surface technique and firing are introduced through studio work, demonstrations and lectures. Repeatable for credit. Prerequisites: ARTS 270; concurrent enrollment in or completion of ARTF 202.

ARTS 372. Sculptural Ceramics  3 credit hours
Using a variety of hand-building and/or wheel-throwing techniques, students explore a range of formats, including the vessel, the figure, abstraction, installation and mixed media. Various firing techniques and solutions to issues of surface are addressed. Emphasizes creative thinking in clay to make a personal statement. Prerequisite: ARTS 270.

ARTS 373. Intermediate Ceramics Studio III  3 credit hours
Emphasizes self-directed studies focused around specific artistic themes and subjects. Course discussions, readings and videos guide students through the generation of ideas and their implementation in studio ceramics. Students also develop tools of creativity such as mind-mapping and creating a visual journal. Repeatable for credit. Prerequisites: ARTS 270; instructor's consent; concurrent enrollment in or completion of ARTF 202.

ARTS 374. Atmospheric Firing  3 credit hours
Offers in-depth explorations of atmospheric firing processes, such as wood-firing and salt glazing. Emphasis on value-added content though historical/cultural awareness as well as formal relationships and personal expression. Repeatable for credit. Prerequisites: ARTS 270; concurrent enrollment in or completion of ARTF 202.

ARTS 375. Special Topics in Ceramics  1 credit hour
Short-form workshops exploring a rotating range of subjects pertaining to ceramics practices. Substitutable for quick-fire elective. Prerequisites: ARTS 270; concurrent enrollment in or completion of ARTF 202.

ARTS 375A. Special Topics: Kilns and Firing  1 credit hour
Familiarizes students with the principles and practices of various types of kilns and firing solutions.

ARTS 375B. Special Topics: Tableware Design  1 credit hour
Familiarizes students with the issues and concerns involved with the design and use of pottery for the table. Students have the opportunity to learn from professionals in the food industry about what matters to those who use pottery to present their culinary works.

ARTS 375C. Special Topics: Ceramics Materials  1 credit hour
Familiarizes students with the materials, tools and technical procedures of formulating and mixing clay bodies and glazes.

ARTS 375D. Special Topics: Contemporary Pottery Practices  1 credit hour
Familiarizes students with issues in contemporary ceramic practices, including professional networking, marketing and public presentation of pottery in various contexts. Course may involve student travel to regional art fairs, sales, and exhibitions.

ARTS 376. Ceramic Design/Mold-Making for Ceramics  3 credit hours
Explores digital and analog methods of prototype development for mold-forming and casting processes. Students engage the design process from idea generation to the final production of one-of-a-kind and serially reproduced objects. Emphasis on design thinking and solutions for living. Repeatable for credit. Prerequisites: ARTS 270; concurrent enrollment in or completion of ARTF 202.

ARTS 380. Intermediate Sculpture  3 credit hours
Emphasizes individual artistic development by stressing concepts, methods of creation and research on the historical context of student work. Includes instruction in contemporary and traditional sculpture techniques. Repeatable once for credit. Prerequisites: completion of art foundation program and ARTS 282, 283.

ARTS 381. Materials, Techniques and Extended Media in Sculpture  3 credit hours
In-depth instruction in various methods and materials in creating sculpture. Traditional processes such as casting and fabrication in wood and steel are covered, with an emphasis on how material choices extend into nontraditional media. Course objectives are to develop technical skills and an ability to creatively use different materials in creating artwork. Prerequisites: ARTS 282; concurrent enrollment in or completion of ARTF 202.

ARTS 383. Time as Media in Sculpture  3 credit hours
Encourages experimentation in incorporating time and change as core elements of artworks. Investigates a wide range of materials, methods and processes with focus on different ways that change can influence artwork and be incorporated within students' artistic vision.
ARTS 390. QuickFire Topics  1-3 credit hours
Immersive, experiential condensed coursework designed to provide
research, intern and similar experiences per student's interest.
Interchangeable with ARTH 390. Repeatable for credit. Prerequisite: ARTF 202.

ARTS 390E. Kiln Building  3 credit hours
Students learn about the materials, design, and construction of various
types of kilns through both theoretical and hands-on activities. In
addition to producing kiln construction plans of their own design,
students participate in building a wood-burning, anagama-style kiln on
site.

ARTS 390G. QuickFire: ShockPress Collaborative Workshop  1-3
credit hours
Emphasis on the collaborative learning environment between visiting
artists, students and project organizers. Collaborative workshops build
community, professional engagement, and applied learning through
mentorship and stewardship of the print studio. Students explore the
relationship between project ideas, organization, technical execution,
and conceptual development as it relates to the visiting artist's vision.
Course revolves around the relationship between student and visiting
artist and the completion of a published limited edition print. Students
are asked to attend class for five weeks with a one-week intensive
workshop. Successful completion of ARTS 261 is recommended before
taking this course. Prerequisite: ARTF 202.

ARTS 390I. NYC: Albert Oehlen  1 credit hour
Course centers on travel to the New Museum in New York City and
includes several additional museum and gallery visits. Coursework
comprises research assignments on various artists, galleries and
exhibitions preceding travel, as well as response assignments including
the production of artwork upon return.

ARTS 390K. QuickFire: Surveillance - The Body  1 credit hour
Students consider the concept of The Body intersects with
surveillance. Focuses on how artists have responded to old and
new surveillance methods that codify our ideas of gender/sexuality,
race/ethnicity, and religion. Examines related cultural theory and
contemporary issues. Students engage with these ideas through a
final creative project. Students working in any artistic discipline are
welcome; no photo experience required.

ARTS 390L. QuickFire: Surveillance - Space and Place  1 credit hour
Students consider how the concepts of Space and Place intersect
with surveillance. Focuses on how artists have responded to old and
new surveillance methods that shape our relationship with space in
its various forms including public/private, national/international/
transnational, and digital environments. Also examines related cultural
theory and contemporary issues. Students engage with these ideas through a
final creative project. Students working in any artistic discipline are welcome; no photo
experience required.

ARTS 390M. QuickFire: Surveillance - The Archive  1 credit hour
Students consider how the concept of the Archive intersects with
surveillance. Focuses on how artists have addressed personal,
institutional, military, and governmental archives as forms of
surveillance. Also examines related cultural theory and contemporary
issues. Students engage with these ideas through a final creative project.
Students working in any artistic discipline are welcome; no photo
experience required.

ARTS 390N. QuickFire: Creative Coding  1 credit hour
A brief survey regarding the nature of creative coding along with
focused instruction in the Puredata programming environment. Students
complete tutorial exercises and one larger project that uses Puredata
and Arduino technology. This project may be used as part of the Project
RunAway Coding Couture event.

ARTS 390O. QuickFire: 4D Media Through Wearable and
Performance Art  1 credit hour
Creating and performing wearable sculpture through the use of
performance, presentation, time and change, music, and interactivity
while referencing links to art history, our collective human history,
cinema and other time-based platforms.

ARTS 390P. QuickFire: Introduction to Metal Casting  1 credit hour
Students have the opportunity to make an iron or aluminum object
using metal casting and become familiar with different mold-making
and casting process. No prerequisites required, students from all areas
of the university are welcome.

ARTS 390S. QuickFire: Drawing Marathon  1 credit hour
Takes place over four consecutive Saturdays. Investigates the potential
of drawing as an expressive tool in the context of eight-hour long
sessions. What happens when sustained attention and endurance
become part of one's creative practice? Each session has a different
topic to explore and the course requires three hours of outside work per week.

ARTS 390T. QuickFire: Documentary Photography  1 credit hour
Students concentrate on producing a single documentary photo project
over the course of this QuickFire, with regular critiques and in-class
discussions about other important documentary photographers.

ARTS 390U. QuickFire: Portraiture Photography  1 credit hour
Students focus on the craft of portrait photography, learning about
various styles and techniques. Discussions include commercial
portraiture, headshots, environmental portraits, fashion/beauty, and
studio portraits.

ARTS 390V. QuickFire: Studio Product Lighting  1 credit hour
Students learn various techniques for photographing products in
the studio, working with a full range of professional studio lighting
equipment.

ARTS 395. Professional Practices: Entrepreneurship in Art &
Design  3 credit hours
Introduces business and marketing concepts to artists and designers via
promotion and marketing, business plans, accounting, funding, legal
issues, demographics, nonprofit developments, grant writing, patents
and intellectual property law. Prerequisite: ARTF 202.

ARTS 481. Cooperative Education  1-8 credit hours
Provides practical field experience, under academic supervision, that
complements and enhances the student's academic program. Graded Cr/
NcR. Prerequisite: departmental consent.

ARTS 481N. Cooperative Education: Internship  1-8 credit hours
Complements and enhances the student's academic program by
providing an opportunity to apply and acquire knowledge in a
workplace environment as an intern. Graded Cr/NcR. Prerequisite: departmental consent.

ARTS 495. Professional Practices in Studio Art  3 credit hours
Research into and practical application of professional practices,
business skills and career planning specific to the discipline of studio
art. Provides a foundation of practical information to assist the
undergraduate studio art major in building a successful professional
career. Not repeatable for credit. Prerequisite: junior standing in a
studio art major or instructor's consent.

ARTS 517. Community & Social Practice Senior Project 1 credit hour
BFA in art - studio art with community and social practice
concentration capstone course. Emphasizes individual development
of research and/or artistic content. For undergraduate students
only. Prerequisites: ARTS 481N, instructor's consent. Corequisite:
ARTS 599.

ARTS 525. Advanced Electronic Media 3 credit hours
Focus on further development of thematic content, creative problem
solving, and producing original artwork that makes a personal artistic
statement. Exploration of the field through presentations and/or
research papers. Repeatable for credit. Prerequisites: ARTS 322,
instructor's consent.

ARTS 527. Electronic Media Senior Project 1 credit hour
BFA in art-studio art with electronic media concentration capstone
course. Emphasizes individual development of research and/or artistic
content. Limited to undergraduate students. Prerequisites: ARTS 525,
instructor's consent. Corequisite: ARTS 599.

ARTS 535. Advanced Photo Media 3 credit hours
Focus on further development of thematic content, creative problem
solving, and producing original artwork that makes a personal artistic
statement. Exploration of the field through presentations and/or
research papers. Repeatable for credit. Prerequisites: ARTS 335,
instructor's consent.

ARTS 537. Photo Media Senior Project 1 credit hour
BFA in art-studio art with photo media concentration capstone course.
Emphasizes individual development of thematic content. Limited to
undergraduate students. Prerequisites: ARTS 535, instructor's consent.
Corequisite: ARTS 599.

ARTS 545. Advanced Drawing Studio 3 credit hours
 Independently-defined projects and directions in drawing and drawing-
related media aimed toward development of a drawing practice, process
or portfolio. Research, readings and/or lectures investigating historical,
contemporary and applied approaches to drawing in both fine art and
popular applications. Repeatable for credit. Prerequisite: ARTS 341 or
345, instructor's consent.

ARTS 547. Drawing Senior Project 1 credit hour
BFA in art-studio art with applied drawing concentration capstone
course; emphasizes individual development of thematic content.
Limited to undergraduate students. Prerequisites: ARTS 545,
instructor's consent. Corequisite: ARTS 599.

ARTS 549. Independent Study-Drawing 1-3 credit hours
A professional emphasis on technical or aesthetic research in the
drawing area. Available only for the advanced drawing student with
instructor's consent. Statement of intent must be submitted for faculty
approval before registration. Prerequisites: ARTS 340, 345, instructor's
consent.

ARTS 550. Art Workshop 1-3 credit hours
Intensive study of topics related to studio arts. Differing topics are
denoted by a letter following the course number (i.e., ARTS 550C,
ARTS 550P, etc.).

ARTS 550AB. Photography Abroad: Italy 3 credit hours
Class travels to Northern Italy to make photographs, study the history
of the area, and see amazing ancient and contemporary art over spring
break. Fly from Wichita to Rome, drive a rental van from Rome to
Florence, stop in several small hill-towns in northern Italy and finish
in Venice. Cost varies depending on prices at the time of travel,
but includes all travel and lodging. Contact instructor for details.
Prerequisite: instructor's consent.

ARTS 550U. Art and Surveillance 3 credit hours
Students consider how the concept of The Body, Space and Place as
well as Archive intersect with surveillance. Course comprises three
key components. First, how artists have responded to old and new
surveillance methods that codify ideas of gender/sexuality, race/
ethnicity, and religion. Second, how artists have responded to old
and new surveillance methods that shape relationships with space
in its various forms including public/private, national/international/
transnational, and digital environments. Third, how artists have
addressed personal, institutional, military, and governmental archives
as forms of surveillance. Also examines related cultural theory and
contemporary issues. Students engage with these ideas through three
creative projects - one for each of the focal areas of this course.
Students working in any artistic discipline are welcome; no photo
experience required.

ARTS 550W. Photography Abroad: Netherlands 3 credit hours
Explores the culture, art, and landscapes of the Netherlands. There are
assigned readings and lectures in preparation for travel. The class leaves
Wichita for Amsterdam on March 10 and returns March 20 (spring
break plus a few days added at the beginning). Cities visited include
Amsterdam, the Hague and Rotterdam. There are also trips to rural
areas. Costs for transportation and lodging are approximately $2000
per person, depending on the number of students enrolled and current
exchange rates.

ARTS 550Z. International Exhibition Design 3 credit hours
Introduces students to the fundamentals of sound museum and
nonmuseum installation techniques and practices. Topics include
hanging techniques and devices, strategies for coping with difficult
installation environments, following instructions by and managing
collaborations with artists, and troubleshooting.

ARTS 551. Advanced Watercolor Studio 1-3 credit hours
For the professionally-oriented student. Emphasizes independent study.
Repeatable for credit. Prerequisites: four semesters of ARTS 351 and
interview with instructor.

ARTS 552. Advanced Decorative and Ornamental Painting and
Design 3 credit hours
Projects in decorative and ornamental painting and design developed
and completed by the student with faculty supervision. Preparation
for more independent work. A plan of study defining projects must
be submitted and approved by the instructor. Repeatable for credit.
Prerequisite: ARTS 352 or instructor's consent.

ARTS 553. Independent Study: Painting 1-3 credit hours
A professional emphasis on technical or aesthetic research in the
painting area. Available only for the advanced painting student with
instructor's consent. Statement of intent must be submitted for faculty
approval before registration. Prerequisite: departmental consent.

ARTS 554. Advanced Painting 3 credit hours
Focus on further development of thematic content, creative problem
solving and producing original artwork that makes a personal artistic
statement. Exploration of the field through presentations and/or
research papers. Repeatable for credit. Prerequisites: 6 hours from
ARTS 354, 356, 358; instructor's consent.

ARTS 557. Painting Senior Project 1 credit hour
BFA in art-studio art with painting concentration capstone course;
emphasizes individual development of thematic content. Limited to
undergraduate students. Prerequisites: ARTS 554, instructor's consent.
Concurrent enrollment in ARTS 599.
ARTS 559. Terminal Project: Decorative and Ornamental Painting and Design 3 credit hours
Supervised independent study. A plan of study for a project in decorative and ornamental art must be submitted for faculty approval prior to registration. Repeatable for credit. Prerequisite: ARTS 552.

ARTS 560. Advanced Printmaking 3 credit hours
Focus on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Exploration of the field through presentations and/or research papers. Repeatable for credit. Prerequisites: ARTS 369, instructor's consent.

ARTS 565. Independent Study: Printmaking 1-3 credit hours
A professional emphasis on technical and aesthetic research in the printmaking area. Only for the advanced printmaking student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

ARTS 567. Printmaking Senior Project 1 credit hour
BFA in art-studio art with printmaking concentration capstone course. Emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisites: ARTS 560, instructor's consent. Corequisite: ARTS 599.

ARTS 570. Advanced Ceramics 3 credit hours
Focus on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Exploration of the field through presentations and/or research papers. Repeatable for credit. Prerequisites: ARTS 373, instructor's consent.

ARTS 577. Ceramics Senior Project 1 credit hour
BFA in art-studio art with ceramics concentration capstone course; emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisites: ARTS 570, instructor's consent. Corequisite: ARTS 599.

ARTS 578. Independent Study in Ceramics 1-3 credit hours
A professional emphasis on technical or aesthetic research in the ceramics field. Available only for the advanced ceramics student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent.

ARTS 580. Advanced Sculpture 3 credit hours
Focus on further development of thematic content, creative problem solving, and producing original artwork that makes a personal artistic statement. Exploration of the field through presentations and/or research papers. Repeatable for credit. Prerequisites: ARTS 380 and instructor's consent.

ARTS 585. Independent Study in Sculpture 1-3 credit hours
A professional emphasis on technical or aesthetic research in the sculpture area. Available only for the advanced sculpture student with instructor's consent. Statement of intent must be submitted for faculty approval before registration. Prerequisites: ARTS 282, 283, departmental consent.

ARTS 587. Sculpture Senior Project 1 credit hour
BFA in art-studio art with sculpture concentration capstone course; emphasizes individual development of thematic content. Limited to undergraduate students. Prerequisites: ARTS 580, instructor's consent. Corequisite: ARTS 599.

ARTS 590. SlowBurn Topics - 1st Semester 3 credit hours
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the first semester course typically devoted to research and planning. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Repeatable for credit. Graded Cr/NCr. Prerequisites: ARTF 202; senior standing in an ARTS major or instructor's consent.

ARTS 590E. SlowBurn Topics - 1st Semester: Galleries & Exhibitions 3 credit hours
SlowBurn courses consist of experiential coursework whose planning and implementation extend across successive semesters, with the first semester course typically devoted to research and planning. Course travel fee may apply. For “Galleries & Exhibitions,” professional, practical, theoretical aspects of managing, organizing, marketing, funding and designing art exhibitions through installations in student art galleries, readings and lectures. In the first semester students learn about exhibition design, themes, curator & organizing, programming, and art venues; they then seek funding and support for an exhibition, design the exhibition, create calls for entries of artworks. In the second semester course (to be offered in the following Spring semester), students receive artworks, publicize the exhibition, install artworks, host the receptions, design and hold programming. SlowBurn courses require enrollment in two consecutive semesters of a sequence of the same two SlowBurn Topics courses. ARTS 590E is offered in the fall and ARTS 591 Galleries & Exhibitions is offered in the following spring to complete the sequence. Graded Cr/NCr. Prerequisite: ARTF 202; senior standing in a studio arts major or instructor's consent.

ARTS 590F. SlowBurn Topics - 1st Semester: Designing and Creating a Sculpture Path in Mattfield Green, KS 3 credit hours
Students assist in all phases of designing and installing a sculpture path in the art colony of Mattfield Green, Kansas. First semester: designing signs, brochures, creating an online presence and applying for grant support for the project. Second semester: preparing the path, installing signage and assisting professional artists in installing their work. Travel to and from Mattfield Green (one hour drive from Wichita) is required; funding for travel and overnight accommodations is provided.

ARTS 591. SlowBurn Topics - 2nd Semester 3 credit hours
Course travel fee may apply. Long-term projects consisting of experiential coursework whose planning and implementation extend across two successive semesters, with the second semester course typically devoted to the experience researched and planned in the first semester SlowBurn Topics course. Requires enrollment in consecutive semesters of a single sequence of two SlowBurn Topics courses. Repeatable for credit. Prerequisite: ARTF 202; approved ARTS 590 in sequence; senior standing in an ARTS major or instructor's consent.

ARTS 591E. SlowBurn Topics - 2nd Semester: Galleries & Exhibitions II 3 credit hours
SlowBurn courses consist of experiential coursework whose planning and implementation extend across successive semesters, with the first semester course typically devoted to research and planning. Course travel fee may apply. For Galleries and Exhibitions, professional, practical, theoretical aspects of managing, organizing, marketing, funding and designing art exhibitions through installations in student art galleries, readings and lectures. In the first semester students learn about exhibition design, themes, curator and organizing, programming, and art venues; students then seek funding and support for an exhibition, design the exhibition and create calls for entries of artworks. In the second semester course (to be offered in the following spring semester), students receive artworks, publicize the exhibition, install artworks, host the receptions, design and hold programming. SlowBurn courses require enrollment in two consecutive semesters of a sequence of the same two SlowBurn Topics courses. ARTS 590E is offered in the fall and ARTS 591 Galleries & Exhibitions is offered the following spring to complete the sequence. Graded Cr/NCr.
Students wishing to repeat BIOL 105 (no longer offered) should enroll in BIOL 106 and 107. Only one of the following may be taken for credit: BIOL 104, 105, 106 and/or 107. Students seeking to repeat BIOL 225 or 226 may enroll in BIOL 223. Students seeking to repeat BIOL 225 or 226 may enroll in this course, subject to the credit limitations indicated above. Students may receive credit for only one of the following: HS 290 or BIOL 223. Prerequisite: CHEM 101 or 103 or 212 is recommended.

**Biology (BIOL)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**BIOL 103. Microbes & You 3 credit hours**

*General education introductory course.* Surveys general information about microbial physiology, biochemistry and ecology that supports more detailed discussion of interesting topics in food, medical and environmental microbiology. Includes subjects of general interest and current newsworthy topics. Credit will not be given if the student has completed any biology course beyond the 100-level prior to enrollment. Suitable for general education requirements, but cannot be used for credit toward the major or minor in biological sciences.

**BIOL 104. The Human Organism 3 credit hours**

*General education introductory course.* Introduces the nonscience major to certain biological principles as they relate to the human organism, provides biological information and understanding of subjects which are relevant to the student’s own well-being and role as a world citizen, and increases awareness of the human place in the biosphere. Concurent or subsequent enrollment in BIOL 107 is recommended for students needing general education credit for a natural sciences laboratory experience. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: BIOL 104, 105, 106 and/or 107. Students wishing to repeat BIOL 105 (no longer offered) should enroll in BIOL 106 and 107.

**BIOL 105. The Human Organism Laboratory 1 credit hour**

2 Lab hours. *General education introductory course.* For the nonscience major. Supplements and reinforces the material covered in BIOL 106 with a laboratory experience. Uses a hands-on approach and covers topics relevant to students and their role in the biosphere. Topics include cell structure, human organ systems, the role of microorganisms in the environment, metabolism, genetics and cancer. Requires no animal dissection. Credit for this course may not be applied toward the requirements for a major or minor in biological sciences. Only one of the following may be taken for credit: BIOL 104, 105, 106 and/or 107. Students wishing to repeat BIOL 105 (no longer offered) should enroll in BIOL 106 and 107.

**BIOL 201. General Biology I 4 credit hours**

3 Classroom hours; 3 Lab hours. *General education introductory course.* Introduces fundamental concepts in cellular and molecular biology. Includes basic biological chemistry; cell and membrane structure and function; aerobic and anaerobic respiratory pathways; intermediary metabolism and photosynthesis; regulation of cellular activities at genetic and protein levels; cellular reproduction; mechanisms of inheritance at molecular, organismal and population levels; phylogeny and evolution. The laboratory develops skills in the experimental method, basic laboratory procedures and written communication of scientific information using topics related to the lectures. Students may not receive credit for both BIOL 204 (no longer offered) and BIOL 210. Students wishing to repeat BIOL 204 may enroll in this course, subject to the credit limitations indicated above. Corequisite: CHEM 211 recommended.

**BIOL 211. General Biology II 4 credit hours**

3 Classroom hours; 3 Lab hours. *General education introductory course.* Introduces fundamental concepts of biology as they apply to levels of organization from organisms through ecosystems. Focuses on morphology, physiology, diversity and ecology of organisms. Introduces growth and anatomy, transport of materials, regulatory mechanisms and reproduction in plants; also nutrient procurement, circulation, neural and hormonal regulation, reproduction, immune responses and behavior in animals. Principles of ecology presented include population growth and regulation, interspecific interactions and food webs, and energy flow and material cycling through ecosystems. The laboratory includes a survey of organismal diversity including prokaryotes, protists, fungi, plants and animals. Emphasizes evolutionary trends in the plant and animal kingdoms. Prerequisite: BIOL 210. Concurrent enrollment in CHEM 212 is recommended.

**BIOL 220. Introduction to Microbiology 4 credit hours**

3 Classroom hours; 2 Lab hours. *General education introductory course.* For students in allied health fields. Introduces eucaryotic and procaryotic microorganisms and viruses and develops an understanding of microbial growth, including the use of antiseptics, disinfectants, and antibiotics; DNA as the genetic material including DNA replication, protein synthesis, gene regulation, mutation and gene exchange in bacteria; applied and environmental microbiology including water and sewage treatment and food microbiology; resistance to infection, basic mechanisms of pathogenesis, and selected microbial diseases. The lab reinforces concepts learned in lecture and helps the student gain an understanding of and develop competence in basic microbial techniques including the safe handling of microorganisms. Credit earned in this course may not be applied toward the requirements for a major or minor in biological sciences. Students may not receive credit for both BIOL 120 (no longer offered) and BIOL 220. Students wishing to repeat BIOL 120 may enroll in this course. Prerequisite: CHEM 101 or 103 or 211.

**BIOL 222. Human Anatomy and Physiology 5 credit hours**

4 Classroom hours; 2 Lab hours. *General education introductory course.* Presents the structure and function of the major human body systems. Demonstrates the structure and function of certain systems further in the laboratory setting. For students majoring in programs other than biological sciences or biochemistry. Students who have completed BIOL 225 or 226 (both no longer offered) may not receive credit for prior enrollment in these courses and subsequent enrollment in BIOL 223. Students seeking to repeat BIOL 225 or 226 may enroll in this course, subject to the credit limitations indicated above. Students may receive credit for only one of the following: HS 290 or BIOL 223. Prerequisite: CHEM 101 or 103 or 211.
BIOL 309. Foundations of Human Heredity  3 credit hours
*General education advanced further study course. An introduction to the mechanisms and societal significance of development, transmission and population genetics of humans. Draws attention to inborn errors of metabolism and development and the roles of genetic counseling and genetic engineering in their management. Designed for students majoring outside the natural sciences and cannot carry credit toward a biological sciences major or minor.*

BIOL 310. Human Reproduction: Issues and Perspectives  3 credit hours
*General education advanced issues and perspectives course. A comprehensive survey of the many biological aspects of reproduction. Covers structure and function of the reproductive system, as well as information on in vitro fertilization, fertility testing, contraception, population problems, AIDS, cancer, reproductive issues, ethical problems and other concerns about the control of human reproduction. Prerequisite: any one of the following: BIOL 106, 210 or 223.*

BIOL 330. General Microbiology  5 credit hours
3 Classroom hours; 6 Lab hours. Introduces the structure, function, systematics, ecology and population dynamics of microorganisms emphasizing prokaryotes. Prerequisites: BIOL 204 (no longer offered) or 211, CHEM 212.

BIOL 370. Introductory Environmental Science  3 credit hours
*General education advanced issues and perspectives course. Examines the relationship of the earth's human populations to resource use/ depletion and to the impact of human activities on the environment. Introduces and uses basic concepts relating to energy, populations and ecosystems as a basis for understanding environmental problems on the local, regional, national and international levels. Course includes diversity content.*

BIOL 408. Biology of Aging  3 credit hours
Cross-listed as AGE 408. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, emphasizing humans. Prerequisite: a basic course in biology that satisfies the general education requirements.

BIOL 418. General Ecology  4 credit hours
3 Classroom hours; 3 Lab hours. Principles underlying the interrelationships of living organisms and their environments from the biosphere to the population level of organization. Some laboratory exercises and class projects conducted at local field sites. Course includes diversity content. Prerequisites: BIOL 204 (no longer offered) or 211, CHEM 212.

BIOL 419. Genetics  4 credit hours
3 Classroom hours; 3 Lab hours. The mechanisms of heredity and variation in animals, plants, and prokaryotes with a critical review of gene structure and function. Prerequisites: BIOL 204 (no longer offered) or 211, CHEM 212.

BIOL 420. Molecular Cell Biology  4 credit hours
3 Classroom hours; 3 Lab hours. Concerned primarily with the molecular biology of eukaryotic cells. Covers individual cellular components (organelles) and processes including the plasma membrane, mitochondrion and energy conversion, intracellular sorting, the cell nucleus and genetic mechanisms, control of gene expression, cell signaling, cell growth and division, cancer, and cellular mechanisms of development. Reviews and demonstrates current techniques and experimental approaches for studying cells. Prerequisites: BIOL 204 (no longer offered) or 211, CHEM 212.

BIOL 481. Cooperative Education  1-4 credit hours
Course complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through coursework to job-related situations. For information, contact the coordinator of undergraduate studies or the cooperative education program office. No more than 4 credit hours earned in BIOL 481 may be applied toward satisfying the requirements for a major in biological sciences. Graded Cr/NCr. Prerequisite: applicant and cooperative education position approved by the departmental affairs committee.

BIOL 481N. Internship  2-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

BIOL 497. Biology Colloquium  1 credit hour
Research seminars presented by graduate students, faculty and visiting researchers. Requires a written term paper on one of the presented topics. Repeatable once for credit. Graded Cr/NCr. Prerequisites: two of the following: BIOL 418, 419, 420.

BIOL 498. Undergraduate Independent Reading  1-2 credit hours
Students perform library scholarship under the direct supervision of faculty and write a report. No more than 6 credit hours earned from BIOL 498, 499 or equivalent independent study courses may be applied toward departmental major graduation requirements. Graded Cr/Ncr. Prerequisites: at least 20 hours of biology coursework that satisfies the major requirements, instructor's consent, a Directed Independent Study Abstract form, and departmental consent.

BIOL 499. Undergraduate Research  1-4 credit hours
Students perform library scholarship under the direct supervision of faculty and write a report. No more than 6 credit hours earned from BIOL 498, 499 or equivalent independent study courses may be applied toward departmental major graduation requirements. Graded Cr/Ncr. Prerequisites: at least 20 hours of biology coursework that satisfies the major requirements, instructors consent, a Directed Independent Study Abstract form, and departmental consent.

BIOL 502. Vascular Plants  4 credit hours
2 Classroom hours; 4 Lab hours. An introduction to the structure, reproduction, and evolution of the major groups of living and extinct vascular plants. Includes an introduction to flowering plant systematics. Students earning graduate credit perform a primary literature survey on a topic selected in consultation with the instructor and deliver a 30-minute oral presentation to the class. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212.

BIOL 503. Field Botany  4 credit hours
Introduction to the field identification of common flowering plants, the use of technical scientific keys, distributional patterns and general principles of taxonomy. In addition to lecture and laboratory activities, numerous field trips are used to develop botanical skills and reinforce principles covered in lecture. Prerequisites: BIOL 204, BIOL 211, CHEM 212, or instructor's permit.

BIOL 510. Ecosystem Management & Restoration  3 credit hours
Examines the design, implementation, and evaluation of land management plans and restoration projects. Restoration case studies covering a wide-array of ecological systems (e.g. grassland, forest, wetland, aquatic and marine) are used to examine the strengths and weaknesses of different approaches in these contexts with particular attention to key ecological principles and socio-economic realities. Students produce a written management plan for a site in south-central Kansas. Course includes diversity content. BIOL 418 is recommended. Prerequisite: BIOL 211 or instructor's permission.

BIOL 523. Freshwater Invertebrates  4 credit hours
2 Classroom hours; 4 Lab hours. Emphasizes the ecology, taxonomy, form and function of free-living, freshwater invertebrates. Half of
the course deals with arthropods. Includes methods of collecting, culturing and preserving specimens. Part of the course grade is based on a collection of invertebrates correctly prepared and identified. For graduate credit, students submit a term paper or a more extensive collection within a given taxon. Prerequisites: BIOL 211, CHEM 212.

BIOL 524. Vertebrate Zoology  3 credit hours
Evolution, distribution, natural history and special characters of vertebrate animals. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212; BIOL 527 is also recommended.

BIOL 526. Endocrinology  4 credit hours
3 Classroom hours; 4 Lab hours. Functions of the endocrine system in vertebrates. Emphasizes nervous and endocrine control systems and the coordination of body functions. Students earning graduate credit submit a term paper based on library research on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 531, or instructor's consent.

BIOL 533. Human Physiology Lab  2 credit hours
4 Lab hours. An empirical approach to human physiology. Students seeking graduate credit submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Pre- or corequisite: BIOL 534.

BIOL 540. Developmental Biology  4 credit hours
2 Classroom hours; 4 Lab hours. Developmental processes in animals emphasizing vertebrates. Centered on the cell interactions controlling differentiation and morphogenesis. Students earning graduate credit complete additional assignments chosen in consultation with the instructor. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212. BIOL 420 recommended.

BIOL 560. Plant Ecology  2 credit hours
2 Classroom hours. An examination of the relationship of plants to their environment at the organismal, population, community and ecosystem levels. For graduate credit, a student must prepare and present a 30-minute lecture over one of the topics covered in this course. Prerequisites: BIOL 418 and CHEM 212 or instructor's consent.

BIOL 561. Plant Ecology Lab  2 credit hours
Laboratory component of BIOL 560. Field trips are an integral part of the course. Emphasizes an experimental approach to plant ecology. For graduate credit, a student must present the results of the laboratory/laboratory project orally, as well as in writing. Prerequisite: prior or current enrollment in BIOL 560.

BIOL 570. Conservation Biology  3 credit hours
Examines the application of fundamental concepts in ecology, evolutionary biology and genetics to the preservation of biological diversity at the levels of genotypes, species and ecosystems. Topics covered include (1) how biologists quantify biological diversity, (2) threats to biological diversity, (3) tools used to evaluate the level of threat to individual species and to design species management plans, and (4) concepts and considerations for preserve design. Decisions related to biodiversity conservation often have social and economic consequences. Students explore these complexities through case studies. Skills developed in this course include critical reading of primary scientific literature, scientific writing and oral presentation. Prerequisite: BIOL 418.

BIOL 575. Field Ecology  3 credit hours
9 Lab hours. Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Students earning graduate credit perform an individual project on comparative community structure and report the results as a technical paper. Prerequisite: BIOL 418 or instructor's consent.

BIOL 578. Aquatic Ecology  4 credit hours
2 Classroom hours; 4 Lab hours. Introduction to the biological and physical processes that operate in lakes, streams and estuaries. Requires assigned readings, individual projects and field trips. Students earning graduate credit investigate and compare the characteristics and properties of two freshwater ecosystems or investigate a specific taxon or trophic level in a freshwater ecosystem. The results of this investigation are reported as a technical paper. Prerequisite: BIOL 418 or instructor's consent.

BIOL 590. Immunobiology  3 credit hours
The nature of antigens and antibodies and their interactions. Includes cellular and humoral aspects of immunologic phenomena. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212.
BIO 595. Avian Biology 3 credit hours
Presents birds (class Aves) as models in contemporary animal behavior, physiological ecology, evolutionary biology, population ecology and conservation. The laboratory portion of the course teaches field identification of resident and migratory species by sight, song and call on frequent field trips to a diversity of habitats, and culminates in a field survey of avian species diversity and abundance conducted by each student. Additional laboratory topics are bird banding, determination of age, sex, body lipid reserves, morphological measurement and population census. Student-led discussions of current papers in avian biology are required, as is an all-day Saturday field trip during spring migration through the Central Flyway, which includes south central Kansas. Graduate students must write a term paper on an approved topic in avian biology. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212, or instructor's consent.

BIO 610. Topics in Botany 1-5 credit hours
Selected offerings in botany. Consult the Schedule of Courses for current offering(s). Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212 and instructor's consent.

BIO 610N. Plant Ecology Lecture and Lab 4 credit hours
Focuses on identifying and explaining key ecological patterns found in plant populations and communities.

BIO 626. Reproductive Biology 3 credit hours
Covers the basic organization and function of vertebrate reproductive systems. Includes current concepts and contemporary research from the molecular to the population level. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. BIOL 526 is strongly recommended. Prerequisite: BIOL 420.

BIO 630. Behavioral Ecology 3 credit hours
Studies the biological basis of social behavior, stressing the underlying evolutionary and ecological mechanisms. Lectures examine altruism and kin selection, kin recognition mechanisms, sexual behavior, sexual selection and mate choice, mating systems, and reproductive strategies from the perspective of natural selection. Students earning graduate credit write a term paper based on the technical literature and present this in a class seminar. Prerequisite: BIOL 418.

BIO 640. Topics in Zoology 1-4 credit hours
Selected offerings in zoology. Consult the Schedule of Courses for the current offering(s). Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 212 and instructor's consent.

BIO 640AB. Human Anatomy 3 credit hours
Gives students an understanding of the anatomy of the human body at the 600 level. Emphasis is on the detailed structural anatomy and classification of each of the human body’s organ systems. Students are challenged to begin thinking clinically so as to prepare for a future in the health professions. Includes weekly lectures and laboratories that the student is expected to attend.

BIO 640AL. Human Anatomy Lab 2 credit hours
The gross and microscopic anatomy of each human body system is examined in lab through the use of models, diagrams, lab activities and dissections. Dissections include fetal pig full dissection and organ dissections of the following sheep organs: brain, eyeball, heart and kidney.

BIO 660. Topics in Microbiology 1-4 credit hours
Selected offerings in botany. Consult the Schedule of Courses for current offering(s). Students wishing to enroll in courses not listed in the current schedule must complete a Directed Independent Study Abstract form and obtain approval prior to enrollment. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Repeatable. Prerequisites: BIOL 330 and instructor's consent.

BIO 661. Pathogenic Microbiology 3 credit hours
Focuses on those microbes that produce disease. Most coverage is given to those microbes that cause disease in humans, but zoonotic diseases are also covered. In addition to describing the features of each microbe that enable its pathogenesis, attention is given to the distinctive aspects of its epidemiology, its means of spread and effective countermeasures. Prerequisite: BIOL 330 or instructor’s consent.

BIO 662. Virology 3 credit hours
Focuses on the following aspects of viruses: structure, function, replication strategy, host cell interactions and mechanism of variability. Additional topics include the coevolution of viruses and their host cells, the unique ecological niche occupied by viruses, and the challenge that viruses present when attempting to draw clear distinctions between living and nonliving entities. Prerequisite: BIOL 330 or instructor’s consent.

BIO 666. Special Topics in Biochemistry 3 credit hours
Primarily for students who choose the biochemistry field major. Discusses a small number of current problems in biochemistry in depth. Requires reading published research papers in the field. Students earning graduate credit produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: BIOL 204 (no longer offered) or BIOL 211, CHEM 662 and 663.

BIO 669. Research in Biochemistry 2 credit hours
Cross-listed as CHEM 669. Primarily for students who choose the biochemistry field major. Requires participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results. May be repeated once for credit. Graded Cr/NCr. Prerequisites: BIOL 420 and CHEM 662 or 663, and CHEM 664 and instructor's consent.

BIO 710. Glycobiology 3 credit hours
Introduction to glycoprotein biosynthesis, structure and function. Covers the various roles of carbohydrates in modifying protein structure and function. Students earning graduate credit prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 420.

BIO 725. Biodiversity Analyses 3 credit hours
Surveys the theory, principles, metrics and applications of biodiversity sciences including systematics, biogeography and phylogeny. The pervasive role of phylogenetic data in evolutionary biology (e.g., biogeography, coevolution, speciation, conservation) and other fields (e.g., epidemiology, anthropology, agriculture) are highlighted. Species diversity, species radiations, structure of the tree of life, the wealth of comparative data (from genes to proteins and morphology) and the role of systematics in conservation biology are discussed. Offered fall, even years.
BIOL 730. Cancer Biology 3 credit hours
The basic mechanisms of carcinogenesis are covered by discussing the control of normal and abnormal cell growth in several model systems. Students earning graduate credit also submit a term paper dealing with a specific topic to be determined by discussion with the instructor. Prerequisite: BIOL 420.

BIOL 737. Aquatic Toxicology 3 credit hours
The qualitative and quantitative study of the fate and effects of toxic agents in the aquatic environment. Class examines the concentrations or quantities of chemicals that occur in the aquatic environment. Includes a detailed study of the transport, distribution, transformation and ultimate fate of various environmentally important chemicals. Class is for undergraduate or graduate students interested in advanced training in toxicology. Prerequisites: BIOL 418 or equivalent, CHEM 531 or equivalent, or instructor's consent.

BIOL 738. Plant and Animal Interactions 3 credit hours
Develops and expands basic ecological and evolutionary concepts presented in earlier biology courses including natural selection, coevolution, population growth and factors structuring ecological communities. Applies these concepts to the study of herbivory, pollination by animals and seed dispersal by animals. Designed to improve students' abilities to read current primary scientific literature critically with particular emphasis on identifying and evaluating evidence for hypotheses in ecology and evolutionary biology. Introduces the peer review process and hone students' scientific writing skills. Students write a mini-review article of a current hypothesis in the field of plant-animal interaction. An oral presentation based on the findings of the mini-review is also required. Prerequisites: BIOL 418 or equivalent general ecology course.

BIOL 740. Topics in Graduate Biology 2-4 credit hours
Lecture, laboratory, field techniques, selected readings or discussion course pertaining to a specific biological topic not available in the regular curriculum. May include oral presentations(s) and/or written paper(s). Topics are developed by individual faculty members and reflect current topics, in-depth analysis and biological specialties. May be taken more than once for credit up to 6 hours. Prerequisites: any two of the following three courses: BIOL 418, 419, 420; and instructor's consent.

BIOL 760. Experimental Molecular Biology 4 credit hours
2 Classroom hours; 4 Lab hours. Introduces upper-level undergraduate and graduate students to molecular biology techniques. The methodology primarily involves the manipulation of DNA and the expression of genetic material in prokaryotic and eukaryotic systems. Prerequisite: BIOL 419 or 420.

BIOL 767. Mechanisms of Hormone Action 3 credit hours
The mechanism of action of several hormones is described and used to illustrate the major intracellular signal transduction pathways. Includes gonadotropin-releasing hormone, the glycoprotein hormones, luteinizing hormone, follicle-stimulating hormone, chorionic gonadotropin, thyroid-stimulating hormone, steroid hormones, thyroid hormone, activin/inhibin, prostaglandins, insulin and growth hormone. Mostly lectures covering signal transduction pathways. Students write brief summaries of recent research papers related to the current week's lecture topics. Each student makes an oral presentation of a research paper in journal club format. Students earning graduate credit write a term paper describing in detail a hormone not described in class and its mechanism of action. Prerequisites: BIOL 420 and CHEM 662 or their equivalents, plus either BIOL 526 or 534 or their equivalents, and instructor's consent.

BIOL 773. Statistical Applications in Biology 3 credit hours
Introduction to experimental designs and statistical analyses that are commonly used in biological research. Focuses on univariate statistical analyses including t-tests, analysis of variance, nonparametric equivalents of ANOVA, linear regression, goodness-of-fit tests and categorical data analysis. Applications to research questions that arise in biological research, including the students' own research, are emphasized. Students also receive training in the use of statistical analysis computer software. Previous enrollment in STAT 370 is recommended.

BIOL 780. Molecular Genetics 3 credit hours
Studies the physiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Students earning graduate credit produce a term paper and deliver a class seminar based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: BIOL 419.

BIOL 781. Cooperative Education in Biology 1-4 credit hours
Students pursuing the nonthesis MS degree may gain practical professional experience, under academic supervision, that complements the student's academic program. BIOL 781N is for internships that last no more than one semester or summer and may be unpaid. The intern experience to be used for credit must be approved by the student's graduate capstone project committee. An academic product from the experience, such as a written summary and/or oral presentation is assigned by the graduate capstone committee. Graded Cr/NCr. Prerequisite: acceptance into MS program.

BIOL 781N. Internship in Biology 1-4 credit hours
Students pursuing the nonthesis MS degree may gain practical professional experience, under academic supervision, that complements the student's academic program. BIOL 781N is for internships that last no more than one semester or summer and may be unpaid. The intern experience to be used for credit must be approved by the student's graduate capstone project committee. An academic product from the experience, such as a written summary and/or oral presentation is assigned by the graduate capstone committee. Graded Cr/NCr. Prerequisite: acceptance into MS program.

BIOL 797. Departmental Seminar 1 credit hour
Forum for the weekly presentation and discussion of research projects performed by invited scientists from outside departments and institutions, departmental faculty and graduate students. All MS degree-bound graduate students are required to attend the seminar each semester and must enroll in the course for credit during two semesters. Students enrolled in the course must attend all seminars presented in the course, fill out an evaluation of each seminar and make one 15 minute professional-meeting style presentation of their research. Repeatable up to 5 credit hours. Graded S/U. Prerequisite: acceptance into MS program.

Biomedical Engineering (BME)

Note: For a course to be used as a prerequisite to BME courses, it must have been passed with a grade of C or better (generating 2.000 grade points or better).

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

BME 281I. Noncredit Internship 0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.
BME 335. Biomedical Computer Applications 3 credit hours
Introduces students to software packages and applications applicable to the biomedical engineering curriculum and discipline. Course content includes statistical analysis software and applications (e.g., Excel), three-dimensional graphical computer aided design software (e.g., SolidWorks), and mathematical programming software and applications (e.g., MATLAB). Prerequisite: MATH 242.

BME 452. Biomechanics 3 credit hours
A foundation of mechanics in addressing bioengineering problems. Introduction to the basic concepts and methods of mechanics as applied to biological tissues. Introduces statics, dynamics and mechanics applied to the human body including the following: (1) vectors, moments, equilibrium, (2) kinetics and kinematics including displacement, rotation, acceleration and deformation, (3) stress and strain, (4) equations of motion, (5) impulse and momentum, and (6) mechanical properties of biological tissues. Prerequisites: MATH 243, AE 223.

BME 462. Introduction to Biofluids 3 credit hours
Introduction to the conservation laws which form the foundation of fluid mechanics and their application to bioengineering related problems including blood flow in the vascular system and other biological flows within the human body. Topics include dimensional analysis, definition of system, conservation of mass and energy, and conservation of momentum. Prerequisites: AE 223, MATH 555. Corequisites: BIOL 223, ME 398.

BME 477. Introduction to Biomaterials 3 credit hours
Major classes of materials used in medical devices including polymers, metals, ceramics, composites and natural materials are discussed. Biocompatibility, host reactions to biomaterials, immune response, wound healing, biomaterial implantation and acute inflammation, thrombosis, infection, tumorigenesis and calcification of biomaterials, testing and degradation of biomaterials in vivo are covered. Specific biomaterials applications such as cardiovascular devices, drug delivery and tissue engineering are covered. Additionally, biomedical device design and regulatory issues are also discussed. Prerequisites: CHEM 211, PHYS 213 or 313.

BME 480. Bioinstrumentation 3 credit hours
Introduction to engineering aspects of the detection, acquisition, processing, interpretation and display of signals from living systems; biomedical sensors for measurements of biopotentials, force, displacement, blood pressure, blood flow, heart sounds, respiration and temperature; biomedical devices; medical imaging instrumentation. Prerequisites: BME 335, EE 282, ME 254.

BME 481A. Cooperative Education 1 credit hour
Introduction to engineering practice by working in industry in an engineering-related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignments and need not be enrolled in any other course. May be repeated. Graded Cr/NCr. Perquisites: 30 hours toward Bachelor of Science in biomedical engineering and approval by the appropriate faculty sponsor.

BME 481P. Cooperative Education 1 credit hour
Introduction to engineering practice by working in industry in an engineering-related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. May be repeated. Graded Cr/NCr. Perquisites: 30 hours toward Bachelor of Science in biomedical engineering and approval by the appropriate faculty sponsor.

BME 482. Design of Biodevices 3 credit hours
Discusses the overview of device definitions, selection and use of materials in invitro medical devices and implantable medical devices, product development and documentation, regulation and testing of medical devices, reliability and liability, licensing and patents, manufacturing and quality control, biocompatibility, FDA and ISO 10993 biological evaluations. Provides an overview of the multiple issues in designing a marketable medical device, including the design process from clinical problem definition through prototype and clinical testing to market readiness. Design case studies are discussed. Students must be within three semesters of graduation in order to take this course. Prerequisites: BME 335 and program consent.

BME 497. Special Topics 3 credit hours
New or special topics presented on sufficient demand at the undergraduate level. Prerequisite: instructor's consent.

BME 585. Capstone Design I 3 credit hours
First course in a two-semester capstone design sequence. Focuses on the process of strategic clinical problem solving and innovation through evaluation of real world diagnostic processes, current therapeutic approaches and clinical outcomes. Students work in teams to identify and critically evaluate unmet medical or clinical needs through the use of a biodesign and innovation process, including clinical needs finding through on-site observations, stakeholder assessments, needs statement development and concept generation. Students and their results from this course transition to the next course in this sequence, BME 595, Capstone Design II. For undergraduate students only. Students must be within three semesters of graduation in order to take this course. Prerequisites: BME 335 and program consent.

BME 590. Independent Study and Research 1-3 credit hours
Independent study or research directed by a faculty member affiliated with the bioengineering program. May be repeated for credit. A maximum of 3 credit hours may be applied toward graduation. Prerequisite: consent of supervising faculty member.

BME 595. Capstone Design II 3 credit hours
Second course in a two-semester capstone design sequence. Uses design and engineering practice involving a team-based biomedical engineering analysis and design project, including discovering customer requirements, design requirements, biocompatibility, regulatory, ethical, societal, environmental and economic considerations, creativity, alternative approaches for solution, specific system analysis, project management, prototype construction and testing, and final report and presentation. For undergraduate students only. Prerequisites: BME 482, 585.
and hands-on laboratories. In these laboratories, students gain firsthand experimental design, data analysis, interpretation of data and results, mechanics; (6) the mechanobiological feedback loop; (7) cell and tissue alteration cellular function; (8) how cells sense and respond to mechanical applications; (4) how the extracellular matrix and biomimetic matrices play in normal cell function and disease; (3) the role of the mechanical health importance of mechanobiology; (2) the role mechanical forces and biomedicine. Topics include, but are not limited to: (1) global/

BME 735. Biocomputational Modeling  3 credit hours
Prepares students for engineering practice by introducing 3D multiphysics modeling software. Students use COMSOL multiphysics simulation software linked with SolidWorks and MATLAB to solve engineering problems in complex 3D geometries such as the human body. Within the simulation software environment, students define the geometry, set boundary conditions, specify the physics, set material properties, mesh, simulate, and visualize their results. Topics include modeling of biofluidic mechanisms (e.g., stress and strain on arteries), heat and mass transfer (i.e., bioheat and drug delivery), and structural mechanisms (i.e., stress and strain on bone). Computer simulation has become an essential part of science, medicine and engineering. Course gives students hands on experience to meet those demands. Prerequisites: either BME 462 or ME 521, and BME 335 or its equivalent; or instructor's consent.

BME 738. Biomedical Imaging  3 credit hours
Prepares students with knowledge of medical imaging and gives hands on experience with ultrasound imaging, dual-energy x-ray absorbmetry (DEXA), spectral imaging, and medical image processing labs. Covers medical imaging modalities such as planar x-ray, x-ray computed tomography (CT), DEXA, magnetic resonance imaging (MRI), nuclear medicine imaging-radio emission tomography and single-photon emission computed tomography, ultrasound imaging, and spectral imaging. Students gain hands on experience with medical image processing software to import CT or MRI scans and construct 3D models of human anatomy. Introduces fundamental physical and engineering principles used in medical imaging and image processing, with a primary focus on physical principles, instrumentation methods, and image processing methods. Strengths, limitations, sensitivity and appropriate applications for each modality of imaging are also examined. Prerequisites: PHYS 314 and BME 335 or its equivalent; or instructor's consent.

BME 742. Biosensor Development  3 credit hours
A comprehensive introduction to the basic features and components of biosensors. Discusses different ways to evaluate the physiological state of cells in culture or a whole organism using various methods such as: optical detection, impedance measurements, amperometric measurements, potentiometric measurements and physical measurements using a scanning probe microscope. Primary focus is given to optical measurements and techniques used to explore surface chemistry such as: bioconjugation of biomolecules such as proteins, biomolecule attachment to transducer surfaces, DNA microarrays and bead-based assays. Case studies and analysis of commercially available biosensors are covered. Students perform a project for the design, fabrication and testing of a microfluidic-based biosensor. Students leave the course with a fundamental knowledge of biosensor design and development. Prerequisites: MATH 242 and either CHEM 532 or 533 or 536; or instructor's consent.

BME 743. Mechanobiology of Cells and Tissue  3 credit hours
Focuses on how the mechanical environment influences cell behavior and integrates principles from engineering, cell biology, physiology, and biomedicine. Topics include, but are not limited to: (1) global/health importance of mechanobiology; (2) the role mechanical forces play in normal cell function and disease; (3) the role of the mechanical environment in regenerative medicine and tissue engineering applications; (4) how the extracellular matrix and biomechanical matrices alter cellular function; (5) how cells sense and respond to mechanical forces; (6) the mechanobiological feedback loop; (7) cell and tissue mechanics; (8) microscopy of cells and tissues; and (9) experimental methods to study cellular mechanobiology. Course emphasizes experimental design, data analysis, interpretation of data and results, and hands-on laboratories. In these laboratories, students gain firsthand experience with cell culture techniques; microscopy, and experimental and computational techniques in cell mechanobiology. Prerequisites: BIOL 210, BME 452 or equivalent, or instructor's consent.

BME 747. Biochemical Engineering  3 credit hours
Prepares students for careers in the pharmaceutical industry as research scientists or process engineers. Students learn about designing scaffolds for tissues, molecular design for new drugs, in vitro testing of cells and in vivo testing of whole organisms. Students are guided through the process of transgenic organism production, production of pharmaceutical agents using bioreactors and downstream processing. Topics covered include the thermodynamics and kinetics for the biosynthesis or enzymatic degradation of various biological macromolecules. Students learn the application of engineering principles to analyze, design and develop processes using biocatalysts to enhance these processes. Processes covered include those that are involved in the formation of desirable compounds and products and in the transformation, or destruction of unwanted substances. Several in-class demonstrations are performed, and students design a micro-bioreactor. Prerequisites: MATH 242 and either CHEM 532 or 533 or 536; or instructor's consent.

BME 752. Applied Human Biomechanics  3 credit hours
Examines the biology, physiology, and structure of skeletal muscle, the mechanisms of skeletal muscle force generation, and the adaptations to muscle that arise from changes in muscle usage. Students learn to create biomechanical models and generate simulations of human movement based on data collected in a human biomechanics lab. Experimental design and data analysis and interpretation are emphasized. Prerequisites: BIOL 223 and BME 452 or its equivalent; or instructor's consent.

BME 757. Clinical Biomechanics Instrumentation  3 credit hours
Students learn to collect, process, analyze and interpret motion of the human body (e.g., running, walking, jumping, lifting, etc.), muscle force, muscle activity and acceleration data using various equipment in a human biomechanics lab. The equipment and techniques used are common to multiple fields and disciplines, including physical medicine and rehabilitation, orthopedics, physical therapy, prosthetics and orthotics, wearable biosensors, sports performance and medical/sport/safety equipment design. Prerequisite: BME 452 or instructor's consent.

BME 777. Biodegradable Materials  3 credit hours
A comprehensive overview of biodegradable materials as it relates to their applications in the biomedical and health care fields. Covers in detail different classes of biodegradable materials including biodegradable polymers, ceramics and metals. Synthesis, characterization and degradation of these materials in the biological environment are covered. Biodegradation/biocorrosion mechanisms of these materials, the complexity of the response of the biological environment, and the experimental methods for monitoring the degradation process are discussed, as well as strategies for surface modification to control the degradation. Finally specific applications are covered. Prerequisite: either BME 477 or ME 651; or instructor's consent.

BME 779. Tissue Engineering  3 credit hours
Introduction to the strategies and fundamental bioengineering design criteria behind the development of tissue substitutes. Principles of engineering and the life sciences toward the development of biological substitutes that restore, maintain or improve tissue function are covered. Topics include stem cells, cell growth and differentiation, cell signaling, materials for scaffolding, scaffold degradation and modification, cell culture environment, cell nutrition, cryopreservation, bioreactor design,
Clinical applications, regulatory and ethics. Prerequisite: BME 477 or instructor's consent.

**Business Administration (BADM)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**BADM 101. Becoming a Business Student I 1 credit hour**

Required orientation class for new business students who are first-time freshmen. Covers various university policies, academic requirements for a degree, campus resources, study skills and career opportunities. Facilitates connections with faculty staff and other students. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center.

**BADM 102. Becoming a Business Student II 1 credit hour**

Required continuation of BADM 101 for second-semester freshmen who are planning for their sophomore year in the Barton School of Business. Involves students in more in-depth career, academic planning and involvement with the Barton School of Business community. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite: BADM 101.

**BADM 160. Business Software 3 credit hours**

Provides online instruction in Microsoft Word, Excel, PowerPoint, Outlook and Access. Students with significant skills in one or more of these programs may be able to test out of the course. Required for advanced standing in the Barton School; Barton School students should take this course during their freshman year. Prerequisite: MATH 111 or equivalent, or concurrent enrollment in MATH 111.

**BADM 190. Selected Topics 1-3 credit hours**

Repeatable with departmental consent.

**BADM 281. Cooperative Education 1 credit hour**

An academic program that integrates academic theory with professional experience through paid employment in a supervised work setting related to the student's career focus. Course does not satisfy elective requirements for any major or minor offered by the Barton School. May be repeated, but limited to a total of 3 credits. Graded Cr/NCr. Prerequisites: sophomore standing and 2.250 GPA.

**BADM 290. Selected Topics 1-3 credit hours**

Repeatable with departmental consent.

**BADM 301. Transferring to the Barton School of Business 1 credit hour**

Required for students transferring from other institutions who are planning to pursue a business degree. Designed to offer a smooth transition from a prior institution, to integrate the student into the WSU campus and provide information about various university policies, academic requirements for a degree, campus resources, study skills and career opportunities in the field of business.

**BADM 490. Selected Topics 1-3 credit hours**

Repeatable with departmental consent.

**Business Law (BLAW)**

*Department of Finance, Real Estate & Decision Sciences*

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**BLAW 190. Selected Topics 1-3 credit hours**

Repeatable with departmental consent.

**BLAW 390. Special Group Studies in Business Law 1-3 credit hours**

Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

**BLAW 431. Legal Environment of Business 3 credit hours**

Introduction to the legal environment in which businesses operate. Considers the institutions and processes related to business law, and the major frameworks of private and public law, including contracts and commercial transactions, business organizations, business torts and crimes, and regulatory law. Addresses ethical and social responsibility considerations as an integral aspect of legal regulation. Prerequisites: junior standing, advanced standing.

**BLAW 481. Cooperative Education 1-3 credit hours**

Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing and 2.250 GPA.

**BLAW 491. Independent Study/Project 1-3 credit hours**

Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing and departmental consent.

**BLAW 635. Business Law for Accountants I 3 credit hours**

Law of contracts, bailments, sales, commercial paper and secured transactions. Centers on the Uniform Commercial Code. Prerequisites: junior standing, advanced standing.

**BLAW 636. Business Law for Accountants II 3 credit hours**

Law of agency, partnerships and corporations. Considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Prerequisites: junior standing, advanced standing.

**BLAW 690. Seminar in Selected Topics 1-5 credit hours**

Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

**Chemistry (CHEM)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**CHEM 101. Science of Chemistry 3 credit hours**

*General education introductory course.* Teaches the basic concepts of chemistry that aid in understanding the physical world. No attempt to teach basic computational or laboratory skills; instead emphasizes such concepts as atomic and molecular theory, energy, structures and theories regarding why reactions occur.

**CHEM 103. Introductory Chemistry 5 credit hours**

3 Classroom hours; 4 Lab hours. Lab fee. *General education introductory course.* A survey of inorganic, organic, nuclear and biological chemistry. Recommended for the student who plans to take only one course in chemistry. Course does not meet the requirements for students who are planning to apply to medical school. Students who expect to major in the natural sciences should take the CHEM 211-212
CHEM 110. Preparatory Chemistry  3 credit hours
A general chemistry course for students who have not had adequate preparation in chemistry or physics. Enables students to improve their problem-solving skills and to briefly review mathematics relevant to general chemistry. Introduces the basic chemical concepts of atoms, molecules, chemical reactions, chemical equations, gas laws and solutions. Students with credit in CHEM 103 or 211 cannot also receive credit for CHEM 110. Prerequisite: one year of high school algebra or MATH 011.

CHEM 211. General Chemistry I  5 credit hours
3 Classroom hours; 4 Lab hours. Lab fee. General education introductory course. An introduction to the general concepts of chemistry. Includes chemical stoichiometry, atomic and molecular structure, bonding, gas laws, states of matter and chemical periodicity. CHEM 211-212 meets the needs of students who may wish to take more than one course in chemistry. Credit is allowed in only one of the following: CHEM 211 or 110. Prerequisites: a college-level chemistry course such as CHEM 110, 101 or 103, or high school chemistry or physics. Corequisite: MATH 111 or two units of high school algebra or MATH 011.

CHEM 212. General Chemistry II  5 credit hours
3 Classroom hours; 4 Lab hours. Lab fee. General education advanced further study course. Continuation of CHEM 211. Includes thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis and an introduction to theories of bonding. Prerequisite: CHEM 211 with a grade higher than C-.

CHEM 309. Special Topics in Chemistry  1-3 credit hours
Detailed study of topics in chemistry with particular emphasis established according to the expertise of the various instructors. Repeatable for credit. Prerequisite: CHEM 212.

CHEM 481. Cooperative Education in Chemistry  1-6 credit hours
Permits chemistry students to participate in the cooperative education program. Graded Cr/NCr.

CHEM 481N. Internship  1 credit hour
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

CHEM 514. Inorganic Chemistry  3 credit hours
General education advanced further study course. Basic inorganic chemistry emphasizing molecular symmetry and structure, fundamental bonding concepts, ionic interactions, periodicity of the elements, systematics of the chemistry of the elements, acid-base chemistry and non-aqueous solvents, classical coordination chemistry and introductory bioinorganic chemistry. Prerequisite: CHEM 212 with a grade higher than C-. CHEM 531 strongly suggested but not required.

CHEM 523. Analytical Chemistry  4 credit hours
2 Classroom hours; 6 Lab hours. Lab fee. General education advanced further study course. Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite: CHEM 212 with a grade higher than C-.

CHEM 524. Instrumental Methods of Chemical Analysis  4 credit hours
2 Classroom hours; 6 Lab hours. Lab fee. Introduction to spectroscopic techniques (UV-Visible atomic absorption, molecular absorption, infrared, mass spectrometry and NMR), electrochemical techniques (potentiometry, voltammetry and coulometry) and separation techniques (gas chromatography and HPLC). Applications of computer and automated methods of analysis also covered. Prerequisite: CHEM 531. CHEM 532 strongly recommended but not required.

CHEM 531. Organic Chemistry I  5 credit hours
3 Classroom hours; 6 Lab hours. Lab fee. General education advanced further study course. Introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry and spectrographic analysis. Credit is not allowed for both CHEM 531 and 533. Prerequisite: CHEM 212 with a grade higher than C-.

CHEM 532. Organic Chemistry II  5 credit hours
3 Classroom hours; 6 Lab hours. Lab fee. A continuation of CHEM 531 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Credit is not allowed for both CHEM 532 and 536. Prerequisite: CHEM 531 with a grade higher than C-.

CHEM 533. Elementary Organic Chemistry  3 credit hours
A one semester survey of organic chemistry, examining various classes of organic compounds, organic reactions and reaction mechanisms. The goal of the course is to establish an understanding of the relationship between structure and reactivity, with particular emphasis on the importance of organic chemistry to the health sciences and biomedical engineering. Credit is not allowed for both CHEM 533 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: CHEM 212 with a grade higher than C-.

CHEM 535. Organic Chemistry I  3 credit hours
Introduction to the study of carbon compounds emphasizing reaction mechanisms, stereochemistry and spectrographic analysis. Credit is not allowed for both CHEM 535 and 531. This course does not include a lab, is open only to biomedical engineering majors and does not meet the needs of chemistry majors or premed students. Prerequisites: must be a biomedical engineering major and have completed CHEM 212 with a grade higher than C-.

CHEM 536. Organic Chemistry II  3 credit hours
Continuation of CHEM 535 emphasizing the structure and reactions of principal functional groups and compounds of biological interest. Credit is not allowed for both CHEM 536 and 532. This course does not include a lab, is open only to biomedical engineering majors and does not meet the needs of chemistry majors or premed students. Prerequisites: must be a biomedical engineering major and have completed CHEM 531 or 535 with a grade higher than C-.

CHEM 545. Physical Chemistry I  3 credit hours
General education advanced further study course. Introduction to the fundamentals of thermodynamics with the goal of understanding the driving forces behind chemical and physical changes and equilibria. Covers the laws of thermodynamics and explores concepts involving work, heat and simple mechanical processes. Helmholtz and Gibbs energy are introduced as thermodynamic indicators of spontaneity/equilibria. The last portion of the course applies these concepts to the study of phase changes, chemical equilibria, ideal and non-ideal solutions, electrolytes and chemical kinetics. Prerequisites: CHEM 212 with a grade higher than C-, one year of college physics, MATH 344 or its equivalent.

CHEM 546. Physical Chemistry II  3 credit hours
Covers elementary quantum mechanics and its applications to chemistry. Begins with a historical comparison between classical and quantum mechanics, then builds from the postulates of quantum mechanics to explore the Schrödinger equation and its use in solving problems involving particles, rotating bodies and vibrations. Special emphasis on spectroscopy and approximation methods relevant to
chemistry. Prerequisites: CHEM 212 with a grade higher than C-, one year of college physics, and MATH 344 or its equivalent.

CHEM 547. Physical Chemistry Lab  2 credit hours
6 Lab hours. Lab fee. Laboratory experiments and exercises that reinforce physical chemistry concepts of thermodynamics, equilibrium, spectroscopy and error analysis. Students gain practical, hands-on experience with computerized data acquisition and learn computational techniques for data reduction and analysis. Pre- or corequisites: CHEM 545, 546.

CHEM 605. Medicinal Chemistry  3 credit hours
For students interested in chemistry related to the design, development and mode of action of drugs. Describes those organic substances used as medicinal agents and explains the mode of action and chemical reactions of drugs in the body; illustrates the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc.; and brings about a better understanding of drugs. Includes transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties in relation to biological activity, drug design, structure-activity relationships and discussion of a select number of organic medicinal agents. Prerequisite: CHEM 532 or equivalent; a semester of biochemistry (CHEM 661 or 662) and a year of biology are strongly recommended.

CHEM 615. Advanced Inorganic Chemistry  3 credit hours
Includes modern bonding theories, structure and spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic ring systems and polymers, inorganic environmental chemistry, mechanisms of inorganic reactions and solid state chemistry. Prerequisite: CHEM 514. Pre- or corequisite: CHEM 546.

CHEM 616. Inorganic Chemistry Lab  2 credit hours
6 Lab hours. Lab fee. Experimental methods of inorganic chemistry. Pre- or corequisite: CHEM 615.

CHEM 661. Introductory Biochemistry  3 credit hours
General education advanced further study course. An introductory course for chemistry majors including chemistry/business majors and students in life sciences. Not recommended for the BS in chemistry-premedicine or biochemistry field majors for whom CHEM 662 and 663 are required. Introduces thermodynamics and biological oxidation-reduction reactions; structure, metabolism and synthesis of proteins, carbohydrates, lipids and nucleic acids; enzyme kinetics, photosynthesis and transfer of genetic information. Prerequisite: CHEM 532, 533, or 536. Credit is not granted for both CHEM 661 and 662.

CHEM 662. Biochemistry I  3 credit hours
Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acid, nucleoprotein, enzyme catalysis, biological oxidations, photosynthesis and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: CHEM 523 and 532 or equivalents. Credit is not granted for both CHEM 661 and 662.

CHEM 663. Biochemistry II  3 credit hours
Study of metabolism and control of carbohydrates, lipids, phosphoglycerides, spingolipids, sterols, amino acids and proteins; synthesis of porphyrins, amides and polyamines; synthesis and metabolism of purines, pyrimidines and nucleotides; synthesis and structure of DNAs, RNAs and proteins; organization and functioning of genes; evolution of proteins and nucleic acids, hereditary disorders of metabolism, biochemistry of endocrine glands, major nutrients and vitamins, body fluids and generalized tissues. A fundamental background of biology or microbiology is recommended but not essential. Prerequisite: CHEM 662 with a grade higher than C-.

CHEM 664. Biochemistry Laboratory  3 credit hours
1 Classroom hour; 6 Lab hours. Lab fee. Practical training in biochemical procedures and literature searching; experiments include isolation, characterization and assay of biomolecules and use of centrifugation, chromatography, electrophoresis, spectrophotometry, enzyme kinetics and molecular cloning techniques. Prerequisite: CHEM 532. Pre- or corequisite: CHEM 662 or 663.

CHEM 666. Special Topics in Biochemistry  3 credit hours
Discusses a small number of current problems in biochemistry in depth. Requires reading of published research in the field. (Offered in fall semester in even-numbered years.) Prerequisites: BIOL 211, CHEM 662, 663.

CHEM 669. Research In Biochemistry  2 credit hours
Cross-listed as BIOL 669. Students in the biochemistry field major participate in a biochemistry research project under the direction of a faculty member. Requires a written report summarizing the results. May be repeated once for credit. Graded Cr/NCr. Prerequisites: BIOL 420, CHEM 662 or 663, and CHEM 664 and instructor's consent.

CHEM 690. Independent Study and Research  1-3 credit hours
Studies performed must be directed by a faculty member in the department of chemistry. For undergraduate students only. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation. Graded Cr/NCr. Prerequisite: departmental consent.

CHEM 700. Chemistry Seminar  1 credit hour
Students give seminars on either papers recently published in the literature or on their own research. Repeatable for credit. Graded S/U.

CHEM 701. Chemistry Colloquium  1 credit hour
Speakers for the colloquium consist of outstanding chemists from other institutions and faculty. Repeatable for credit. Graded S/U.

CHEM 709. Special Topics in Chemistry  2-3 credit hours
A discussion of topics of a special significance and interest to faculty and students. Offerings announced in advance. Repeatable for credit.

CHEM 715. Advanced Spectroscopy  3 credit hours
Introduction to 1H and 13C NMR spectroscopy including basic concepts such as integration, chemical shifts, diamagnetic shielding, magnetic anisotropy, spin-spin coupling (first and second-order), coupling constants, proton decoupled 13C NMR and molecular motion by NMR, coupling to 1+ metal centers, including those with <100 percent natural abundance, virtual coupling in metal complexes, NMR of paramagnetic systems and use of paramagnetic shift reagents. An introduction to mass spectroscopy including instrumentational-magnetic sector, quadrupole, ion trap, MS-MS; sample preparation and interfaces-GC-MS, LC-MS, electropray, MALDI; methods of ionization-electron impact, chemical ionization, electropray, interpretation of mass spectra-basic concepts, fragmentation patterns. An introduction to the interpretation of mid-infrared spectroscopy of complex molecules and ionic compounds followed by the synthesis of results from NMR, MS and mid IR spectra to determine structure. Emphasis on interpretation of results for understanding electronic and molecular properties of chemical compounds related to their symmetry. Prerequisite: CHEM 532 or equivalent; or admission to a chemistry graduate program.

CHEM 717. Advanced Spectroscopy II  3 credit hours
Introduction to electronic and vibrational spectroscopy, EPR and magnetic properties of compounds. A study of the electric field interaction of radiation, electronic and vibrational spectroscopy, and the magnetic field interaction of radiation, EPR and magnetism, with molecular systems examining the different changes in state.
that molecules can undergo. Emphasis on interpretation of results for understanding electronic and molecular properties of chemical compounds related to their symmetry and structure. Prerequisites: CHEM 532, 546, 615, or their equivalents; or admission to a chemistry graduate program.

CHEM 719. Modern Synthetic Methods  3 credit hours
Introduction to modern synthetic methods in chemistry. A detailed investigation of the synthetic chemistry of anions is followed by a detailed survey of functional group interconversions, then oxidation and reduction reactions. The topic of retrosynthetic analysis is introduced. Topics in inorganic synthesis include organometallic bond forming and breaking reactions, ligand synthesis and replacement, solid state synthesis and topics in bioorganic synthesis. Prerequisites: CHEM 532 and 615, or their equivalents; or admission to a chemistry graduate program.

CHEM 721. Advanced Biochemistry  3 credit hours
Introduction to advanced biochemical concepts, processes and techniques. A comprehensive survey of structure and functions of biomolecules including proteins, nucleic acids, lipids, DNA replication and translation, biological membrane and membrane transport are covered. Enzyme mechanisms and kinetics and protein structure/function are discussed in detail. Biochemical, molecular biological, biophysical and chemical techniques that are commonly used in the study of biochemical processes are introduced and discussed. Prerequisite: CHEM 661 or 663 or their equivalents; or admission to a chemistry graduate program.

CHEM 722. Advanced Physical Chemistry  3 credit hours
In-depth overview of the fundamentals of thermodynamics, kinetics, quantum mechanics and statistical mechanics as they apply to chemistry. Special emphasis is placed on solution thermodynamics, kinetics of coupled reactions, statistical mechanics of macromolecules and quantum mechanics as it applies to spectroscopy. Prerequisites: CHEM 545 and 546, or their equivalents; or admission to a chemistry graduate program.

CHEM 734. Instrumental Methods for Research  3 credit hours
Designed to prepare graduate students or other researchers to perform spectroscopy experiments relevant to their research. The identity of organic compounds can be determined by the information provided by several types of spectra: mass, infrared, nuclear magnetic resonance, fluorescence and ultraviolet. Students learn to operate such instruments as the Varian 2200 GC/MS mass spectrometer, the ThermoNicolet Avatar FTIR spectrophotometer, the Varian Mercury 300 and Inova 400 NMR spectrometers, the Fluorolog fluorescence spectrophotometer and the Hitachi U-2010 and Varian Cary 100 UV-Vis spectrophotometers in the department's NMR and analytical facilities. The focus of this class is technique and not the interpretation of spectra. On successful completion of this course, students are authorized to use departmental instruments. Prerequisite: CHEM 524 or equivalent, or departmental consent, or admission to a chemistry graduate program.

CHEM 738. Structure Determination and Spectral Analysis of Organic Compounds  3 credit hours
Discusses chiroptical techniques, infrared, ultraviolet, nuclear magnetic and electron spin resonance and mass spectroscopy, and their practical use in structure determination. Prerequisite: CHEM 532.

CHEM 744. Computational Quantum Chemistry  3 credit hours
An introduction to molecular orbital procedures and methods for calculating a wide range of physical, chemical and electronic properties of systems large enough to be of interest to inorganic, organic and biochemists. Using commercial molecular orbital software programs such as MOPAC, SPARTAN and GAUSSIAN, students learn to select appropriate "model" computational procedures to predict properties of molecules and reactions. By comparison with experiment, students learn to assess the range of applicability and accuracy of the "model" methods as applied to various categories of chemical systems. Properties considered include energies and structures of molecules, ions and transition states; vibrational frequencies, IE and RAMAN spectra; thermochemical properties, heat of formation, bond and reaction energies, isomerization energy barriers, reaction pathways; molecular orbitals, atomic charges, dipole and multipole moments, ionization potentials, bond orders; orbital energies and photoelectron spectroscopy; excited state properties, singlet and triplet surfaces. Prerequisite: CHEM 546 or equivalent (MATH 344 is necessary).

Chinese (CHIN)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

CHIN 111. Elementary Chinese I  5 credit hours
Introduction to the Chinese language with emphasis on the fundamentals of phonetics, listening, speaking, reading and writing, as well as gaining an understanding of Chinese culture.

CHIN 112. Elementary Chinese II  5 credit hours
Continues the introduction to the Chinese language with emphasis on improving the skills of listening, speaking, reading and writing, as well as gaining competence in Chinese culture. Prerequisite: CHIN 111 or one unit of high school Chinese or departmental consent.

CHIN 210. Intermediate Chinese  5 credit hours
Designed to be a seamless continuation of the elementary level by building on the skills of listening, speaking, reading and writing, as well as helping learners better understand contemporary Chinese society and be able to discuss and analyze cultural differences. Prerequisite: CHIN 112 or two units of high school Chinese or departmental consent.

CHIN 224. Intermediate Chinese  3 credit hours
A continuation of CHIN 210; further enhancement of listening comprehension and speaking, reading and writing skills. Prerequisite: CHIN 210 or instructor's consent.

Communication (COMM)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

COMM 111. Public Speaking  3 credit hours
General education foundation course. Studies basic concepts of speech communication as applied to public speaking. For students wishing to enhance leadership potential by improvement in traditional public speaking situations. An honors section of this course is available. (The university's requirement in oral communication must be fulfilled by completion of COMM 111. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the Elliott School of Communication.)

COMM 11IH. Public Speaking - Honors  3 credit hours
General education foundation course. Counts as an honors seminar. Studies basic concepts of speech communication as applied to public speaking and critical analysis. Goal is to learn basic strategies for tailoring messages to overcome obstacles in a variety of public speaking situations. Prerequisite: honors standing.

COMM 130. Communication & Society  3 credit hours
General education introductory course. Introduces the functions, processes and effects of individual and mass communication in American society. Explores economic, social and governmental impacts of such communication. Includes a survey of the media and communication industry.
COMM 130H. Communication & Society - Honors 3 credit hours
General education introductory course. Introduces the functions, processes and effects of individual and mass communication in American society. Explores economic, social and governmental impacts of such communication. Includes a survey of the media and communication industry. Honors section.

COMM 190. Introduction to Human Communication 3 credit hours
General education introductory course. Explores several alternative frameworks by which humans cope with and control the communication environment. Uses observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other and entire cultures. Uses multimedia instructional procedures. Course includes diversity content.

COMM 202. Debate & Forensics 3 credit hours
Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a maximum of 6 hours credit. May not be counted toward a major. Prerequisite: departmental consent.

COMM 221. Oral Interpretation 3 credit hours
General education advanced further study course. Cross-listed as THEA 221. Designed to enhance speaking skills through the performance of original stories and excerpts from literature. The main focus is to aid the student in becoming a compelling storyteller. Class works on the development of an expressive voice and also the development of performance skills such as learning to gesture and express oneself through facial expression. These verbal skills aid the student in being a better communicator.

COMM 222. Improving Voice & Diction 3 credit hours
Cross-listed as THEA 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Course is performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

COMM 301. Writing for the Mass Audience 3 credit hours
A hands-on introduction to writing for the mass audience, including print and broadcast journalism, advertising and public relations. In this survey-style course, students become acquainted with various news and promotional writing techniques and formats, develop reporting and interviewing skills, and learn to apply media judgment and ethics. Course is a prerequisite to many specialized Elliott School courses. Prerequisites: grade of C or better in ENGL 101, 102, COMM 130 or 190; and pass the department's Grammar, Spelling and Punctuation (GSP) exam.

COMM 302. Interpersonal Communication 3 credit hours
General education advanced further study course. Develops an awareness of the elements of interpersonal communication and aids the student in establishing more meaningful and effective interpersonal relationships, both personally and professionally.

COMM 304. Studio Video Production 3 credit hours
2 Classroom hours; 2 Lab hours. Basic principles, procedures and techniques of video production, including operation of studio equipment and direction of television programs and other video productions. Prerequisite: COMM 303 or instructor's consent.

COMM 305. Visual Technologies 3 credit hours
Examines the importance and meaning of visual symbols in modern society. Explores the methods by which visual images inform, educate and persuade readers.

COMM 306. Introduction to Multimedia 3 credit hours
Examines appropriate multimedia formats for telling stories and presenting information. Focuses on understanding effective publication of communication via audio, video and web.

COMM 310. Introduction to Photojournalism 3 credit hours
Basic photographic theory and technique emphasizing telling stories about people and events. Students explore and use digital camera gear and learn shooting techniques; study masters of the genre, historical changes, photo editing, legal and ethical issues, and dealing with controversy.

COMM 311. Persuasion 3 credit hours
General education advanced further study course. Explores the history, development and manifestation of persuasive techniques through the study and/or creation of persuasive messages in speeches, mass media, advertising, politics and organizations. The student becomes a better user and critic of persuasive messages and strategies. Prerequisite: COMM 111.

COMM 312. Nonverbal Communication 3 credit hours
General education advanced further study course. A study of theory and research in nonverbal communication. Students explore different aspects of nonverbal communication and engage in original research and study in the field of nonverbal communication. Emphasizes the application of nonverbal communication to the total human communication process. Prerequisite: COMM 111.

COMM 313. Argumentation & Advocacy 3 credit hours
General education advanced further study course. Studies the principles of effective rational discourse, oral and written, dealing with controversial issues in public deliberative, forensic and educational areas. Includes valid and fallacious reasoning as well as tests of evidence.

COMM 321. Introduction to Film Studies 3 credit hours
General education advanced further study course. Emphasizes the nature and function of film as a mode of communication with attention to film theory and technical criticism. Selected films are shown in class.

COMM 324. Integrated Marketing Communication 3 credit hours
Introduces the theory and practice of the integrated fields of advertising and public relations viewed from the perspective of integrated marketing communication. Includes audience research, the creation of specialized messages and message delivery systems. Prerequisite: COMM 301 or 190, or departmental consent.

COMM 325. Speaking in Business and the Professions 3 credit hours
A study of the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasizes public presentations, group leadership and interpersonal communication as appropriate to business and professional oral communication. Prerequisite: COMM 111 with a grade of C or better.

COMM 328. Teamwork, Leadership and Group Communication 3 credit hours
Studies the nature and functions of groups and the development of skills for identifying and evaluating communication behavior in small group situations emphasizing the dynamics of teamwork and group leadership.
COMM 335. International and Intercultural Communication  3 credit hours
*General education advanced issues and perspectives course.* Introduces basic concepts and principles regarding communication between people from different racial, ethnic and cultural backgrounds. Also includes the influence of the media in intercultural communication. *Course includes diversity content.*

COMM 360. Applied Communication Strategies  3 credit hours
COMM 360. Applied Communication Strategies (3). Surveys communication strategies as applied in interpersonal/organizational and rhetorical/political settings. Examines the connection between communication and technology, explores strategies for communication criticism and identifies communication strategies relevant to issues such as human relations, ethical decision making, freedom of speech and political rhetoric. Prerequisite: COMM 130 or 190, or instructor's consent.

COMM 401. Reporting the News  3 credit hours
Principles of reporting, interviewing and multimedia writing, emphasizing both print and broadcast storytelling techniques. Prerequisites: COMM 301 with a C- or better, COMM 305 or 306.

COMM 402. Debate & Forensics  3 credit hours
Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensics competition, and debate and forensics squad meetings. Repeatable for a maximum of 6 credit hours. Three hours may be counted toward the major. Prerequisite: departmental consent.

COMM 406. Audio Production  3 credit hours
Production and direction of audio programs. Hands-on use of all standard audio production equipment to learn techniques of sound blending and reproduction. Prerequisite: COMM 306.

COMM 422. Broadcast News  3 credit hours
Theory and techniques of preparing news for the electronic media, including preparation of news reports for radio and television. Prerequisite: COMM 301 with a C or better.

COMM 430. Communication Research and Inquiry  3 credit hours
*General education advanced further study course.* Introduces the process of research and inquiry across the discipline of communication. Helps students in communication become more intelligent consumers of research and investigative inquiry, and to become more adept at designing their own research projects. Includes information gathering, structuring inquiry with qualitative and quantitative research designs, and processing and reporting information. Prerequisite: junior standing and COMM 130 or 190, or instructor's consent.

COMM 450. Integrated Marketing Communication Strategy  3 credit hours
Builds on theories and practices of integrated marketing communication, including audience, market research, brand management and media selection. Uses case studies of local and national brands to explore strategic concepts unique to integrated marketing communication.

COMM 472. Senior Portfolio Seminar  1 credit hour
Students prepare a resume and portfolio of their best work to be evaluated by faculty members and communication professionals in their areas of emphasis. Ideally completed in a student's final semester before graduation. Graded Cr/NCr. Prerequisites: senior standing, completion of 18 hours of communication coursework and departmental consent.

COMM 481. Cooperative Education  1-2 credit hours
Credit for cooperative field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. May be repeated, but limited to a total of 4 credits in COMM 481 and COMM 690. Graded Cr/NCr. Prerequisite: departmental consent.

COMM 481N. Internship  1-2 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

COMM 500. Advanced News and Feature Writing  3 credit hours
1 Classroom hour; 4 Lab hours. Focuses on journalistic techniques for reporting and writing the more complex and important types of news and feature stories. Students work in various forms of traditional and emerging journalism. Emphasizes creating comprehensive content by integrating print, broadcast, Web, social media and other delivery methods. Prerequisites: junior standing, COMM 301 with a C or better, and COMM 401.

COMM 502. Public Information Writing  3 credit hours
Uses basic journalistic skills of clear, precise writing to communicate effectively with various audiences. Students write press releases, speeches and popularizations of complex documents. Techniques learned are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisites: COMM 301 with a C- or better, COMM 450, junior standing, or departmental consent.

COMM 506. Sound for Picture  3 credit hours
Focuses on the use of sound as a part of the storytelling process of film and video production. Examines the concepts and technology necessary for production. Prerequisite: COMM 406.

COMM 510. Editing For Print  3 credit hours
Selection, evaluation and preparation of copy and pictures for publication. Covers copy editing, rewriting, headline and caption writing. Prerequisites: junior standing and COMM 301 with a C or better.

COMM 511. Strategic Communication in Organizations  3 credit hours
Emphasizes the importance of effective communication in building meaningful relationships, grooming civic leadership and producing marketable employees. Human communication skills taught include: how to give effective presentations, facilitate small group discussions, handle conflict, manage diverse constituencies at various levels: organizational, interpersonal, small group and public; and contemporary topics and issues. Prerequisite: COMM 130 or 190, or instructor's consent.

COMM 512. Principles of Video Production  3 credit hours
Examines the concepts and technology necessary for effective production of video communication. Topics include camera operation, video editing and the role of light, sound and sequencing in video production. Prerequisite: COMM 306.

COMM 525. Advertising Copywriting  3 credit hours
Detailed practice at writing various kinds of advertising copy, including print and broadcast forms. Emphasizes terse, precise writing that evokes response sought by advertiser. Prerequisites: COMM 301, 324 with a C or better or departmental consent.

COMM 526. Media Buying & Selling  3 credit hours
Principles, methods and strategies of buying and selling media for advertising, including study of reach and frequency of the various mass media and specialized media, budgeting, research, rates, market share
and other tools of current buying and selling strategies. Prerequisite: COMM 324 or instructor's consent.

COMM 535. Communication Analysis and Criticism  3 credit hours
General education advanced further study course. Introduces the methods used for the analysis and critique of various linguistic, pictorial and aural elements of communication to become more discerning consumers of the various forms of public and mass-mediated messages. Analysis includes print advertisements, radio and television messages, newspaper features and public speeches. Prerequisites: junior standing and COMM 301 with a C- or better or instructor's consent.

COMM 550. Opinion Writing  3 credit hours
Studies editorial judgment, including practice in writing print, broadcast and electronic opinion pieces, and examining traditional and new technology research materials available to opinion writers. Prerequisites: COMM 301 or departmental consent.

COMM 555. News and Information Design  3 credit hours
Examines contemporary theories of publication layout and the visual presentation of quantitative information. Students investigate methods for combining type, graphics and photographs to convey information and tell stories. Prerequisites: COMM 301, 305.

COMM 570. Magazine Product  3 credit hours
Magazine production, including the choosing of subjects, approaches and illustrations; the shooting and editing of photographic stories; layout; the handling of production and management concerns. Prerequisites: COMM 301 and 510, or departmental consent.

COMM 571. Feature Writing  3 credit hours
Writing features for newspapers and magazines. Nonfiction topics may include personal experience essays, consumer pieces, travel articles and personality profiles. Prerequisites: COMM 301 with a C or better, junior standing.

COMM 581. Communication Practicum  1-3 credit hours
Application of theory, principles and practices to professional settings where students work under instructor supervision to continue their professional preparation in various areas of media and communication. Prerequisites: COMM 301 and instructor's consent.

COMM 604. Video Storytelling  3 credit hours
Application of video equipment and techniques for field productions. Execution of visual and audio expression in relation to effective video productions in a field setting. Prerequisite: COMM 512.

COMM 609. Interactive Media Production  3 credit hours
Investigation and application of production techniques for educational and instructional broadcasting, emphasizing television. Prerequisite: COMM 304.

COMM 612. Scholastic Journalism Instructional Strategies  3 credit hours
Assists those who are preparing to advise and teachers who currently supervise a student newspaper or yearbook. Emphasizes techniques for teaching various forms of writing and design, duties relating to production and finance of school publications, and methods to help students become better communicators. Prerequisite: COMM 301 with a C or better, or instructor's consent.

COMM 622. Studio B: Live Television News  3 credit hours
Reporting and writing about events in the university and community. Story assignment and preparation under the instructor's guidance; story broadcast over WSU Cable Channel 13. May be repeated for credit with adviser's consent. Prerequisite: COMM 422 or instructor's consent.

COMM 626. Integrated Marketing Communications Campaigns  3 credit hours
Instruction and practice in planning and developing integrated advertising and public relations campaigns. Teaches students to perform a situation analysis, identify objectives, develop strategies and tactics, and write a plans book, as well as produce advertising and public relations campaign materials. Prerequisites: COMM 324, 450, 525, or instructor's consent.

COMM 630. Communication Law and Responsibility  3 credit hours
Emphasizes both oral and written aspects of communication law and responsibility. Addresses general functions of the law including the right to communicate, broadcast law and law of the press. Includes discussion of First Amendment rights, libel, privacy, copyright, advertising, obscenity, pornography and corporate communication concerns. Prerequisite: COMM 301 with a C- or better or instructor's consent.

COMM 631. Historical and Theoretical Issues in Communication  3 credit hours
General education advanced further study course. Examines the development of various issues in communication in historical context. Emphasizes different humanistic and scientific theories of communication and the historical development of mediated communication. Uses selected theories to generate critiques of specific communication events. Prerequisites: junior standing and COMM 130 or 190, or instructor's consent.

COMM 633. Senior Honors Project  3 credit hours
For undergraduates seeking departmental honors in communication. An individual written and oral project, including a review of literature, methodology and critical analysis on a communication topic approved by the instructor. Prerequisites: senior standing; minimum GPA of 3.500; COMM 430, 535, 630, 631; departmental consent.

COMM 636. Advanced Public Speaking  3 credit hours
General education advanced further study course. Skills development in a variety of advanced presentational methods, including speaking from a TelePrompter, using PowerPoint technology, spokesperson/press conference speaking, conducting a training session, formal manuscript speaking, after dinner speaking and writing a speech for another person. Prerequisite: COMM 325.

COMM 637. Web Publishing  3 credit hours
Senior capstone course in journalism emphasis area. Prepares students to integrate print, broadcast, audio and video news in web-based platform. Graded Cr/NCr. Prerequisites: senior standing, COMM 401, 510.

COMM 640. Issues in Corporate Communication  3 credit hours
Examines how corporations craft messages that are persuasive to their various publics. Special attention to how companies use communication strategies to cope with situations that threaten their reputations.

COMM 650. Communication Training and Development  3 credit hours
An examination of communication concepts, processes, technologies and strategies related to training and development. Includes the application of these elements to formal instruction across disciplines and at various educational levels as well as in most professional training settings.

COMM 660. Seminar in Communication  1-3 credit hours
Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.
COMM 660AL. Real News, Fake News: Literacy for the Information Age 3 credit hours
In today's media-saturated world, in an era many refer to as "post-truth," much of what we see, hear and read is FAKE news. This advanced-level course probes the background for this development, and provides students with methods and tools to understand and critique this phenomenon.

COMM 660AM. Autoethnography 3 credit hours
Provides a comprehensive study and application of autoethnography as a qualitative research method. Autoethnography explores through various media the dynamic relationships among method, theory and personal narratives.

COMM 660AN. Race, Rhetoric and Media 3 credit hours
Examines the role of rhetoric and media in the public life of race and racism. Explores how race is constituted through symbolic practices, how race is negotiated through the use of media technologies, and how rhetoric and media have been used to both perpetuate and challenge racism.

COMM 661. Directing Forensics Program 3 credit hours
A study of the methods and procedures in coaching and directing the high school and collegiate forensic programs (debate and individual events). The future teacher is made aware of the literature and professional organizations in the field.

COMM 662. Seminar in Communication 1-3 credit hours
Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

COMM 662V. Communication Entrepreneur 3 credit hours
Special seminar dealing with current problems, issues or interests in various areas of communication. Students read and discuss how to effectively communicate while starting a company. Students meet with entrepreneurs who have been both successful and unsuccessful communicators in their careers. Repeatable for credit in different topics only.

COMM 675. Directed Study 1-4 credit hours
Cross-listed as THEA 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

COMM 690. Communication Internship 1-2 credit hours
Credit for professional experience that integrates theory with a planned and supervised professional experience designed to complement and enhance an academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. May be repeated, but limited to a total of 4 credits in COMM 481 and COMM 690. Graded Cr/NCr. Prerequisite: departmental consent.

COMM 720. Dimensions of Mass Communication 3 credit hours
A detailed study of mass media, their role as social institutions, their control, support, content and audience, and their effects.

COMM 722. The Art of Conversation 3 credit hours
Conversation is the form of communication people engage in most naturally and frequently, but about which they seldom think seriously. Helps participants enhance their understanding and appreciation of, as well as their skill in, the art of conversation. Includes the nature of conversation, principles of conversational communication, types of conversation, conversation in the media and conversation analysis. Prerequisites: COMM 302 and junior standing or departmental consent.

COMM 750. Workshops in Communication 1-4 credit hours
Workshops on a variety of communication topics. Different topics are indicated by a letter following the course number.

COMM 760. Seminar in Communication 1-3 credit hours
Special seminars dealing with current problems, issues or interests in various areas of communication. Repeatable for credit in different topics only.

**Communication Sciences and Disorders (CSD)**
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

CSD 111. Disorders of Human Communication 3 credit hours
Introduction to communication sciences and disorders and the ways society views people with communication disorders. Explores media and literature representations of communication disorders through movie and television reviews, personality profiles of well-known people and fiction. Students gain an understanding of the various types of communication disorders and learn how to become advocates for children and adults with communication disorders and their families. Course includes diversity content.

CSD 240. Introduction to Deaf and Hard of Hearing 2 credit hours
Reviews history and philosophies contributing to present trends in education of the deaf. Introduces state and federal laws addressing services to people who are deaf and hard of hearing, as well as certification and evaluation requirements for teachers and interpreters. Includes a look at etiology of deafness, interventions and devices for the deaf. Course includes diversity content.

CSD 251. Auditory Development and Disorders 2 credit hours
Introduces the etiology, nature and symptomology of auditory disorders and pathologies.

CSD 260. Signing Exact English I 2 credit hours
Introduction to the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Independent outside practice is necessary to facilitate skill. Course includes diversity content.

CSD 270. American Sign Language I 3 credit hours
Focuses on the use of American Sign Language as used by the American deaf community. Development of basic communication skills leads to basic conversational skills in ASL. Course includes diversity content.

CSD 301. Basic Anatomy and Physiology of the Speech Mechanism 2 credit hours
Introductory course in basic anatomy and physiology of speech with an emphasis on respiration, phonation, resonance and articulation.

CSD 302. Basic Anatomy and Physiology of the Auditory System 2 credit hours
Studies basic anatomy of the outer, middle and inner ears, and the auditory nervous system. Addresses fundamental knowledge of hearing mechanisms based on function of each part of the system.

CSD 304. Early Language Development 3 credit hours
Development of language traced from birth to early school age. Evaluation of various acquisition theories in light of current psychological and linguistic thought. Emphasizes the development of linguistic categories: phonology, morphology, syntax, semantics and pragmatics. Lab required for reflective observation and analysis of various linguistic categories of typically developing children.

CSD 306. Applied Phonetics 3 credit hours
Identification, production and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduction to typical phonological
CSD 306L. Applied Phonetics Lab 0 credit hours
Identification, production, and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduction to typical phonological acquisition and variations in speech production related to connected speech, cultural/linguistic diversity, and children's speech sound disorders. Lab required for reflective observation and analysis of developmental phonetics and variance due to disorders and linguistic differences. Corequisite: CSD 306L.

CSD 330. Educational Interpreting 2 credit hours
Addresses the professional development, roles, ethics, confidentiality and responsibilities of interpreters in educational settings. Includes interpreting principles. Covers ways to efficiently integrate the role of the interpreter into the educational system, as well as current issues in the field of educational interpreting. Course includes diversity content. Prerequisites: CSD 240, 260.

CSD 340. Pragmatic Process and Analysis in SEE 3 credit hours
Introduces the pragmatic process required of the interpreter to analyze, organize and prioritize information from a source for its accurate conveyance. Focuses on diagnosing areas causing breakdowns of interpreting, followed by strategies for improvement of skills. Prerequisites: CSD 240, 260, 330, 360, 380, 381.

CSD 345. Refining Interpreting Techniques in SEE 3 credit hours
Provides strategies for improving vital skills in expressive and receptive interpreting. Addresses such issues as reading signs, nonmanual markers and grammar, as well as application of lag time and prioritization for proper word and grammar choices in English. Also addresses interpretation of cultural information and effective public speaking. Prerequisites: CSD 240, 260, 330, 360, 380, 381.

CSD 351. Introduction to Auditory Assessment 3 credit hours
History and scope of the field. Surveys audiology threshold testing procedures, immittance audiometric interpretation. Prerequisite: CSD 251 or instructor's consent.

CSD 360. Signing Exact English II 2 credit hours
An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Emphasizes vocabulary and interpreting skills. Course includes diversity content. Prerequisite: CSD 260.

CSD 370. American Sign Language II 3 credit hours
Increases vocabulary and speed of the use of ASL. Focuses on a greater fluency in expressive and receptive skills. Develops intermediate conversational skills. Course includes diversity content. Prerequisite: CSD 270.

CSD 380. Practicum in Signing Exact English I 1 credit hour
Provides students with observation of skilled interpreters in various educational K-12 settings throughout the semester. Opportunities to discuss with the interpreters their responsibilities and roles in providing communication access to students in and outside of the classroom in school-related activities. Course includes diversity content.

CSD 381. Practicum in Signing Exact English II 1 credit hour
Serves to define, examine and practice the separate components of sign and document practice within the realm of interpreting in educational settings. Course includes diversity content. Prerequisite: CSD 380.

CSD 416. Introduction to Language Disorders 3 credit hours
Introduces language disorders and children who do not acquire language typically. Studies language and behavioral characteristics of children with specific language impairment, mental retardation, learning disabilities, autism, hearing impairment and acquired language disorders. Course includes diversity content. Prerequisites: CSD 304 with a grade of B (3.000 points per credit hour) or better, 304L, or instructor's consent. Corequisite: CSD 417.

CSD 416H. Introduction to Language Disorders - Honors 3 credit hours
Introduces language disorders and children who do not acquire language typically. Studies language and behavioral characteristics of children with specific language impairment, mental retardation, learning disabilities, autism, hearing impairment, and acquired language disorders. Prerequisite: CSD 304 with a grade of B (3.000 points per credit hour) or better, 304L, or instructor's consent. Corequisite: CSD 417.

CSD 417. Introduction to Language Disorders Lab 1 credit hour
Laboratory experience complimenting the topics covered in CSD 416. Includes classroom and clinic observations, language sampling and analyzing techniques and experiences. Prerequisites: CSD 304 with a grade of B (3.000 points per credit hour) or better, 304L, or instructor's consent. Corequisite: CSD 416.

CSD 420BA. ASL in Health Care Settings Badge: Introduction to Health Care Interpreting 0.5 credit hours
Designed to promote an infusion of resources related to interpreting in health care. Serves as an introduction to the benefits and challenges of interpreting in health care settings in an effort to prepare interpreters to make well-informed decisions about their readiness and qualifications for interpreting in these settings. Common questions asked during the health history and physical interview are covered while exploring how different cultural and linguistic abilities, perspectives, and life experiences may affect a patient's understanding and perception of the health care system. Course includes diversity content. Graded Bg/NBg. Prerequisite: fluent in ASL/English interpreting.

CSD 420BB. ASL in Health Care Settings Badge: Medical Terminology 0.5 credit hours
Focuses on increasing the interpreter’s vocabulary across a variety of medical terminology in order to accurately communicate appropriate information regarding a wide variety of medical conditions. Includes terminology related to cardiology, gastroenterology, OB/GYN, mental health and others. Course includes diversity content. Graded Bg/NBg. Prerequisite: fluent in ASL/English interpreting.

CSD 420BC. ASL in Health Care Settings Badge: Responses to Standard Medical Questions 0.5 credit hours
Focuses on increasing the interpreter’s ability to accurately interpret in a standard health care appointment. Covers the ASL community’s responses to common questions on a variety of ailments, from a variety of generations, during a medical appointment. Explores how different cultural and linguistic abilities, perspectives and life experiences may affect a patient’s understanding and response during the medical appointment. Course includes diversity content. Graded Bg/NBg. Prerequisite: fluent in ASL/English interpreting.

CSD 420BD. ASL in Health Care Settings Badge: Interpreting in the Emergency Room, Part I 0.5 credit hours
Focuses on covering the interpreter’s questions and responses to a request for interpreting services provided in the emergency room — including whether the interpreter is mentally and physically up to the challenge and whether they are qualified for and willing to provide the services needed. Addresses a complex number of issues regarding the person, the interpreter and medical needs. Course includes diversity content.
CSD 420BE. ASL in Health Care Settings Badge: Interpreting in the Emergency Room, Part II 0.5 credit hours
Builds on topics covered in CSD 420BD (part one). Part two covers the demands on the interpreter in the emergency room. Includes interviews with admissions, staff, medical personnel and all persons related to emergency room care. Topics that help the interpreter know how to make informed judgments about his/her role and responsibility in an emergency situation in order to appropriately represent the deaf person are discussed. Course includes diversity content. Graded Bg/NBg. Prerequisite: fluent in ASL/English interpreting.

CSD 420BF. ASL in Health Care Settings Badge: Ethical Standards in Health Care Interpreting 0.5 credit hours
Focuses on the interpreter’s knowledge of, and adherence to, ethical practices in medical settings. Includes, but is not limited to, maintaining confidentiality, interpreting English policies for the ASL consumer, and demonstrating the ability to hold a position of trust that serves both deaf and hearing consumers. Course includes diversity content. Graded Bg/NBg. Prerequisite: fluent in ASL/English interpreting.

CSD 425. Introduction to Clinical Processes 1 credit hour
Laboratory experience that provides students with an orientation to the WSU Speech-Language-Hearing Clinic environment, the opportunity to observe and assist with individuals experiencing communication challenges, and information regarding the diagnostic process with individuals experiencing communication challenges. Introduces the diagnostic process required for individuals with various communication delays and/or disorders. Prerequisites: senior standing, instructor's consent and medical clearance.

CSD 460. Signing Exact English III 2 credit hours
Increases expressive, receptive and voiced vocabulary in Signing Exact English and the use of visual features of signed languages. Production techniques, self- and peer- analyses, and skills pursuant to Kansas standards for interpreters in educational settings are applied. Course includes diversity content. Prerequisite: CSD 360.

CSD 470. American Sign Language III 3 credit hours
Students demonstrate expressive and receptive mastery of targeted, context-specific commands, questions and statements in ASL, and are exposed to ASL as a foreign language. Exposes students to the life and experiences of deaf people. Course includes diversity content. Prerequisite: CSD 370.

CSD 480. American Sign Language IV 3 credit hours
Increases vocabulary and speed of the use of ASL. Focuses on a greater fluency in expressive and receptive skills. Develops intermediate conversational skills. Course includes diversity content. Prerequisite: CSD 470.

CSD 481. Cooperative Education 1-8 credit hours
Allows students to participate in the cooperative education program. Graded Cr/NCr. Repeatable for credit.

CSD 481N. Internship 1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

CSD 490. Directed Study in Speech and Language Pathology or Audiology 1-3 credit hours
Individual study or research on specific problems. Repeatable. Instructor's consent must be obtained prior to enrollment.

CSD 490D. Intro to Signed Language Interpreting 3 credit hours
This is an introductory overview to the profession of interpreting. Course content includes the history of interpreting, terminology, the responsibilities, skills, aptitudes of interpreters, the process of becoming an interpreter, employment environment and options, and current issues.

CSD 491. Honors Research Project 1-3 credit hours
Directed scholarly project culminating in a public presentation as determined by the student's faculty mentor. Prerequisite: CSD honors track program approval.

CSD 504. Aural Rehabilitation 3 credit hours
Discussion and labs concerning the role of speech-language pathologists and audiologists in evaluation and treatment of hearing-impaired children, adolescents, adults and their families. Students focus on understanding psychological, social, educational and occupational impacts of hearing loss; on applying a rehabilitative model, technology, individual and group therapies, and collaboration with families and professionals to help hearing-impaired persons improve or cope better with their communication problems. Prerequisite: CSD 351 or instructor's consent.

CSD 506. Acoustic and Perceptual Phonetics 3 credit hours
Study of the physical patterns (acoustic) of speech sounds and the importance of these acoustic patterns to speech recognition (perception). Focuses on segmental phonemes (vowels and consonants) and on suprasegmental characteristics such as stress and intonation. Introduces different types of speech analysis techniques and discusses how they may be used to study the acoustic patterns of speech sounds. Studies how different aspects of the speech signal relate to listener perception. Prerequisites: PHYS/CSD 210; CSD 301 and 302 with grades of B (3.000 points/credit hr.) or better.

CSD 506H. Acoustic and Perceptual Phonetics - Honors 3 credit hours
Study of the physical patterns (acoustic) of speech sounds and the importance of these acoustic patterns to speech recognition (perception). Focuses on segmental phonemes (vowels and consonants) and on suprasegmental characteristics such as stress and intonation. Introduces different types of speech analysis techniques and discusses how they may be used to study the acoustic patterns of speech sounds. Studies how different aspects of the speech signal relate to listener perception. Honors section. Prerequisites: PHYS/CSD 210; CSD 301 and 302 with grades of B (3.000 points/credit hr.) or better.

CSD 514. Speech-Sound Disorders 3 credit hours
Discusses basic methods and procedures for identifying, assessing, analyzing and remediating speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Course includes diversity content. Prerequisites: CSD 306 with a grade of B (3.000 points/credit hour) or better, 306L, or instructor's consent. Corequisite: CSD 515.

CSD 514H. Speech-Sound Disorders - Honors 3 credit hours
Discusses basic methods and procedures for identifying, assessing, analyzing, and remediating speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Prerequisites: CSD 306 with a grade of B (3.000 points/credit hour) or better, 306L, or instructor's consent. Corequisite: CSD 515.

CSD 515. Speech-Sound Disorders Lab 1 credit hour
Laboratory experience compliments the topics covered in CSD 514 and includes classroom and clinic observations. Prerequisites: CSD 306 with a grade of B (3.000 points/credit hour) or better, 306L or instructor's consent. Corequisite: CSD 514.
CSD 517. Communication in Aging  3 credit hours
Focuses on how communication is affected by aging, what communication problems may be experienced by older persons, and what the implications are for speech-language pathologists and audiologists providing services to older persons. Explores prevention activities geared toward maintaining functional communication abilities in older adults as well as functional treatment approaches geared toward the specific communication needs of older persons. Course is appropriate for students in other fields of study. *Course includes diversity content.*

CSD 517H. Communication in Aging - Honors  3 credit hours
Focuses on how communication is affected by aging, what communication problems may be experienced by older persons, and what the implications are for speech-language pathologists and audiologists providing services to older persons. Explores prevention activities geared toward maintaining functional communication abilities in older adults as well as functional treatment approaches geared toward the specific communication needs of older persons. Honors section. Course is appropriate for students in other fields of study. *Course includes diversity content.*

CSD 518. Deaf Culture  3 credit hours
Examines various cultural aspects of the deaf community. Presents the interrelationship of language and culture along with a study of socialization, norms and values. *Course includes diversity content.*

CSD 519. Genetic and Organic Syndromes  3 credit hours
Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. Prerequisites: CSD 301, 302 with grades of B (3.000 points/credit hour) or better. Corequisite: CSD 521.

CSD 519H. Genetic and Organic Syndromes - Honors  3 credit hours
Introduces human genetics and the impact of chromosomal and structural anomalies of communication disorders. Assessment and remediation of cleft palate speech. Prerequisites: CSD 301, 302 with grades of B (3.000 points/credit hour) or better. Corequisite: CSD 521.

CSD 520. ASL: Nonverbal Communication  3 credit hours
Nonverbal way of communication which forms an integral base for communication in American Sign Language. Emphasizes the use and understanding of facial expression gestures, pantomime and body language. Role play and acting out are required as part of this class. Prerequisite: CSD 370 or instructor's consent.

CSD 521. Genetic and Organic Syndromes Lab  1 credit hour
Laboratory experience which provides students the opportunity to observe and document assessment and treatment of individuals with various communication disorders caused by syndromic and/or gene-linked conditions. Prerequisites: CSD 301, 302 with grades of B (3.000 points/credit hour) or better. Corequisite: CSD 519.

CSD 522. Deaf Heritage  2 credit hours
Considers the history, nature and uses of language and its effect upon human thought and action. Also covers the ideas and ideals expressed by deaf people over many periods of time through drama, philosophy, painting and related areas. *Course includes diversity content.*

CSD 605. Neuroscience of Speech and Language: Basic Processes  4 credit hours
A consideration of basic neuroanatomy and neurophysiology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisites: CSD 301 with a grade of B (3.000 points/credit hour) or better, senior standing.

CSD 605H. Neuroscience of Speech and Language: Basic Processes - Honors  4 credit hours
A consideration of basic neuroanatomy and neurophysiology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisite: senior standing.

CSD 705. Counseling in Communication Disorders  2 credit hours
Provides information on the structure and conduct of interviews, basic counseling strategies, and consideration of the "helping" role as practiced by communication disorders professionals. Focuses on information supportive of developing effectiveness in these roles. Considers multicultural concerns. *Course includes diversity content.*

CSD 710. Autism Spectrum Disorders  2 credit hours
An overview of the characteristics and etiology of autism spectrum disorders and the knowledge needed to conduct effective communication and language assessments and develop evidence-based treatment strategies for individuals with ASD. Covers guidelines for the assessment and intervention of communication skills, including decision making for the selection of functional communication systems, structured teaching and positive environmental supports for effective learning. *Course includes diversity content.*

CSD 740. Selected Topics in Communication Sciences and Disorders  1-3 credit hours
Individual or group study in specialized areas of communication sciences and disorders. Repeatable for credit to a maximum of 6 hours. Prerequisite: instructor's consent.

CSD 740L. Speech Sound Disorders  2 credit hours
Discussed basic methods and procedures for identifying, assessing, analyzing and remediating speech-sound disorders. Practice in phonetic transcription of highly unintelligible speech samples. Includes classroom and clinic observations. Prerequisite: Admission to CSD graduate program.

CSD 750. Workshop in Communication Sciences and Disorders  1-4 credit hours
Individual or group study in specialized areas of communication sciences and disorders. Repeatable for credit to a maximum of 8 hours. Prerequisite: instructor’s consent.

CSD 750Q. Improving Communication Skills of Children  1 credit hour
“Communication = Power! Improving the communication skills of individuals with complex communication challenges.” Workshop designed for teachers and speech-language pathologists who work with individuals who have been diagnosed with various disabilities, including autism spectrum disorder (ASD) and are minimally verbal or nonverbal. Participants engage in activities focused on selecting appropriate assessment tools, using a guided decision making process for developing instructional supports, setting goals and objectives based on assessments and observations, and implementing collaborative evidence-based instructional strategies, including augmentative and alternative communication, in the classroom and/or home.

CSD 781. Cooperative Education  1-4 credit hours
A work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. May not be used toward degree requirements. Repeatable for credit. Graded Cr/NCr.

**Computer Science (CS)**
For a computer science course to be used as a prerequisite, it must have been passed with a C- or better.
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**CS 194. Introduction to Digital Design** 4 credit hours
3 Classroom hours; 2 Lab hours. An introduction to digital design concepts. Includes number systems, Boolean algebra, Karnaugh maps, combinational circuit design, adders, multiplexers, decoders, sequential circuit design, state diagram, flip flops, sequence detectors and test different combinational and sequential circuits. Uses CAD tools for circuit simulation. Prerequisite: MATH 111 or equivalent.

**CS 210. Introduction to Computer Science** 3 credit hours
General education introductory course. Broad introduction to the discipline of computer science. Covers algorithms, computer hardware, operating systems, introduction to high-level language programming, databases, artificial intelligence and other applications, and social issues. Prerequisite: MATH 111.

**CS 211. Introduction to Programming** 4 credit hours
3 Classroom hours; 2 Lab hours. First course in computer programming in a high-level language. Emphasizes analyzing problems, designing solutions and expressing them in the form of a well-structured program using the procedural aspects of C++. Prerequisite: MATH 111.

**CS 238. Assembly Language Programming** 3 credit hours
An introduction to basic concepts of computer organization and operation. Studies machine and assembly language programming concepts that illustrate basic principles and techniques. Laboratory exercises given for experience using personal computers. Prerequisite: CS 211.

**CS 281I. Non-Credit Internship** 0 credit hours
Compiles and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

**CS 300. Data Structures** 4 credit hours
3 Classroom hours; 2 Lab hours. Introduces basic data structures and covers their implementations using classes in C++. Includes lists, stacks, queues, binary trees and hash tables. Prerequisite: CS 211 with a C- grade or better.

**CS 300L. Data Structures Lab I** 0 credit hours
General education advanced further study course.

**CS 321. Discrete Structures I** 3 credit hours
Cross-listed as MATH 321. Provides a mathematical foundation essential to the entire computer science curriculum. Includes propositional and predicate logic, induction, recursion and counting techniques. Prerequisite: MATH 242 with a grade of 2.000 or better.

**CS 322. Discrete Structures II** 3 credit hours
A continuation of CS 321. Includes relations, graphs, trees, Boolean algebra and automata. Prerequisite: CS 321.

**CS 350. Computer Science Workshop** 1-5 credit hours
Short-term courses with special computer science emphases. Repeatable for credit. No credit toward the major or minor in computer science. Prerequisite: departmental consent.

**CS 394. Introduction to Computer Architecture** 3 credit hours
Introduces multilevel approach to computer systems, with an emphasis on micro architecture and instruction set architecture levels. Also introduces techniques to improve performance such as cache memory and instruction level parallelism. Prerequisites: CS 194, 211.

**CS 410. Programming Paradigms** 3 credit hours
An overview of different programming paradigms, including their philosophies, uses and relative advantages/disadvantages. Covers the procedural/imperative, functional, logic, and object-oriented paradigms. Includes programming assignments in the functional and logic paradigms. Prerequisite: CS 300.

**CS 411. Object-Oriented Programming** 3 credit hours
Concepts of object-oriented programming. Covers data abstraction, classes and objects, methods, inheritance, polymorphism, dynamically-bound method calls, and data encapsulation. Includes programming assignments in C++. Prerequisite: CS 300.

**CS 420. Automata and Formal Languages** 3 credit hours
Introduces theory of formal languages. Includes finite automata and regular expressions/languages; push-down automata and context-free grammars/languages; Turing machines. Prerequisite: CS 322 or MATH 322.

**CS 444. Introduction to Unix** 3 credit hours
Learn the fundamentals of the Unix operating system. Topics include the Unix file system, essential commands and utilities of Unix, and shell programming. Prerequisite: any high-level programming language.

**CS 460. Algorithm Design Methodologies** 3 credit hours
Advanced course on problem modeling and techniques for designing algorithms for real world problems. Projects emphasize program design and development. Prerequisite: CS 300.

**CS 464. Computer Networks** 3 credit hours
First course on computer networking. Introduces OSI layers, direct link networks, packet switching, routing, end-to-end protocols and network applications. Prerequisites: ME 254, CS 300.

**CS 465. Oracle Development Environment** 3 credit hours
Oracle is the most widely used database management system in the world. Course covers basic relational database concepts, the SQL query language, PL/SQL, object creation, including indexes, tables, triggers and stored procedures; Oracle Forms, SQL Loader in the transition of legacy systems, and web-enabled applications. Students work with real-life projects. Prerequisite: CS 211.

**CS 481. Cooperative Education in Computer Science** 1-3 credit hours
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. Repeatable for credit. Graded Cr/NCr. Prerequisite: departmental consent.

**CS 481A. Cooperative Education** 1-3 credit hours
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. May be repeated. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

**CS 481I. Noncredit Internship** 0 credit hours
Compiles and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

**CS 481N. Internship** 1-3 credit hours
Compiles and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a
workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

**CS 497. Special Topics  1-3 credit hours**
1-3 Classroom hours; 0-2 Lab hours. Special topics of current interest in computer science. Prerequisite: departmental consent.

**CS 498. Individual Projects  1-3 credit hours**
Repeatable for a total of 6 hours of credit. Graded Cr/NCr. Prerequisite: departmental consent.

**CS 510. Programming Language Concepts  3 credit hours**
Theoretical concepts in the design and use of programming languages. Formal syntax, including Backus Normal Form (BNF), Extended Backus-Naur Form (EBNF), and syntax diagrams. Semantics, including declaration, allocation and evaluation, symbol table and runtime environment; data types and type checking, procedure activation and parameter passing, modules and abstract data types. Prerequisites: CS 300, MATH 322.

**CS 540. Operating Systems  3 credit hours**
Fundamental principles of modern operating systems. CPU management including processes, threads, scheduling, synchronization, resource allocation and deadlocks. Memory management including paging and virtual memory. Storage management and file systems. Prerequisites: CS 238, 300.

**CS 560. Design and Analysis of Algorithms  3 credit hours**
Design of various algorithms including several sorting algorithms. Analysis of their space and time complexities. Data structures include heaps, hash tables and binary search trees. Prerequisites: CS 300, 322; STAT 460 or IME 254.

**CS 580. Introduction to Software Engineering  3 credit hours**
Introduction to the processes, methods and tools used in software development and maintenance. Topics include software development life cycle and processes, configuration management, requirements gathering, OOA/D with UML, cohesion and coupling, and unit testing. Prerequisite: CS 238, 411.

**CS 594. Microprocessor-Based System Design  4 credit hours**
3 Classroom hours; 2 Lab hours. Presents knowledge and skills required to design and program microprocessor-based systems. Introduces vendor-supplied special-purpose chips such as interrupt controllers and programmable input/output devices. Laboratory activities give hands-on experience. Prerequisites: CS 238, 394.

**CS 644. Advanced Unix Programming  3 credit hours**
Improves skills in C programming under the Unix environment. Covers file I/O, both buffered and unbuffered, working with the Unix file system, concurrent programming with multiple processes and process control. Also includes the use of signals and concepts of interprocess communication with pipes and FIFOs. Students must have prior knowledge of C language and its use in structures and pointers. Prerequisite: CS 540.

**CS 655. Information Delivery on the Internet  3 credit hours**
Explores the capabilities of providing information on the World Wide Web. Information is typically provided through some sort of website that incorporates static text and the dynamic capabilities of the Web. Learn how to create an interactive website through the use of CGI and Java programming and how to interconnect a website to databases and generate images on the fly. Java portion covers a wide range of Java language and the Applet interface and utilities. Prerequisite: CS 300.

**CS 665. Introduction to Database Systems  3 credit hours**
Fundamental aspects of relational database systems, conceptual database design and entity-relationship modeling; the relational data model and its foundations, relational languages and SQL, functional dependencies and logical database design; views, constraints and triggers. Course includes a group project involving the design and implementation of a relational database and embedded SQL programming. Prerequisites: CS 300, MATH 322.

**CS 697. Selected Topics  1-3 credit hours**
1-3 Classroom hours; 0-2 Lab hours. Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

**CS 697AN. Hardware-Based Computer Security  3 credit hours**
Intended for seniors and graduate students who want to study and explore the role of hardware in improving computer security. Topics covered may include (1) elements of computer security, (2) secure coprocessor, (3) secure bootstrap loading, (4) secure memory management, (5) hardware-based authentication, (6) hardware-based virus detection, (7) hardware as a cybersecurity solution, (8) security engineering, (9) managing the development of secure systems, and (10) system evaluation and assurance. Prerequisites: CS 394 and a desire to learn more about both computer architecture and security.

**CS 715. Compiler Construction  3 credit hours**
First compiler course for students with a good background in programming languages and sufficient programming experience. Covers compiler design, lexical analysis, parsing techniques, symbol tables, scope analysis, type checking and conversion, run-time organization, code generation and optimization. Project-oriented course involves implementation of a full compiler for a simplified but nontrivial procedural language. Prerequisites: CS 238, 510.

**CS 720. Theoretical Foundations of Computer Science  3 credit hours**
Provides an advanced level introduction to the theoretical bases of computer science. Computer science theory includes the various models of finite state machines, both deterministic and nondeterministic, and concepts of decidability, computability and formal language theory. Prerequisite: CS 322.

**CS 721. Advanced Algorithms and Analysis  3 credit hours**
Topics include height-balanced trees, graph algorithms, greedy algorithms, dynamic programming, hard problems and approximation algorithms. Prerequisite: CS 560.

**CS 731. Mathematical Foundations for Computer Networking  3 credit hours**
Introductory class on applying various mathematical tools to the field of computer networks and related areas. Divided into three phases: phase one covers the fundamentals of probability, statistics and linear algebra required for understanding the core topics to follow. Phase two covers the core topics of optimization and queuing theory. Phase three briefly covers the advanced topics of game theory and information theory. The depth of coverage is sufficient to allow students to read and understand research papers in computer networking and related areas that use these standard techniques. Ideas are taught through intuition, mathematically correct formalization and detailed numerical examples. Prerequisite: MATH 243. Corequisite: CS 464.

**CS 736. Data Communication Networks  3 credit hours**
Presents a quantitative performance evaluation of telecommunication networks and systems. Includes fundamental digital communications system review; packet communications, queuing theory, OSI, s.25 and SNA layered architectures, stop-and-wait protocol, go-back-N protocol, and high-level data link layer; network layer flow and congestion control, routing, polling and random access, local area networks (LAN); integrated services digital networks (ISDN), and broadband networks. Prerequisites: CS 300, IME 254.
CS 737. Wireless Networking  3 credit hours
Covers topics ranging from physical layer to application layer in the wireless and mobile networking fields. Explores physical layer issues of wireless communications, wireless cellular telephony, ad-hoc networks, mobile IP and multicast, wireless LAN (IEEE 802.11), security, Bluetooth and WAP, etc. Imparts general knowledge about wireless communication technologies and ongoing research activities. Prerequisite: CS 736.

CS 738. Embedded Systems Programming  3 credit hours
Studies the requirements and design of embedded software systems. Application of the C programming language in the implementation of embedded systems emphasizing real-time operating systems, interfacing to assembly and high-level languages, control of external devices, task control and interrupt processing. Prerequisite: CS 594.

CS 750. Workshop in Computer Science  1-5 credit hours
Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite: departmental consent.

CS 764. Routing and Switching I  4 credit hours
3 Classroom hours; 2 Lab hours. An introductory course which studies different hardware technologies, like Ethernet and token ring. Discusses VLSM. Introduces different routing protocols. Includes hands-on experience in the CS department's routing and switching lab. Prerequisite: CS 464 or 736.

CS 766. Information Assurance and Security  3 credit hours
Provides basic concepts in information assurance and security including encryption, digital certificates, security in networks, operating systems and databases. Topics in intrusion detection, legal and ethical issues in security administration are also discussed. Prerequisite: CS 464 or 736 or 764.

CS 767. Foundations of Network Security  3 credit hours
Presents fundamental concepts in cryptography and network security, and discusses applications and protocols for providing confidentiality, authentication, integrity, and availability in networking services and systems. Includes review of symmetric-key cryptographic schemes such as DES and AES, public-key cryptographic schemes such as RSA and Diffie-Hellman key exchange protocol, cryptographic hash functions such as SHA, message authentication codes such as HMAX, digital signature schemes such as El-Gamal and DSS, kerberos and user authentication protocols, transport layer security and TLS, IP layer security and IPSec, and wireless security principles. CS 766 is highly preferred, but not required. Prerequisite: CS 464 or 736.

CS 771. Artificial Intelligence  3 credit hours
Introduction to some of the fundamental concepts and techniques underlying artificial intelligence. Topics covered include state spaces, heuristic search, game playing, knowledge representation, and resolution in propositional and first-order predicate logic. Prerequisites: CS 300, MATH 322.

CS 780. Advanced Software Engineering  3 credit hours
Discusses advanced topics in software development, maintenance and evolution. Topics include software design patterns, architecture and architectural styles, frameworks, refactorings, and static and dynamic analyses. Includes a group project. Prerequisite: CS 580.

CS 781. Cooperative Education in Computer Science  1-3 credit hours
Practical experience in a professional environment to complement and enhance the student's academic program. For master's level CS students. Repeatable, but may not be used to satisfy degree requirements. Graded Cr/NCr. Prerequisites: departmental consent and graduate GPA of 3.000 or above.

CS 794. Multicore Architectures and Programming  3 credit hours
3 Classroom hours. Introduces state-of-the-art concepts and techniques to design and program modern computer systems. Particular attention is given to the following areas: multicore architecture, parallel programming and advanced research. Labs give hands-on experience. Prerequisites: CS 211, 394.

CS 797. Special Topics in Computer Science  1-4 credit hours
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

CS 798. Individual Projects  1-3 credit hours
Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Graded S/U. Prerequisite: departmental consent.

Counseling, Educational and School Psychology (CESP)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

CESP 334. Introduction to Diversity: Human Growth and Development  2 credit hours
Comprehensive overview of the theories, methods and content of child development. Learning should come from multiple sources: required and nonrequired reading, group discussions, class projects, individual student development, etc. Course framework has four major dimensions: (1) basic theoretical and research issues, (2) development from and interdisciplinary perspective, (3) interaction of the life experience and human changes, and (4) applying this understanding to the real world. Course includes diversity content. Prerequisite: acceptance into teacher education program.

CESP 433. Learning Assessment and Evaluation Theory: Evidence-Based Instruction  3 credit hours
Prepares students to develop and modify instruction using student performance data and theories of learning. The psychology of learning is examined including such concepts as the nature of learning and memory, learning strategies, individual differences and social factors influencing learning. Principles of measurement and evaluation are examined including measurement instruments, observations, questioning strategies and grading plans. The reciprocal relationship between student performance data and instructional decisions is emphasized. Prerequisite: CESP 334.

CESP 490. Independent Studies in Education  1-3 credit hours
Independent studies in CESP topics.

CESP 517. Families and Addictions  3 credit hours
Teaches basic family processes in families with a family member experiencing an addiction. The impact of the addiction on the functioning of other family members is examined, including children and adolescents. The family's role in the recovery process is examined. Major topics include: family systems theory, alcoholic family systems and the impact of substance abuse and addiction on the family. Basic family assessment and interventions is covered. Prerequisite: PSY 111 or equivalent course.

CESP 701. Introduction to Educational Research  3 credit hours
An introduction to research in education. Includes (1) a survey of current educational research, (2) the nature of research methodology, (3) the preparation of research reports, and (4) criticism of current research.
CESS 704. Introduction to Educational Statistics  3 credit hours
Introduction to statistics, including measures of central tendency, measures of variability, correlation, chi square, t-test, correlated t-test, one-way, two-way analysis of variance and simple regression.

CESS 728. Theories of Human Development  3 credit hours
Describes what developmental theories are, what they do, where they come from, how they work and how they are used to explain human nature. Uses theoretical assumptions and related research to systematically evaluate developmental theories in terms of their scientific worthiness and their ability to address characteristics of human development. Focuses on those theories which helped shape the way we currently view human development as well as significant new perspectives which may shape the way it is viewed in the future. Prerequisite: CLES 801 or CLES 810 may be taken prior to or concurrently with CESS 728.

CESS 729. Theories of Early Childhood Development  3 credit hours
Describes what developmental theories are, what they do, where they come from, how they work and how they are used to explain human nature. Uses theoretical assumptions and related research to systematically evaluate developmental theories in terms of their scientific worthiness and their ability to address characteristics of early childhood development. Focuses on those theories which helped shape the way we currently view early childhood development as well as significant new perspectives which may shape the way we view it in the future. Intended to cover birth through elementary school years of development. Prerequisite: CESS 701 or CLES 801, or equivalent, or instructor's consent.

CESS 750. Workshops in Education  1-6 credit hours
Intensive study of topics related to education. Differing topics are denoted by a letter following the course number (i.e., 750C, 750P, etc.).

CESS 750AC. Interpersonal Skills for Teachers  1 credit hour
Focuses on nonverbal communication, using 'I' messages, conversation starters, active listening, giving and accepting forgiveness, and developing trust.

CESS 750AD. Parenting Techniques  1 credit hour
Students learn basic parenting techniques to help develop their children's self-concept, responsibility and self-control. Different parenting theories are discussed.

CESS 750Q. Children with Criminal Justice Contact  1 credit hour
Designed to allow participants to gain the necessary background and theory information regarding children who have had contact with the criminal justice system. Contact can be defined as children with incarcerated parents as well as children who have been incarcerated themselves. Understanding this expanding group of children, who are currently 2.3 percent of today's child population, can assist in working with them in many different settings, including educational environments. Participants work together in group activities to evaluate scenarios, view informative videos, and are required to choose an article for review and discussion pertaining to the subject in the class.

CESS 752. Special Studies in Education  1-3 credit hours
For students with personnel and guidance interests. May emphasize different preselected areas during a semester. Repeatable with advisor's consent. Prerequisite: instructor's consent.

CESS 752K. Effectiveness at School and Work  1 credit hour
Focuses on concepts underlying the well-known and widely used Myers-Briggs Type Indicator®. The personal interaction information from the MBTI® is used to enhance students ability to interact positively with others in the workplace and in their personal life.
development, curriculum development, assessment, basic research design, and the role of research. Course includes diversity content.

CLES 750. Workshops in Education  1-6 credit hours
Intensive study of topics related to education. Differing topics are denoted by a letter following the course number (i.e., 750A, 750C, etc.).

CLES 750B. Neurobiology of Play Therapy: How to Improve Our Practice  1-6 credit hours
Over the past two decades, research has clearly documented the vulnerability of the developing brain and the negative impact of social and emotional trauma on brain functioning. It is now apparent that traumatic and neglectful developmental experiences alter normal brain development in all parts of the brain depending on the nature of the maltreatment, developmental stage of the child, and the quality of the nurturing environment. As play therapists learn more about brain development, brain organization, and the impact of trauma they are better able to identify play therapy interventions likely to be effective treatment options. Class reviews basic brain development principles, the impact of social and emotional trauma on the developing brain, and treatment options consistent with the child's current brain functioning through the use of developmental, symptom, and functional history interviews designed to assist the play therapist in appropriate intervention strategies.

CLES 750D. Using Art to Integrate Social Emotional Learning  0.5 credit hours
Based on practice and research within the mental health field of art therapy, learn how arts integration across academic subjects increases social emotional learning in the classroom with activities that school counselors and educators can adapt for a range of ages and a variety of academic, career and personal/social counseling goals. Workshop provides an introduction to the field of art therapy, its history, approaches and applications in meeting Kansas Social, Emotional, and Character Development Model Standards and Common Core. Participants experience how an expressive arts project can facilitate student empowerment through self-expression and a shared art experience can promote community building as well as useful tools to build integrated lesson plans for their classroom.

CLES 750E. Art Therapy in Schools: An Introduction  0.5 credit hours
This professional learning course provides an introduction to the field of art therapy, its history, approaches and applications in working with children and adolescents. The expressive arts - visual arts, movement, drama, music and writing - offer countless ways to promote the academic, career and personal/social development of students, which are goals of a comprehensive school counseling program. This course is customized for educators and counselors, as well as education and counseling students who are interested in strategies to incorporate art therapy into their practice or classroom but is open to anyone seeking an introduction to the field of art therapy. Participants experience hands-on how the creative process of art making can be used for self-care and with students. Participants are introduced to program models in school districts in which school counselors and art therapists work together to address the needs of students with social, emotional, academic and/or behavioral challenges. Please wear casual clothes for art making.

CLES 750F. Understanding Students Who Have Experienced Trauma and Neglect  0.5 credit hours
Introduction to trauma. Includes different types of trauma and some general impacts of trauma. In addition, students learn about the Adverse Childhood Experience (ACE) study; understand how developmental trauma can impact students socially, emotionally and academically; understand some basic Neurosequential Model in Education (NME) concepts, including how the therapy can be a lens through which to view children who are victims of trauma. Students apply NME concepts in order to develop interventions and supports in the classroom.

CLES 750G. Go Alliance Module 1 — Building a College-Going Culture for All Students  0.5 credit hours
Developed for practicing professional school counselors and preservice school counselors, course includes four sessions: understanding the national workforce landscape and 21st century careers; cultural competency and equity; understanding, communicating, and advocating for the role of the school counselor in college and career planning; and creating a school-wide college-going culture. These sessions are designed for school counselors to develop an understanding of their role in developing a college-going mission for all students, particularly students in poverty or facing other barriers in postsecondary planning. Additionally the sessions help counselors develop approaches for communicating and working with high-poverty students and diverse populations to remove barriers to high aspirations and achievement.

CLES 750J. Go Alliance Module 3 — College, Career and Academic Planning  0.5 credit hours
Developed for practicing professional school counselors and preservice counselors, course includes four sessions that focus on engaging students in early career awareness and planning, using data to guide academic planning, transition of students from middle school to high school and then to college, and the importance of postsecondary choices and finding the right postsecondary fit. Participants are engaged in building knowledge and skills in each of these areas, and they engage in constructive discussions in a learning community with their colleagues during each session.

CLES 750L. Positive Psychology Counseling  3 credit hours
Discover how to assess client's character strengths to develop the client's full potential and make them a more positive individual. (Possible text: Positive Psychology Coaching, Biswas-Diener and Dean, 2007.)
CLES 750M. Mindfulness & Acceptance in Therapy  3 credit hours
Teach clients how to reboot their brains by using mindfulness and acceptance techniques with individuals, couples and families. (Possible text: Mindfulness and Acceptance in Couple and Family Therapy, Gehart, 2012.)

CLES 750N. Introduction to Educational Psychology  3 credit hours
Introduces students to the field of educational psychology and its application in different areas, such as teaching, learning, coaching, training, and assessment. Introduces students to the practical application of educational psychology by considering topics such as the following: cognition (problem solving, memory, decision making), behavioral learning principles, motivation, human development, curriculum development, assessment, basic research design, and the role of research in educational psychology. While these topics are considered, the course also introduces students to careers in educational psychology; many educational psychologists work in K-12 schools, but many also work in higher education, health professions, program evaluation, instructional design (including online instructional design), industry, human resources, military settings, research, counseling, and sports — in any field requiring training, teaching and learning, motivation, assessment, or research.

CLES 750O. Introduction to School Psychology  3 credit hours
Introduces students to the opportunity of a career in school psychology. School psychologists work in schools to solve students’ academic and behavioral problems through consultation, assessment, and intervention. Course examines the roles and functions of school psychologists, the methods they use to address students’ psychoeducational needs, and the school and community systems within which they operate.

CLES 750P. Counseling Children and Adolescents  3 credit hours
Prepares counselors to address the specific needs of children and adolescents, with emphasis on developmental needs, specific therapeutic interventions, and common emotional issues. Counseling techniques and treatment planning are included. Prerequisite: None.

CLES 750Q. Advanced Issues in Psychopathology  0.5 credit hours
Studies of crimes against the environment remain underrepresented in criminology. Seeks to bring attention to this important area of criminology by introducing the scope and prevalence of environmental harms and crimes in the United States and abroad. Topics such conflict and climate change, exposure to toxins and correlated deviance, the distribution of environmental hazard sites relative to race, class, and ethnic groups, as well as environmental law and regulation are explored.

CLES 750R. Advanced Issues in Psychopathology and the DSM  3 credit hours
Designed to assist students in further understanding the diagnoses in the DSM. Students distinguish among similar diagnoses and recognize how they manifest in clients in both community and inpatient settings. Students acquire skills in differential diagnosis and treatment planning, and recognize personality traits and learned behaviors which impact client outcomes. Designed to help students to understand mental health disorders through a variety of frameworks beyond the introductory level.

CLES 750S. Social Emotional Learning Across the K-12 Curriculum  3 credit hours
While moving towards becoming responsive schools staffed with responsive educators, educators must embrace and fully understand the Social and Emotional standards and look for opportunities to incorporate them into the curriculum in ways that are meaningful for students and seamless for educators. In this course, teachers and other educators explore and apply nonacademic standards to prepare students for success in the ever changing 21st century society.

CLES 750T. Understanding Students Living in Poverty  1 credit hour
Students living in poverty attend every school in Kansas. Understanding the dynamics of situational and generational poverty are key to relating with and adjusting approaches to serving the families of these students. This workshop explores key definitions surrounding the dynamics of poverty and ways to tailor programs to meet students and families where they are. Provides educators with a real-life simulation of poverty situations and gives them an opportunity to discuss their feelings as they navigate the academic life of a student living in poverty.

CLES 750U. KCA Mental Health Drive In  0.5 credit hours
Encompasses four content areas: (1) Enhancing emotion intelligence effective self care for mental health professionals includes definition of emotional intelligence (EI), increasing emotional intelligence and awareness, and providing operating instructions for optimal human psychological functioning. (2) Strategies for supporting compassionate classrooms and building staff resilience includes compassionate instruction and discipline in the classroom; building a framework for a compassionate curriculum, and fostering resilience to avoid burnout. (3) Making clinical diagnoses using the DSM 5 — assists counselors and other mental health workers to increase their knowledge of the diagnostic criteria in the DSM 5 and improve their skills in diagnosis and treatment planning. (4) Trauma based play therapy – introduce participants to trauma-informed play therapy TM, an evidence-based and neurodevelopmentally appropriate method for working with traumatized children. A final reflective paper is due one week following the course.

CLES 750W. What Counselors and Therapists Need to Know About Psychotropic Medications  1 credit hour
Surveys basic neuropharmacology, the effects of various psychotropic drugs, and the actions of drugs used to treat mental disorders. Examines the actions of specific drugs and their effects on behavior and their uses in biological psychiatry. Basic principles of neuropharmacology are covered.

Criminal Justice (CJ)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

CJ 191. Introduction to Criminal Justice  3 credit hours
General education introductory course. Introduces crime and the criminal justice system by discussing the nature of crime and by identifying multiple facets of the justice system, including the police, the courts and correctional agencies. Studies the role of the criminal justice system as it relates to the individual and to society. Students become acquainted with criminal justice careers.

CJ 310. Community-Based Corrections  3 credit hours
Focuses on the analysis and evaluation of programs in community settings such as diversion, probation, parole, halfway houses, furlough, study release, work release and restitution. Discusses programs in terms of definition, history, purpose, administration/process, problems, cost and effectiveness. Prerequisite: CJ 191.

CJ 315. Criminal Law  3 credit hours
History, scope and nature of law; parties to crime, classification of offenses, act and intent; capacity to commit crime; and defenses. Examines elements of major criminal statutes and an overview of criminal processes and rules of evidence. Prerequisite: CJ 191.
CJ 320. Criminal Procedure 3 credit hours
Criminal procedure in the criminal justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure, and the exclusionary rule. Prerequisite: CJ 191.

CJ 341. Criminalistics and Scientific Crime Detection 3 credit hours
Studies the application of the natural sciences to assist law enforcement officers and the criminal justice system. Studies investigative procedures from the crime scene through laboratory analysis to the presentation of evidence in court. Prerequisite: CJ 191.

CJ 343. Special Investigations 3 credit hours
Care, collection and preservation of evidence. Studies sources of information and locating subjects, crime scene recording and investigative techniques applicable to specific offenses. Prerequisite: CJ 191.

CJ 351. The Victim in Criminal Justice 3 credit hours
General education advanced further study course. Examines the relationship of crime victims to the criminal justice system. Considers the role of the victim in crime occurrences, as well as theoretical developments in the field. Prerequisite: CJ 191.

CJ 353. Organized and White Collar Crime 3 credit hours
Surveys the history, scope and impact of organized and white collar crime in America, areas of influence, remedial practices and methods of legal control. Reviews the societal conditions involved in the appearance, spread and expansion of organized and white collar crime in America and the overlap and interrelationship between corporate and business crime (white collar and organized crime). Emphasizes the processes of infiltration, fraud and corruption that are characteristic of these conspiratorial crimes. Prerequisite: CJ 191.

CJ 355. Special Populations in the Criminal Justice System 3 credit hours
General education advanced further study course. Examines the role of women and minorities as employees of the criminal justice system. Also explores the role of women, minorities, juveniles and elder citizens as individuals who commit crime and are apprehended and sanctioned by the criminal justice system. Considers the unique challenges of each of the four identified populations, including their interactions with law enforcement, the judiciary and corrections. Course includes diversity content. Prerequisite: CJ 191.

CJ 381. Special Topics 3 credit hours
Detailed study of topics in criminal justice with particular emphasis established according to the expertise of the various instructors. Prerequisite: CJ 191.

CJ 381AK. Digital Investigations 3 credit hours
Cross-listed as CJ 783AK. Discusses how computers play a role in both crime and criminal investigations. Although digital investigation is usually thought to be associated with cybercrimes, class does not necessarily focus solely on cybercrimes. With today’s technologies, all crimes could involve digital evidence and hence require digital investigation. Students learn about the methods that criminals may adopt as well as the methods that investigators may use. Some coursework requires more-than-minimum computer knowledge and operation of computer software. Students need to have a functional computer and access to the internet.

CJ 381AL. Criminal Brains, Criminal Minds 3 credit hours
Cross-listed as CJ 783AL. Explores the causes of criminal behavior holistically by employing genetics/biology, neuroscience, psychopathy, and development/life course criminology. The impact of pre/perinatal care, parental substance abuse, child maltreatment, and the exposure to violence on developing brains and its behavioral consequences is addressed. Additionally, the relationship between brain dysfunction and mental disorder in conjunction to the genesis of violence is examined.

CJ 381AM. Environmental Crime and Green Criminology 3 credit hours
Studies of crimes against the environment remain underrepresented in criminology. Course seeks to bring attention to this important area of criminology by introducing the scope and prevalence of environmental harms and crimes in the United States and abroad. Topics such conflict and climate change, exposure to toxins and correlated deviance, the distribution of environmental hazard sites relative to race, class, and ethnic groups, as well as environmental law and regulation are explored.

CJ 381AN. Crime Scene Reconstruction 3 credit hours
Through text and case studies participants learn to analysis crime scene events using established principles and scientific method to define as accurately as possible what did and did not occur during the commission of major crimes. Participants develop the ability to take information from multiple investigative sources and forensic disciplines to effectively understand the events surrounding the commission of crime, as well as limitations in the investigative process.

CJ 381AP. Crime, Race & Social Class 3 credit hours
Designed to introduce students to criminological, historical and legal analyses of the American justice system, with special emphasis on: (1) racial and class relations in society (2) racial and class differences in crime and violence, and (3) racial and class disparities in the justice system. Draws on research to examine the social construction of racial and class identity, the causes of racial and class differences in offending, and the consequences of ethnicity and class identity in criminal case processing. A variety of specific topics are addressed, including theories of racial, class, and ethnic antagonism, racial, class, and ethnic differences in violence, racial/class disparities in punishment such as the death penalty, and correctional problems surrounding the overrepresentation of minorities and poor people in American prisons. Course goal is to provide a foundation for critically assessing the often controversial issues surrounding class, race, ethnicity, crime and criminal justice in society.

CJ 381V. Domestic Violence 3 credit hours
Cross-listed as SCWK 590, WOMS 580J and CJ 783F. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. Course includes diversity content.

CJ 382. Workshop in Criminal Justice 1-3 credit hours
Prerequisites: CJ 191, instructor's consent.

CJ 391. Corrections 3 credit hours

CJ 392. Law Enforcement 3 credit hours
Examines the interaction of police and citizens as regulated by constitutional provisions and other legal and social constraints. Pre- or corequisite: CJ 191.

CJ 393. Serial Killers 3 credit hours
Examines the history, dynamics, causation, investigation and control of the phenomenon of serial crimes, particularly homicide. Emphasizes investigative techniques including psychological and geographic profiling. Prerequisite: CJ 191.
CJ 394. Courts & Judicial Systems  3 credit hours
General education advanced further study course. Consists of a case study approach of an individual defendant from the time the crime is committed through the defendant's parole (of an actual homicide case in California). Includes legal analysis of the procedures and rules involved throughout the criminal justice process. Students play the role of the decision maker for the law enforcement, court and correction agencies, resulting in an in-depth view of the adversary procedures which form the basis for the criminal justice system. Prerequisite: CJ 191.

CJ 401. Management of Criminal Justice Agencies  3 credit hours
An intensive examination of a variety of emerging administrative and management concepts and the processes related to the determination and implementation of management philosophy. Prerequisite: CJ 191.

CJ 407. Introduction to Research Methods  3 credit hours
Introduces research methods emphasizing the methods most commonly used. Includes library and reference materials, government documents and legal materials. Prerequisite: CJ 191, ETHS 100, or AGE 100.

CJ 420. Criminal Evidence  3 credit hours
Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence - procedure for admitting or excluding evidence; witnesses and privileged communications, the hearsay rule and its exceptions, and judicial notice, burdens of proof and presumptions. Emphasizes the rules of evidence that govern the criminal justice process. Prerequisite: CJ 191.

CJ 451. International Criminal Justice  3 credit hours
Acquaints students with the structural and functional aspects of law enforcement agencies, court systems, correctional facilities, juvenile treatment and crime prevention strategies employed by different societies throughout the world. Incorporates the role of the United Nations in the treatment of offenders and crime prevention. Course includes diversity content. Prerequisite: CJ 191.

CJ 453. Crime Prevention  3 credit hours
General education advanced further study course. A study of the theories of crime prevention efforts by governmental and nongovernmental agencies. Analyzes factors which contribute to the reduction of crime, crime analysis and prediction, the methodology of gathering crime data, and the relationship between the criminal justice system and the public. Prerequisite: CJ 191.

CJ 481. Cooperative Education  1-6 credit hours
Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, the cooperative education coordinator. Repeatable for credit. No more than 6 hours may be counted toward the CJ major. Enrollment limited to a maximum of 4 hours in one semester. Graded Cr/NGr. Prerequisites: 24 total hours and consent of the criminal justice agency.

CJ 481N. Internship  1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NGr. Prerequisite: departmental consent.

CJ 483. Individual Directed Study  1-3 credit hours
Study in a specialized area of the criminal justice system emphasizing the student's research project. Repeatable for credit not to exceed a total of 6 hours. Prerequisites: 15 hours in the criminal justice core and individual directed study coordinator's consent.

CJ 501. Integrity in Public Service  3 credit hours
Cross-listed as PADM 501. Exposes students to basic principles of personal and professional integrity and how those principles apply to their daily lives as members of the community and as employees of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and nonprofit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives, begin to develop critical thinking and analytical skills regarding ethical behavior, and become more personally and professionally responsible. Prerequisite: junior or senior level or instructor's permission.

CJ 513. Violent Crime  3 credit hours
General education advanced further study course. Examines the extent, causes and policy implications of violent crime. Begins with a review of the rates of violent crime in various parts of the U.S. Provides students with some direct experience of violence such as an emergency room observation period or a panel of victims of violence. Course also covers the theoretical approaches of violent crime as well as factors related to violence among strangers vs. families. Critical reviews of various policy responses to violence, including their likelihood to prevent or reduce violent crime are required. Prerequisite: CJ 191.

CJ 515. Sex Crimes  3 credit hours
Examines and defines what are classified as criminal forms of sexual behavior and the unique challenges they present to the criminal justice system. Examines the extent and nature of sex crimes, sexual predator laws, sexual harassment and the victims of such crimes. Discusses the theoretical developments in the field. Prerequisite: CJ 191.

CJ 516. Profiling  3 credit hours
Familiarizes students with the methods used to profile violent crimes, including homicide, rape, arson and burglary. Includes scope of the problem in each of these crimes, typical investigation sequence and the role of profiling up to the trial preparation stage. Prerequisite: CJ 191.

CJ 517. Homicide Investigation  3 credit hours
Introduction to death investigations from an investigation-oriented perspective. Emphasis is given to crime scene investigations, mechanisms of injury and death and sex-related homicides. Prerequisite: CJ 191.

CJ 518. Criminal Justice & Crime in Film  3 credit hours
General education advanced further study course. Presents films and associated popular cultural materials related to the criminal justice system and crime. The genre of the crime film has become an important component of contemporary culture. The course begins with basics of film criticism and provides students with instruction on elements of a film genre. American and European films are considered.

CJ 520. Drug & Alcohol Issues in Criminal Justice  3 credit hours
Overview of issues related to substance abuse in the criminal justice system. Covers the impact of drug and alcohol dependency in society, biological and psychological factors of drug and alcohol dependency, and various treatment modalities used in the criminal justice system for drug and alcohol dependent offenders.

CJ 521. Forensic Social Work  3 credit hours
Cross-listed as SCWK 521. Introduction to and overview of the field of forensic social work. Content focuses on the role of social workers in forensic arenas, and the issues related to recent practice trends, relevant theoretical frameworks, collaborative team roles, and multisystem interactions. Psychosocial and legal issues are explored, with particular focus on intersections with family and social services, education, child welfare, mental health, substance abuse, criminal justice, diversity and human rights. Prerequisite: 6 hours of social sciences.

CJ 530. Private Security  3 credit hours
Provides students with a fundamental understanding of the contemporary principles of security and crime prevention. Course materials and discussions explore fundamentals of physical security,
CJ 541. Medical and Legal Aspects of Death Investigation  3 credit hours
Emphasizes the manner, cause and mechanism of death; physiological
effects of trauma, postmortem changes, identification techniques,
investigation of child deaths, and the components of a complete
death investigation. Considers and analyzes the history, function and
responsibilities of the coroner/medical examiner. Prerequisite: CJ 191.

CJ 551. Workshop  1-6 credit hours
Specialized instruction using variable formats in relevant criminal
justice subjects. Repeatable for credit up to 6 hours.

CJ 593. Crime Causation and Criminal Justice Policy  3 credit hours
General education advanced further study course. Introduction to
theoretical issues in criminal justice. Primary emphasis is the etiology
of criminal and delinquent activity and the response of the criminal
justice system to such behavior. Discusses the significant contributions
of outstanding criminologists, as well as elaborating the application of
these perspectives to criminal justice agencies. Prerequisite: CJ 191.

CJ 598. Contemporary Issues in Criminal Justice  3 credit hours
A capstone course for criminal justice majors nearing the completion of
the baccalaureate degree. Explores current criminal justice issues and
integrates material learned in the criminal justice curriculum. Covers
theories of crime and delinquency, origins and development of criminal
law and procedure, functions and operations of criminal justice agencies
in America, including the response to juvenile offenders; prevention of
crime and delinquency, privatization in corrections and policing; the
nature, meaning and purpose of criminal punishment; the nature and
impact of criminal justice policy, and the relationship between criminal
justice and human diversity. Prerequisites: CJ 191, 391, 392, 394, 407,
593, senior standing. For undergraduate criminal justice majors only.

CJ 600. Forensic Anthropology  3 credit hours
Cross-listed as ANTH 600. Encompasses the area of criminal
investigation involving biological evidence: blood, hair, fingerprint,
dentition and skeletal system. Covers procedures of collection,
preservation, marking, transportation, referral, laboratory analysis,
classification and identification emphasizing anthropological
interpretation. Prerequisites: 15 hours of criminal justice courses
including CJ 191, or junior, senior or graduate standing.

CJ 610. Correctional Counseling  3 credit hours
Analysis of the role of a correctional counselor. Emphasizes current
practices in community-based and institutional correctional counseling.
Discusses application of theories of counseling which are widely used
in correctional settings, rehabilitative programs and special needs of
offenders. Prerequisite: CJ 191.

CJ 641. Forensic Psychiatry  3 credit hours
Analysis of the role of psychiatry in the criminal justice process.
Introduces the student to concepts and procedures of forensic
psychiatry. Prerequisites: 15 hours of criminal justice courses including
CJ 191, or junior, senior or graduate standing.

CJ 643. Forensic Science  3 credit hours
An overview of the various sciences used in the forensic investigation
of crime, including toxicology, drug identification, questionable
documents, firearm and toolmark identification, trace evidence analysis,
fingerprint identification, forensic pathology, forensic serology,
forensic odontology and forensic anthropology. Prerequisites: 15
hours of criminal justice courses including CJ 191, or junior, senior or
graduate standing.

CJ 651. Dispute Resolution  3 credit hours
Examines a range of topics including causation, typologies,
communications, mediation, arbitration and other dispute resolution
techniques. Includes criminal and victim mediation and both intergroup
and interorganization relations and dispute resolution techniques.
Analyzes case studies. Prerequisites: 15 hours of criminal justice
courses including CJ 191, or junior, senior or graduate standing.

CJ 652. Juvenile Justice and Social Policy  3 credit hours
General education advanced further study course. Analyzes decision-
making processes in juvenile justice and the content of juvenile law
and Supreme Court decisions affecting juvenile justice, and selected
problems in juvenile justice. Reviews the juvenile justice reform
movement. Covers delinquency prevention and control, and ethical
issues associated with juvenile justice. Prerequisite: CJ 191.

CJ 692. Community Policing  3 credit hours
Reviews the various models and strategies of community policing.
Examines key concepts such as problem-oriented policing, crime
prevention, community relations, empowering the community and the
integration of these concepts into community policing. Prerequisites: 15
hours of criminal justice courses including CJ 191, or junior, senior or
graduate standing.

CJ 781. Cooperative Education  1-5 credit hours
Provides a field placement that integrates theory with a planned
and supervised professional experience designed to complement
and enhance the student's academic program. Students work with a
faculty member in the formulation and completion of an academic
project related to the field experience. The cooperative education
experience must be an integral part of the student's graduate program.
Individualized programs must be formulated in consultation with, and
approved by, the cooperative education coordinator. Open only to CJ
graduate students. Repeatable for credit. No more than 6 hours may
be counted toward a plan of study. Enrollment limited to 4 hours per
semester. Graded Cr/NCr.

CJ 782. Workshop in Criminal Justice  3-6 credit hours
Prerequisites: CJ 191, instructor's consent.

CJ 783. Advanced Special Topics in Criminal Justice  1-4 credit
hours
Detailed study of topics in criminal justice with particular emphasis
established according to the expertise of the various instructors.
Prerequisites: CJ 191, junior, senior or graduate standing.

CJ 783AK. Digital Investigations  3 credit hours
Cross-listed as CJ 381AK. Discusses how computers play a role in
both crime and criminal investigations. Although digital investigation
is usually thought to be associated with cybercrimes, class does not
necessarily focus solely on cybercrimes. With today's technologies,
all crimes could involve digital evidence and hence require digital
investigation. Students learn about the methods that criminals may
adopt as well as the methods that investigators may use. Some
coursework requires more-than-minimum computer knowledge and
operation of computer software. Students need to have a functional
computer and access to the internet.

CJ 783AL. Criminal Brains, Criminal Minds  3 credit hours
Cross-listed as CJ 381AL. Explores the causes of criminal behavior
holistically by employing genetics/biology, neuroscience, psychopathy,
and development/life course criminology. The impact of pre/perinatal
care, parental substance abuse, child maltreatment, and the exposure
to violence on developing brains and its behavioral consequences is
addressed. Additionally, the relationship between brain dysfunction and
mental disorder in conjunction to the genesis of violence is examined.
CJ 783AN. Environmental Crime/Green Criminology  3 credit hours
Studies of crimes against the environment remain underrepresented in criminology. Course seeks to bring attention to this important area of criminology by introducing the scope and prevalence of environmental harms and crimes in the United States and abroad. Topics such conflict and climate change, exposure to toxins and correlated deviance, the distribution of environmental hazard sites relative to race, class, and ethnic groups, as well as environmental law and regulation are explored.

CJ 783AO. Crime & Transportation  3 credit hours
Explores the relationship between crime and a variety of forms of transportation, including public transport, paratransit, and private vehicles. Looks at crimes against passengers, transit employees, and the system itself, as well as some types of terrorism incidents involving transportation. Focuses primarily on transportation as the setting for these crime events, using an opportunity theory perspective, and on situational crime prevention strategies to address these crimes; however, the use of transportation to facilitate crime is also discussed. When looking at crime and fear of crime, the course examines the utility of adopting a “whole journey” approach.

CJ 783AP. Crime, Race & Social Class  3 credit hours
Introduces students to criminological, historical, and legal analyses of the American justice system, with special emphasis on: (1) racial and class relations in society (2) racial and class differences in crime and violence, and (3) racial and class disparities in the justice system. Draws on research to examine the social construction of racial and class identity, the causes of racial and class differences in offending, and the consequences of ethnicity and class identity in criminal case processing. A variety of specific topics are addressed, including theories of racial, class, and ethnic antagonism, racial, class, and ethnic differences in violence, racial/class disparities in punishment such as the death penalty, and correctional problems surrounding the overrepresentation of minorities and poor people in American prisons. Course goal is to provide a foundation for critically assessing the often controversial issues surrounding class, race, ethnicity, crime, and criminal justice in society.

CJ 783F. Domestic Violence  3 credit hours
Cross-listed as SCWK 590, WOMS 580J and CJ 381v. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. Course includes diversity content.

CJ 796. Criminal Typologies  3 credit hours
Introduces an area of criminology that categorizes large amounts of information into mutually exclusive categories. Analyzes the various categories of crimes, the situations under which they are committed, the offenders who commit them and the victims of those offenses. Examines the offenses of homicide, rape/sexual assault, aggravated assault, robbery/armed robbery, burglary, auto theft/carjacking, prostitution, drugs, gambling, cybercrime, white collar crime/occupational crime, arson and hate crimes.

CJ 797. Policy Analysis and Program Evaluation  3 credit hours
An overview of approaches to public policy analysis and program evaluation. Examines the roles of participants in public policy development, implementation and evaluation. Explores policy and program functions and their intended and unintended impacts. Examines methodologies for collection of data and their use in the assessment of programs and program impacts. Prerequisites: 15 hours of criminal justice courses including CJ 191, or junior, senior or graduate standing.

Curriculum and Instruction (CI)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

CI 101. Introduction to the University  3 credit hours
Helps students make connections with academic programs, faculty, staff, and other students; develop required academic and career competencies; and make sense of the higher education environment.

CI 270. Introduction to the Education Profession  3 credit hours
Students examine the nature of teaching, the roles of collaboration, reflective practice, critical thinking, problem solving and inquiry. Students are engaged in activities using all of these tools. Includes electronic classroom observation component. This course replaced CI 271, 272. Prerequisites: successful completion of foundation courses.

CI 305. Clinical Field Experience: Special Education I  1 credit hour
To support coursework in Core I, and specifically CI 320. Students learn how special education services are delivered in public schools, gain practical experience interacting with public school students with various abilities and in a variety of settings; become familiar with related terminology (IEP, ECU, high incidence, low incidence, ID, etc.), the steps used to evaluate and place students with exceptionalities, and approaches that work to maximize the success of all students. A grade of B- or better is required in this course. Prerequisite: acceptance into the teacher education program. Corequisites: CI 311, CI 320.

CI 306. Clinical Field Experience: Special Education II  1-4 credit hours
An extension of CI 305. Prerequisites: acceptance into the teacher education program and a professional development site program.

CI 311. Introduction to Diversity: Field Experience  1 credit hour
To support coursework in Core I, and specifically CI 320 (Introduction to Diversity: Exceptionalities), students learn how special education services are delivered in public schools, gain practical experience interacting with public school students with various abilities in a variety of settings; become familiar with related terminology (IEP, ECU, high incidence, low incidence, ID, etc.), the steps used to evaluate and place students with exceptionalities, and approaches that work to maximize the success of all students. A grade of B- or better is required in this course. Prerequisite: acceptance into teacher education program. Corequisites: CI 311, 320.

CI 313. Reading and Writing Exceptionalities  2 credit hours
Teacher education candidates explore and evaluate instructional theories, principles and research-based literacy instructional strategies for learners with exceptionalities. They become familiar with formal and informal diagnostic tools to assess students’ literacy behaviors and gain skill implementing research-based intervention practices. Teacher education candidates explore the interface of technology and effective literacy instruction. Through assignments designed to provide practical application of content, they explore resources, technology, research and practices that facilitate specific skill development in students. They also learn about strategies to support enjoyment of reading and writing for students with diverse and challenging learning needs. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 314. Principles of Effective Mentoring/Mentee Relationships  1 credit hour
Overview of effective mentoring, recognizing the roles of both the mentor and mentee. Students examine the roles within a mentor
relationship, the best way to communicate, and how to build and maintain a strong rapport with a mentor. Students also examine their preconceived ideas about mentor/mentee relationships, looking for ways to grow and improve as mentees. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

**CI 315. Core I Practicum  1 credit hour**
Designed to allow candidates to spend time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisite: admission to teacher education. Prerequisites with concurrence: CI 320, 321, CESP 334. Corequisite: CI 325.

**CI 320. Introduction to Diversity: Exceptionalities  2 credit hours**
Surveys the strengths and needs of learners with exceptional needs, including those with physical, sensory and cognitive disabilities and those who exhibit gifts and talents. The effects of cultural differences and human developments on individuals with exceptional needs are explored. Current educational policy, practices and services are reviewed. Course includes diversity content. Prerequisite: admission to teacher education. Corequisites: CI 311, 321; CESP 334.

**CI 321. Introduction to Diversity: Cultural Issues  2 credit hours**
Students examine issues that impact providing an equitable education to all students. Disciplined inquiry and critical experience encourage educators to be more responsive to cultural pluralism in society. Course content emphasizes diversity issues in education and development of a knowledge base to support culturally responsible pedagogy. Course includes diversity content. Prerequisite: admission to teacher education. Corequisites: CI 311, 320; CESP 334.

**CI 322. Technology Seminar in Elementary Education  1 credit hour**
Intended to help elementary and early childhood unified education majors develop the technology skills required to be an effective elementary classroom teacher in today's schools. Focuses on word processing, presentation skills, data collection and analysis, interactive and collaborative hardware and software, and the appropriate use of technology in curriculum development and classroom instruction. Prerequisite: acceptance into the teacher education program. Corequisites: CI 311, 320, 322; CESP 334.

**CI 324. Linguistics for Elementary Teachers  3 credit hours**
In-depth study of the major theories of first and additional language acquisition/development/learning and their implications for K-6 classroom instruction. Prerequisite: acceptance into the teacher education program.

**CI 325. Instructional Strategies, Assessment and Management: Middle/Secondary General Methods  1 credit hour**
Addresses basic concepts and skills related to classroom instruction, assessment and management for middle and secondary level students. Features introduction to lesson planning and sequencing, establishing rules and procedures, and cultivating a positive classroom environment. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Course includes diversity content. Prerequisite: admission to teacher education. Prerequisites with concurrence: CI 320, 321. Corequisite: CI 315.

**CI 326. Engaging and Motivating the Learner  3 credit hours**
Strategies for enhancing student engagement and active learning are explored and applied through this hands-on course. This engaging, interactive course prepares the new teacher candidate but also can strengthen the skills of the student with a background that includes working within the schools. Offers teacher candidates tips and strategies for fostering safe environments while using effective classroom management and instructional techniques to build an engaging and motivating classroom. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

**CI 402. Instructional Strategies in Math and Science: Elementary School  5 credit hours**
Introduction to instructional strategies, assessment decisions and classroom management strategies necessary for meeting mathematics curriculum goals and objectives in the K-6 classroom. Students understand how effective instruction, assessment and classroom management support student learning in the context of teaching mathematics. Students should enroll for the specific content course required for their program (402M, 402S, etc.)

**CI 402E. Instructional Strategies, Assessment & Management: Elementary Teaching Early Literacy K-2  3 credit hours**
Introduction to the instructional and assessment decisions and processes necessary for meeting curriculum goals and objectives in the K-2 classroom. Students become familiar with various management strategies for building a positive classroom environment in which young children can achieve at their full potential. Students understand instruction, assessment and classroom management in the context of teaching emergent literacy to foster language development, create optimal learning environments, assess and evaluate literacy learning; provide for language development, create optimal learning environments, assess and evaluate literacy learning and provide for differentiation and intervention strategies related to young students. Comprehensive, evidence-based primary literacy programs include modeled, guided and direct instruction; management and organization frameworks, skill and strategy teaching, integration of reading/writing, listening/speaking and viewing/visual representation; and technologies that enhance K-2 literacy instruction and facilitate professional productivity. Prerequisite: CI 323.

**CI 402I. Instructional Strategies, Assessment & Management: Teaching Intermediate Literacy 3-6  2 credit hours**
Intermediate literacy theory for instructional and assessment decisions and processes necessary for meeting curriculum goals and objectives for the reader to learn in the 3-6 grade classroom. Students become familiar with various classroom management strategies for building a positive classroom environment in which all children can achieve at their full potential. Students understand instruction, assessment and management in the context of teaching the specific subject integrated with all subject areas. Prerequisite: CI 402E.

**CI 402J. Instructional Strategies, Assessment & Management: Elementary Social Studies  4 credit hours**
Introduction to K-6 elementary social studies content, instructional strategies, assessment decisions and classroom management strategies necessary for meeting curriculum goals and objectives in the K-6 classroom. Students understand how effective social studies instruction, assessment and classroom management support student learning in the context of teaching social studies. Prerequisites: CI 311, 320, 321, 323; CESP 334.
CI 402M. Instructional Strategies, Assessment and Management: Elementary Mathematics  3 credit hours
Introduction to instructional strategies, assessment decisions and classroom management strategies necessary for meeting mathematics curriculum goals and objectives in the K-6 classroom. Students understand how effective instruction, assessment and classroom management support student learning in the context of teaching mathematics. Prerequisites: CI 519 with a grade of 2.00 or better; CESP 433; and MATH 501 with a grade of 2.00 or better.

CI 402S. Instructional Strategies, Assessment and Management: Elementary Science  4 credit hours
Introduction to instructional strategies and processes, assessment decisions and classroom management strategies necessary for meeting science curriculum goals and objectives in the K-6 classroom. Students understand how effective science instruction, assessment and classroom management support student learning in the context of teaching science. Prerequisites: CI 311, 320, 321, 323; CESP 334.

CI 411A. Preteaching Internship: Elementary Core IIA  2 credit hours
Designed to allow teacher education candidates to spend an extended period of time in an appropriate elementary classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in early literacy and social studies content. Prerequisites: successful completion of CI 311, 320, 321, 323 and CESP 334.

CI 411B. Preteaching Internship: Elementary Core IIB  2 credit hours
Designed to allow teacher education candidates to spend an extended period of time in an appropriate elementary classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards in intermediate literacy, math and science content. Prerequisites: successful completion of CI 317, 411A, 519; MATH 501.

CI 412E. Teaching Internship I: Middle Level English  2 credit hours
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course(s).

CI 412S. Teaching Internship I: Middle Level Sciences  2 credit hours
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course(s).

CI 413. Pre Student Teaching: Secondary Level  2 credit hours
Designed to allow students to spend an extended period of time in an appropriate classroom setting working with a cooperating teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 317, 318, 427, and CESP 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: appropriate CI 454 course(s).

CI 413C. Teaching Internship I: Secondary Level Journalism  2 credit hours
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course.

CI 413E. Teaching Internship I: Secondary Level English  2 credit hours
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course.

CI 413J. Teaching Internship I: Secondary Level History/ Government  2 credit hours
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate
educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course.

**CI 413M. Teaching Internship I: Secondary Level Mathematics 2 credit hours**
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course.

**CI 413S. Teaching Internship I: Secondary Level Sciences 2 credit hours**
Designed to allow candidates to spend an extended period of time in an appropriate classroom setting working with a mentor teacher to plan, implement, manage and assess instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: CI 417, appropriate CI 435 course.

**CI 414. Instructional Strategies, Assessment and Classroom Management: Elementary Social Studies 3 credit hours**
Introduction to K-6 elementary social studies content, instructional strategies, assessment decisions, and classroom management strategies necessary for meeting curriculum goals and objectives in the K-6 classroom. Students understand how effective social studies instruction, assessment and classroom management support student learning in the context of teaching social studies. Course includes diversity content. Prerequisite: admission to ECU/Elementary Apprentice Program.

**CI 415. Differentiated Instruction for Diverse Learners 3 credit hours**
Surveys the strengths and needs of learners with exceptional needs, including those learners with physical, sensory and cognitive disabilities, and those learners who exhibit gifts and talents. The effects of cultural difference and human development on individuals with exceptional learning needs are explored. Current educational policy, strategies, practices and services are reviewed. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

**CI 416. Classroom Management and Pedagogy 2 credit hours**
Presents best practices in classroom and behavior management and pedagogy - from organizing time, materials and classroom space to strategies for managing individual and large group student behaviors, transitions and other arrangements for classrooms in general and special education. Basic federal and state laws as they pertain to the legal procedures for all teachers, including teachers of students with disabilities and ELL students, are presented. Prepares teaching candidates to feel confident, know and fulfill their professional and legal responsibilities, not only at the beginning of the year, but for the entire school year. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

**CI 417. Instructional Strategies, Assessment and Management: Literacy Strategies in the Content Areas 2 credit hours**
Addresses principles and strategies used in effective literacy instruction, including vocabulary development and comprehension skills needed to more fully read to learn in content areas. Candidates receive training to use the six-trait Analytical Rating Guide for assessing writing, which is the method used to score the Kansas State Writing Assessment. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Course includes diversity content. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisites: appropriate CI 435 course(s), appropriate teaching internship (CI 412 or 413).

**CI 418. Creating a Production Centered Classroom 2 credit hours**
Teacher education candidates strengthen the knowledge that impacts student achievement as they learn to empower students of all levels to explore their own STEM passions. Participants discover how to transform their classroom into a place where students want to engage in work on STEM projects. Teachers learn how to structure their class for students to research a topic and create a product that is shared with the class/school/world. Teachers also learn how to facilitate the student projects to ensure optimal student engagement. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

**CI 425C. ISAM: Middle/Secondary Level Content-Specific Methods I - Journalism 2 credit hours**
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate Core II practicum (CI 426).

**CI 425E. ISAM: Middle/Secondary Level Content-Specific Methods I - English 2 credit hours**
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate Core II practicum (CI 426).

**CI 425J. ISAM: Middle/Secondary Level Content-Specific Methods I - History/Government 2 credit hours**
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate Core II practicum (CI 426).
CI 425M. ISAM: Middle/Secondary Level Content-Specific Methods I - Mathematics 2 credit hours
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate Core II practicum (CI 426).

CI 425S. ISAM: Middle/Secondary Level Content-Specific Methods I - Sciences 2 credit hours
Introduces content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321 and 325; must also receive satisfactory or better rankings in all final observations and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate Core II practicum (CI 426).

CI 426C. Core II Practicum - Journalism 1 credit hour
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate CI 425M course(s).

CI 426E. Core II Practicum - English/Language Arts 1 credit hour
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate CI 425M course(s).

CI 426J. Core II Practicum - History/Government 1 credit hour
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate CI 425M course(s).

CI 426M. Core II Practicum - Mathematics 1 credit hour
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate CI 425M course(s).

CI 426S. Core II Practicum - Science 1 credit hour
Designed to allow candidates to spend an extended period of time in an appropriate middle/secondary classroom setting working with a mentor teacher to plan, implement, manage and assess content-specific instruction aligned with state and/or district standards. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in CI 315, 320, 321, 325; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member. Corequisite: appropriate CI 425M course(s).

CI 427. Philosophy, History and Ethics of Education 3 credit hours
Presents the major contemporary educational philosophies, the historical and social development of American education, and the ethical standards and legal issues influencing schools today. Some emphasis on the students' examination of their own educational philosophies and ethics. Course includes diversity content. Prerequisite: admission to teacher education. Corequisite: a practicum or clinical experience.

CI 435E. ISAM: Middle/Secondary Level Content-Specific Methods II - English/Language Arts 3 credit hours
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 435J. ISAM: Middle/Secondary Level Content Specific Methods II - History/Government 3 credit hours
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 435M. ISAM: Middle/Secondary Level Content-Specific Methods II - Mathematics 3 credit hours
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 435S. ISAM: Middle/Secondary Level Content-Specific Methods II - Sciences 3 credit hours
Addresses further content-specific concepts and advanced skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate
educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 425 course(s) and CI 426; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436C. ISAM: Middle/Secondary Level Content-Specific Methods III - Journalism  2 credit hours
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436E. ISAM: Middle/Secondary Level Content-Specific Methods III - English  2 credit hours
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436J. ISAM: Middle/Secondary Level Content-Specific Methods III - History/Government  2 credit hours
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436L. ISAM: Middle/Secondary Level Content-Specific Methods III - Mathematics  2 credit hours
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 436S. ISAM: Middle/Secondary Level Content-Specific Methods III - Sciences  2 credit hours
Engages middle/secondary level candidates in reflective experience emerging from the teaching internship experience, particularly issues surrounding management and motivation. Emphasizes mastery of content-specific concepts and skills related to classroom instruction, assessment, management and differentiation for middle and secondary level students. Course integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412/413 and 435 course, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 437. Field Experience I  1 credit hour
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/ or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 438. Field Experience II  1 credit hour
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/ or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 439. Field Experience III  1 credit hour
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/ or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 440. Field Experience IV  1 credit hour
Designed to allow teacher education candidates to spend an extended period of time in an appropriate classroom working with a cooperating teacher to plan, implement and assess instruction aligned with state and/ or district standards in elementary curriculum. Additionally, students communicate and reflect with the mentor, using feedback to enhance lesson delivery and classroom interactions. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 446. Student Teaching and Classroom Management Seminar: Elementary  2 credit hours
Students study and evaluate effective classroom management techniques. Students discuss experiences emerging from student teaching including the planning of school programs, organizing effective environments, assessing instructional strategies and assuming the responsibilities of a teacher. Prerequisites: grade of B- or better in each of the following courses: CI 311, 320, 321, 323, 324, 427; CESP 334, 433; CI 402E, 402J, 402L, 402M, 402S, 411A, 411B, and acceptance into clinical practice. Corequisite: CI 447 or 647A.
CI 447. Elementary Teaching Internship  11 credit hours
Designed to allow students to spend a semester in an appropriate classroom setting working with a cooperating teacher. The student and cooperating teacher, with the approval of the university supervisor, devise a plan for the student teacher to assume full responsibility for the classroom(s) for a designated period of time during the semester. Prerequisites: grade of B- or better in each of the following courses: CI 311, 320, 321, 323, 324, 427; CESP 334, 433; CI 402E, 402J, 402I, 402M, 402S, 411A, 411B, and acceptance into clinical practice. Corequisite: CI 446.

CI 452. Special Studies in Education  1-3 credit hours
Primarily for elementary and secondary education majors. Repeatable with adviser's consent.

CI 458. Inquiry Based Learning  2 credit hours
Teacher education candidates strengthen the knowledge that impacts student achievement in science by focusing on the implementation of integrated STEM in the primary/intermediate classroom. Participants increase their (1) confidence in implementing STEM instruction and content knowledge, (2) instructional level of STEM pedagogical skills leading to effective lessons using the 5E process, (3) knowledge and factors in discourse, assessment and curriculum to apply Kansas College and Career Ready Standards for the Next Generation of Science Standards in their instructional practice, (4) focus on STEM instructional practices to increase student attitude toward science, technology, engineering and math learning, and (5) understand how effective science instruction, assessment and classroom management support student learning in the context of teaching science. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 461E. Teaching Internship II: Middle Level English/Language Arts  5-10 credit hours
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 461M. Teaching Internship II: Middle Level Mathematics  5-10 credit hours
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 461S. Teaching Internship II: Middle Level Sciences  5-10 credit hours
Designed to allow middle-level candidates to spend a semester in appropriate classroom settings co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471C. Teaching Internship II: Secondary Level Journalism  10 credit hours
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471E. Teaching Internship II: Secondary Level English/Language Arts  10 credit hours
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 412 and 435 courses, CI 417, CI 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.
CI 471J. Teaching Internship II: Secondary Level History/Government 10 credit hours
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471M. Teaching Internship II: Secondary Level Mathematics 10 credit hours
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 471S. Teaching Internship II: Secondary Level Sciences 10 credit hours
Designed to allow secondary level candidates to spend a semester in an appropriate classroom setting co-teaching with a mentor teacher. The candidate plans, implements, manages and assesses instruction aligned with state and/or district standards. The candidate and mentor teacher, with the approval of the university supervisor, devises a plan for the candidate to assume full responsibility for the classroom(s) for a designated period of time during the semester. Includes practice and application of appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse students. Prerequisites: grades of B- or better in appropriate CI 413 and 435 courses, CI 417, 427, CESP 334, 433; must also receive satisfactory or better rankings in all final observation and disposition evaluation forms by university supervisor/faculty member.

CI 481. Cooperative Education 1-8 credit hours
Provides the student a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit. Graded Cr/NCr. Prerequisites: successful completion of 24 credit hours and a 2.500 GPA.

CI 481I. Noncredit Internship 0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

CI 481N. Internship 1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

CI 490. Individual Studies in Education 1-3 credit hours
Individual study of education topics.

CI 501. Professional Writing for Educators 1-3 credit hours
Helps students learn the writing skills, techniques and typical procedures required for developing manuscripts for possible publication in the field of education. Addresses manuscripts for a variety of publication outlets.

CI 502. Math for Exceptionalities 3 credit hours
Teacher education candidates explore and evaluate instructional theories, principles and research-based instructional strategies appropriate for mathematics for learners with exceptionalities. They also become familiar with formal and informal diagnostic tools to identify students experiencing difficulties learning mathematical concepts and gain skill implementing research-based intervention practices for these students. In addition, teacher education candidates explore the interface of technology and effective mathematics instruction. Through assignments designed to provide practical application of content, they explore resources, technology, research and practices that facilitate specific skill development in students. They also learn about strategies to support enjoyment of mathematics for students with diverse and challenging learning needs. For undergraduate students only. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 503. Mathematics for High School Teachers 3 credit hours
Capstone course in secondary mathematics education designed to prepare secondary mathematics education majors for a career in high school teaching by examining secondary school mathematics from an advanced, mathematical point of view. Topics covered are rooted in core secondary curriculum including number and operations, algebra, geometry, functions and statistics. Students draw connections between ideas taught separately in different mathematics courses as they explore familiar high school level mathematics problems. Open to education majors only. Course includes diversity content. Prerequisites: MATH 321, 344, 415, 511, 513, 531, 615, 621, STAT 460 (with a grade point of 2.000 or better, or instructor's consent).

CI 504. Special Education Law 3 credit hours
Specific local, state, and federal laws governing special education programs and services are discussed in detail. The impact, application of the laws, and strategies for complying with them in the PreK-6 setting are major areas of focus. For undergraduate students only. Course includes diversity content. Prerequisite: admission to ECU/Elementary Apprentice Program.

CI 505. Science Technology & Society 1 credit hour
Investigates the relationships between science and technology, and the effects of both on our past and present society/culture.

CI 519. Mathematical Investigations 3 credit hours
Based on the NCTM principles and standards for school mathematics focusing on process standards: problem solving, reasoning and proof, communication, connections and multiple representations. Students gain an active understanding of problem posing and problem solving in mathematics, as well as a familiarity with heuristics of problem solving. Course integrates appropriate educational technology tools and instructional strategies for students with special needs including English Language Learners (ELL). Prerequisite: MATH 501 with a grade of 2.000 or better, or instructor's consent.

CI 520. Physical Science in the Elementary Classroom 4 credit hours
Students discover how the world around them works by doing a series of hands-on activities which allows them to apply the investigative nature of science to an elementary classroom setting. Intended only for
elementary teacher candidates who are seeking to better understand the critical connections between the discovery and understanding of science concepts and the inquiry approach used in elementary science instruction.

CI 541. Desktop Publishing I  3 credit hours
Desktop publishers control the entire publishing process, from creation and typesetting to printing and distribution, with desktop equipment. Word processing on the personal computer and laser printing are the two technological achievements that make possible a desktop publishing revolution. Stresses type design, harmony, legibility, copy fitting and layout fundamentals.

CI 542. Desktop Publishing II  3 credit hours
An intermediate-level course which enhances, enriches and develops further skills and techniques used in desktop publishing. Students select software packages in which they need additional depth toward master-level. Prerequisite: CI 541.

CI 602. Social Emotional Learning in the School Community  2 credit hours
Teacher education candidates understand the purpose of the social, emotional, and character development standards and how these standards provide classrooms and schools with a framework for integrating social-emotional learning (SEL) with character development so that students learn, practice and model essential personal life habits that contribute to academic, vocational and personal success. For undergraduate students only. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 603. Foundations of Early Childhood Unified  2 credit hours
An introduction to working with young children (including those developing normally, those at risk due to environmental and biological issues, and those with special needs), their families, and professionals in community schools, agencies and programs. Emphasizes professional development, positive dispositions, early childhood learning environments and early childhood professional standards. Examines the ECU professions, characteristics of good teaching, the nature of teacher education and basic historical and philosophical foundations of ECU education. Prerequisite: CI 270.

CI 604. ECU Assessment and Methods: Infants, Toddlers and Preschool (B-PreK)  3 credit hours
Provides knowledge, skills and dispositions for candidates regarding developmental principles, evaluation/assessment, and the development of services, supports and accommodations for infants/toddlers (birth through age 2) and preschool (3-4 years old). Includes competencies within both the early childhood and early childhood special education fields. For undergraduate students only. Course includes diversity content. Prerequisite: admission to ECU/Elementary Apprentice Program.

CI 605. Internship I  2 credit hours
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate students only. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 606. Internship II  2 credit hours
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate students only. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 607. Internship III  2 credit hours
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate students only. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 608. Internship IV  2 credit hours
In the licensure program, this internship replaces the required student teaching assignment for the purposes of licensure. Students in the ECU/Elementary Apprentice Program complete at least 15 hours per week under the supervision of a classroom teacher. For undergraduate students only. Course includes diversity content. Prerequisite: admission to the ECU/Elementary Apprentice Program.

CI 614. ECU Assessment and Methods: Infants, Toddlers and Families  3 credit hours
Provides knowledge, skills and dispositions for candidates regarding developmental principles, evaluation/assessment, and the development of services, supports and accommodations for infants/toddlers (birth through age 2) and their families. Includes competencies within both the early childhood and early childhood special education fields. Prerequisite: CI 603. Corequisite: CI 614I (for undergraduate students only).

CI 614I. ECU Preteaching Internship: Infant Toddler  2 credit hours
Candidates participate in a preteaching internship experience in natural settings (within homes and the community) that include young children from birth through age 2 and their families. Candidates work with a cooperating teacher, other professionals and a university supervisor to plan, implement and assess services and supports for young children and their families. Prerequisite: CI 603. Corequisite: CI 614 (for undergraduate students only).

CI 615. Learning & Reading Strategies  2-3 credit hours
Students are provided with an understanding of the development of reading and learning strategies and explore instructional approaches for guiding secondary students in those strategies and their use in content areas.

CI 616. Literature for Adolescents  3 credit hours
Students expand their knowledge of strategies for helping culturally, developmentally and linguistically diverse students comprehend and construct meaning from texts using appropriate education technology and face-to-face instructional techniques. Includes extensive reading of classic and contemporary young adult literature in all genres. Prerequisite: acceptance into teacher education. Currently and previously certified teachers meet prerequisites.

CI 617. ECU Assessment & Methods: Preschool  3 credit hours
Provides knowledge, skills and dispositions for teacher candidates regarding development and learning at the preschool level (ages 3-5). Candidates learn to link theory and evidence-based practices to the preparation of the learning environment, the curriculum and instructional methods that are appropriate for all children. Includes methods of screening and evaluation, adaptations and accommodations, and interventions to meet individual child needs, including those with exceptionalities. Prerequisite: CI 603. Corequisite: CI 617P (undergraduates).

CI 617P. ECU Preteaching Internship: Preschool  2 credit hours
Candidates participate in preteaching internship experiences in preschool settings that include young children from ages 3 through 5 (both with and without exceptionalities) and their families. Students work with a cooperating teacher(s) and university supervisor to
screen, evaluate, assess, plan curriculum, deliver instruction, adapt for individual child needs, and implement special education services and support for the education of young children. Prerequisite: CI 603. Corequisite: CI 617 (for undergraduate students only).

**CI 620. Assessment & Methods: K-3 2-3 credit hours**
Provides knowledge, skills, and dispositions for candidates working with families and young children from kindergarten through grade three. Covers theory, methodology, screening, evaluation, assessment, and instructional practices, including adaptations/modifications/assistive technology of general education curriculum/instruction for young children both with and without delays/diagnosed disabilities. Prerequisites: CI 603, and at least one of the following: CI 402J, 402S, 402L, or 402M; or hold an elementary teaching license.

**CI 621. Instructional Strategies: Middle-Level Education 3 credit hours**
Students examine the middle grades school as an organization that takes its design specifically from the analysis of 10-14-year-olds, their characteristics and needs. Students examine many curricular and instructional alternatives for middle grades education and learn to manage changes.

**CI 647A. Teaching Internship: ECU K–3 3-8 credit hours**
Candidates spend nine weeks in professional settings (K-3 level) working with a cooperating teacher and university supervisor. The candidate and cooperating teacher, with the approval of the university supervisor, devise a plan for the intern to assume full responsibility for the program/classroom for a designated period of time during the nine-week period. Prerequisites: CI 614*, 614I*, 703*, and either 611 or 796; successful completion of all Core I (CESP 334, CI 311, 320, 321, 323, 317*, 519 (2.000 or better)), and Core II (CI 603, CESP 433, CI 402E*, CI 402J*, CI 411A*, HPS 425*, CI 324, CI 402I*, CI 402M*, CI 402S*, CI 411B*, CI 617, CI 617P) courses and assessments and acceptance into clinical practice. Corequisites: CI 446, 647B. *Course requires a grade of B- or better.

**CI 647B. Teaching Internship: ECU Birth-PreK 4 credit hours**
Candidates spend seven weeks in professional settings (infant/toddler level or preschool level) working with a cooperating teacher and university supervisor. The candidate and cooperating teacher, with the approval of the university supervisor, devise a plan for the intern to assume full responsibility for the program/classroom for a designated period of time during the semester. Course restricted to undergraduate students only. Prerequisites: CI 614*, 614I*, 703*, and either 611 or 796; successful completion of all Core I (CESP 334, CI 311, 320, 321, 323, 317*, 519 (2.000 or better)), and Core II (CI 603, CESP 433, CI 402E*, CI 402J*, CI 411A*, HPS 425*, CI 324, CI 402I*, CI 402M*, CI 402S*, CI 411B*, CI 617, CI 617P) courses and assessments and acceptance into clinical practice. Corequisites: CI 446, 647A. *Course requires a grade of B- or better.

**CI 654E. Instructional Methods in Middle Level/Secondary Education 1-3 credit hours**
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite: teaching license or admission to the Master of Arts in Teaching.

**CI 654J. Instructional Methods in Middle Level/Secondary Education - History 1-3 credit hours**
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite: teaching license or admission to the Master of Arts in Teaching.

**CI 654M. Instructional Methods in Middle Level/Secondary Education - Mathematics 1-3 credit hours**
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite: teaching license or admission to the Master of Arts in Teaching.

**CI 654S. Instructional Methods in Middle Level/Secondary Education - Science 1-3 credit hours**
Acquaints current or potential educators with the concepts and skills necessary to meet the needs of students in middle level and/or secondary education. Focuses on content specific pedagogy as it relates to classroom instruction, management and assessment or adaptations. Prerequisite: teaching license or admission to the Master of Arts in Teaching.

**CI 701. Foundations of Education 2 credit hours**
Students survey the various foundations areas, including philosophical, historical, social and comparative. This course is prerequisite to subsequent foundations courses. Prerequisite: graduate standing.

**CI 702. Introduction to Exceptional Children 3 credit hours**
A survey of the characteristics of exceptional learners, including the handicapped and the gifted. Presents service delivery models and current practices. Fulfills certification requirements for teachers and serves as an introductory course in exceptionality for special education majors, administrators and school psychologists. Prerequisite: bachelor's degree or departmental consent.

**CI 703. Assessments and Methods: K-3 3 credit hours**
Provides knowledge, skills and dispositions for candidates working with families and young children from kindergarten through grade three. Covers theory, methodology, screening, evaluation, assessment and instructional practices, including adaptations/modifications/assistive technology of general education curriculum/instruction for young children both with and without delays/diagnosed disabilities. Prerequisites: CI 603, and at least one of the following: CI 402J, 402S, or 402M; or hold an elementary teaching license.

**CI 704. Assessment & Methods K-1 3 credit hours**
Provides knowledge, skills and dispositions for candidates working with families and young children from kindergarten through first grade. Covers theory, methodology, screening, evaluation, assessment and instructional practices, including adaptations/modifications for all young children, including English language learners and those with and without delays/diagnosed disabilities. Prerequisite: CI 603. Corequisite: CI 748.

**CI 705. Knowledge and Beliefs About Reading 3 credit hours**
Helps students understand the theories of reading development, individual student differences, the nature of reading difficulties and principles of assessment. Includes the standards developed by the International Reading Association concerning knowledge and beliefs about reading as the learning outcome. Prerequisite: graduate standing.

**CI 706. Reflective Inquiry Into Learning, Teaching and Schools 5 credit hours**
Fosters the reflective thinking ability of teachers about the relationships among learning, teaching and schools. Explores various frameworks of growth and development, learning theory, social and multicultural education, and philosophical foundations. Students are engaged in initial reading and investigation into individualized research topics. Prerequisite: admission to graduate school, CLES 801.
CI 708. Current Topics in Curriculum  1-3 credit hours
Addresses a broad range of topical issues in curriculum development and implementation. A current issue is covered under this course number, an umbrella number for a variety of topics/innovations in curriculum. Repeatable.

CI 709. Current Topics in Instruction  1-3 credit hours
Addresses a broad range of topical issues in current practices for effective instruction. A current issue is covered under this course number, an umbrella number for a variety of topics/innovations in instructional practices. Repeatable.

CI 710B. Differentiated Instruction for Active Engagement  2 credit hours
Intended as part of the core for a Master of Arts in Teaching. Focuses on the elements of differentiation, differentiated instruction based on student need, and lesson plan design that reflects planned differentiation. Students explore best practices, strategies and practical applications of differentiation in diverse classroom contexts.

CI 711. Multicultural Education  3 credit hours
Emphasizes students understanding multiple perspectives in a global society and developing multiple modality, culturally aware curriculum experiences. Provides disciplined inquiry and critical experience to become more responsive to the human condition, cultural integrity, and cultural pluralism in society (NCATE, 1982, p. 14). Emphasizes diversity issues in education and the development of a knowledge base to support culturally responsible pedagogy. Prerequisite: graduate standing or departmental consent.

CI 714. Reading Instruction and Assessment  3 credit hours
Helps students create instructional environments; teaches phonemic awareness, word identification (including phonics), vocabulary-building skills, strategies for comprehension and the construction of meaning, reading and writing fluency, and study strategies; and assesses student performance and progress. Prerequisite: CI 705 or departmental consent.

CI 716. Introduction to the School Library  2 credit hours
An introduction to the role of the library and the library teacher in the school. An overview of issues affecting libraries and library teachers is presented. Prerequisite: teacher certification/license.

CI 717. Qualitative Inquiry in Education  1-3 credit hours
Through readings and guided experiences in acts of inquiry in qualitative research, students acquire the disposition of a reflective inquirer, becoming familiar with the knowledge base for qualitative inquiry. Prerequisite: instructor's consent.

CI 724. Introduction to Teaching Strategies for Students With Mild/Moderate Disabilities  3 credit hours
Examines introductory assessments, curriculum and instruction related to students with mild and moderate learning needs. Includes competencies for (a) developing individual educational plans, (b) assessment for culturally responsive models of instructional planning, (c) planning and delivering research-validated individualized instruction, (d) monitoring and basing instructional decisions on performance data, (e) managing safe and conducive learning environments, and (f) strategies for working with students with adaptive learning needs in general and special education environments.

CI 725. Improvement of Instruction in Science  3 credit hours
Assists teachers in improving the way they teach science and the way their students learn science. Includes instructional strategies, curriculum, research and technology. Prerequisite: CI 402S or 454S.

CI 726. Information Technologies in the School Library  2 credit hours
Introduces a wide range of computer applications, including word processing, database, spreadsheet and presentation software to create and manage information in the library. Covers the use of the internet, options for filtering internet content, internet user policies and basic webpage design. Includes basic computer and software troubleshooting, installation and removal of software, and computer security issues. Prerequisite: Windows 95 or equivalent skills, CI 716.

CI 727. Technology in the School Library II  2 credit hours
An introduction to a wide range of technologies and equipment in the school library. Covers selection and purchase as well as basic maintenance and repair of equipment. Includes the basis of local area network design. Students learn the basics of media production and strategies for teaching media production to students. Students also look at the future of technology in school libraries. Prerequisite: CI 726.

CI 728. Cataloging  2 credit hours
An introduction to cataloging materials for the school library. Includes cataloging print and nonprint materials in US MARC format, assigning Dewey Decimal classification numbers, assigning Library of Congress subject headings; sources for cataloging records, and the importance of authority control in the library.

CI 729. Reference Materials & Collection Development  2 credit hours
Provides students with skills in evaluating and selecting library materials. Presents methods of evaluating and using indexes, bibliographies, encyclopedias, dictionaries and other print and electronic media, including the Internet.

CI 730. Curriculum in the School Library  2 credit hours
Comprehensively designed to give students knowledge about the role of the school library in the curriculum development process. Addresses how the school library teacher collaboratively develops and integrates information literacy and content area standards into library and classroom activities. Prerequisite: CI 716.

CI 731. The Reflective and Inquiring Educator  6 credit hours
Builds a foundation for reflective thinking about (a) the role of the educational practitioner; (b) educational issues in curriculum, instruction and change theory; and (c) principles and application of teacher-based action research. Prerequisite: admission to MEd in curriculum and instruction.

CI 732. Library Management & Design  2 credit hours
An introduction to a wide range of technologies and equipment in the school library. Covers selection and purchase as well as basic maintenance and repair of equipment. Includes the basis of local area network design. Students learn the basics of media production and strategies for teaching media production to students. Students also look at the future of technology in school libraries. Prerequisites: CI 716, 726, 728, 730.

CI 733. Assessments & Methods: Grades 2-3  4 credit hours
Provides knowledge, skills and dispositions for candidates working with families and young children in second and third grade. Covers theory, methodology, screening, evaluation, assessment and instructional practices, including adaptations and modifications for all young children, including English language learners and those with and without delays/diagnosed disabilities. Prerequisites: CI 603, 704. Corequisite: CI 749.

CI 734. Literature-Based Reading Programs  3 credit hours
Students examine specific methods for developing a literature program with children (preschool-elementary years) emphasizing extending
Continuation of CI 743 and 744. Prerequisites: employment by a school district or agency partnership and completion of coursework for Residency prerequisites: CI 743, 761A, employment by a school supervision of a classroom teacher. Transition to Teaching and MLS program teach half time or more with a restricted license. Students in the transition to teaching purposes of licensure. Students in the transition to teaching internship replaces the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. Transition to Teaching and MLS Residency prerequisites: CI 744, 769, employment by a school district or agency partnership and completion of coursework for restricted teacher licensure or residency. Corequisite: CI 848. ECU Residency prerequisites: CI 617, 744. Corequisite: CI 704.

In the transition to teaching or residency licensure program, this internship fulfills the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. Transition to Teaching prerequisites: CI 748, employment by a school district and completion of coursework for provisional teacher certification. Corequisite: CI 849. Middle level secondary residency prerequisite: CI 748. Corequisite: CI 849. ECU Residency prerequisites: CI 703, 748. Corequisite: CI 733.

In the transition to teaching (T2T) or residency (ECU or middle level secondary) licensure programs, this internship fulfills the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. Transition to Teaching prerequisites: CI 748, employment by a school district and completion of coursework for provisional teacher certification. Corequisite: CI 849. Middle level secondary residency prerequisite: CI 748. Corequisite: CI 849. ECU Residency prerequisites: CI 703, 748. Corequisite: CI 733.

Provides prospective special education teachers with participation in a class for children or adolescents with high incidence learning needs being served in special education programs. Supervision is provided by a fully-qualified special education teacher and a university faculty member. Emphasizes (a) research-validated teaching methods for students with high incidence learning needs, including planning individual education programs and standards-based education; (b) use of formal-informal psychoeducational assessment devices, curriculum strategies, positive behavior support, behavior management and evaluation of student performance; and (c) reflective analysis of personal performance and its impact on student learning. Prerequisite: practicum placement approval.

Provides supervised practical experience in a program setting that serves students who have low incidence disabilities. Candidates work with a cooperating teacher to plan, implement and assess instruction aligned with state and/or district standards for students with low incidence disabilities. Prerequisite: practicum placement approval.

Provides prospective special education teachers with participation in an educational setting for children and adolescents needing the gifted curriculum served in special education programs. Supervision is provided by a fully-qualified gifted education teacher and a university faculty member. Emphasizes research-validated teaching methods for students with gifted curriculum needs. Prerequisite: practicum placement approval.

Explores a variety of assessment instruments, both teacher-made and standardized, to determine a gifted student's cognitive functioning level and educational needs. Examines strategies and techniques for planning qualitatively differentiated curriculum to meet the academic needs of the gifted learner.

For professionals interested in strengthening their expertise in an education-related area. Students enrolled in these courses develop knowledge that enhances their professional skills and leadership capacity for educational environment. Graduate students only. Graded Bg/NBg.

Examines introductory assessments, curriculum and instruction related to students with severe and multiple disabilities. Includes competencies for (a) developing individual educational plans, (b) assessment for culturally responsive models of instructional planning, (c) planning and delivering research-validated individualized instruction, (d) monitoring and basing instructional decisions on performance data, (e) managing safe and conducive learning environments, and (f) strategies for working with students with moderate to severe needs in general and special education environments.

In the transition to teaching or residency licensure program, this internship fulfills the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. Transition to Teaching and Middle Level Secondary prerequisites: CI 760A, employment by a school district or agency partnership and completion of program requirements for restricted teacher licensure or residency. Corequisite: CI 761A. ECU Residency prerequisite: admission to the program.

In the transition to teaching or residency licensure program, this internship fulfills the required student teaching assignment for the purposes of licensure. Students in the transition to teaching program teach half time or more with a restricted license. Students in the residency program teach at least 20 hours per week under the supervision of a classroom teacher. Transition to Teaching and MLS Residency prerequisites: CI 743, 761A, employment by a school district or agency partnership and completion of coursework for restricted teacher licensure or MLS residency. Corequisite: CI 769. ECU Residency prerequisites: CI 603, 743. Corequisite: CI 614.

Continuation of CI 743 and 744. Prerequisites: employment by a school district, CI 743, 744, and admission to MEd in CI.
CI 750. Workshops in Education  1-4 credit hours
Workshops on a variety of education topics. Different topics are indicated by a letter following the course number.

CI 751. Special Studies in Education  1-3 credit hours
For elementary and secondary school teachers. Repeatable with adviser’s consent. Prerequisite: teacher certification or departmental consent.

CI 751AA. Student-Led Conferencing  0.5 credit hours
Parents and teachers become partners with their students when all parties play equal roles in conferencing. Traditional conferencing between only the teacher and parent can limit students from becoming self-advocates for their education. Student-led conferencing encourages students to take responsibility for their learning through analysis and reflection of their work and goal setting. Workshop guides teachers into the rationale and steps for successfully implementing student-led conferences with any age and setting.

CI 751AB. Enhancing Science Instruction Through STEM Education for the K-8 Classroom  3 credit hours
STEM education incorporates science, technology, engineering and mathematics into the science curriculum. Anticipating a significant increase in the percentage of STEM careers over the next four years, the National Science Foundation and the Federal Government have placed an emphasis on improving STEM education in the K-12 Classroom. Professional learning course participants use the NGSS standards to develop and present STEM activities appropriate for the elementary classroom. Course participants learn the foundations of STEM education as well as engage in hands-on STEM activities. Participants apply the foundations of STEM education and the NGSS standards to develop high quality engaging science lessons. Technology is used as a presentation tool as well as a method to collect and analyze science data and activities. Applications such as Ubersense are used to analyze motion-based activities. The ultimate goal is for each participant to leave with workable knowledge and resources to develop STEM activities for their elementary classroom.

CI 751AC. Inquiry Instruction as a Foundation of Science Education in the Elementary Classroom  0.5 credit hours
Inquiry-based education is a powerful instructional strategy that has shown increased intellectual engagement and has fostered deep understanding through the development of hands-on and minds-on science activities. The 5E learning model develops the natural curiosity of elementary students to stimulate an inquiry mentality of learning science. Using the NGSS standards as the foundation, participants learn to analyze or dissect the standards for critical content and develop engaging science lessons. Throughout the workshop, participants have the opportunity to observe elementary science activities that correlate to the NGSS standards and are presented in an “activity before concept” method. The workshop presents the instructional foundations of the 5E learning model. Additionally, participants have the opportunity to engage in science activities presented in the 5E learning model. Each participant develops and presents a science activity that uses the 5E learning model. Ultimately, participants learn to read the standards and use the information to develop lessons in the 5E learning model.

CI 751AD. Motivating the Writer in Every Student  0.5 credit hours
Participants engage in multisensory writing strategies that encourage all students to learn how to effectively write in various modes. The day is designed around an accumulation of research-based procedures used over 22 years’ experience as a classroom teacher, writing coach, academic coach and blended virtual teacher. Teachers leave the workshop with various tools that they are able to use with their K-5 students. Time is also spent discovering author Jon Scieszka, children’s author and creator of “Guys Read.” If workshop participants teach male students that are discouraged by reading and writing, this author has a reputation of altering those mindsets. Finally, the day also includes how to prepare students for the Multidisciplinary Performance Task portion on the Kansas State Assessment.

CI 751AE. Fractions and Decimals Made Easier  0.5 credit hours
Discusses difficulties elementary school students face in learning fractions and decimals and ways teachers can help in handling these topics. Research-based workshop incorporates current theories of cognitive science in the teaching and learning of fractions and decimals. It consists of several hands-on activities focusing on such key issues as what initial instruction should focus on, what aspects of fractions and decimals should be stressed, and how some common misconceptions involving these topics can be overcome.

CI 751AF. The Highly Engaged Classroom  0.5 credit hours
Participants learn how to use effective engagement techniques and strategies to facilitate the ‘ultimate’ level of student engagement. There are ample opportunities for making classroom connections, energizing attitudes, sharing ideas and best practices.

CI 751AG. Nonverbal Classroom Management  0.5 credit hours
Studies Michael Grinder’s work in the area of nonverbal communication. As teacher behavior establishes classroom management, and classroom management is the language of relationship, we know that what a teacher DOES communicates. Students increase awareness of the messages in body language and consider together how to create a safe, supportive, productive classroom environment.

CI 751AH. Simple View of Reading: The Ingredients of Reading and Instructional Supports  0.5 credit hours
Examines, from principle to practice, differentiated instruction and scaffolds to meet the needs of individual students. Interactive, collaborative experience includes modeling and use of several research-based strategies which lend themselves to classroom use as teachers work to make the best use of instructional opportunities.

CI 751AI. Differentiations and Scaffolds in Instruction  0.5 credit hours
Reviews theoretical models of reading from research, such as the Simple View of Reading and Scarborough’s Rope to help teachers understand the ingredients of reading comprehension. Areas addressed include word recognition, language comprehension and automaticity. Participants learn and experience strategies to address the different components within all content areas. These strategies help students access the content that they need to learn to become college and career ready.

CI 751AJ. KMIC Summer Mentor Forum  0.5 credit hours
Mentors from KMIC member districts who have been trained by the New Teacher Center are invited to attend the Summer Mentor Forum. Participants collaborate and network with other mentors from across the state. Topics for the forum are: mentoring around social emotional learning, differentiating the use of tools, analyzing a case study, and investigating resources in the Learning Zone. Structures include coaching conversations, focused dialogue, World Café, and triad conversations.

CI 751AK. Integrating STEM in the Primary Classroom  0.5 credit hours
A professional learning opportunity aimed to increase student success in science by focusing on the implementation of integrated STEM in the primary classroom. Participants increase their (a) confidence in implementing iSTEM instruction and content knowledge, (b) instructional level of iSTEM pedagogical skills leading to effective
opportunities for meaningful participation, through the use of children's
such as: (a) increasing social bonding; (b) setting clear and consistent
hours
Fostering Resiliency: Helping Children with
teachers, ultimately helping to improve student learning.
even more effective in their skills in advancing the practice of new
career teachers. The series ensures that experienced teachers become
the skills, abilities, and knowledge of mentors and coaches of early
This targeted professional development series is designed to advance
the Next Generation of Science Standards in their
instructional practice, and (4) focus on STEM instructional practices to
increase student attitude toward science, technology, engineering and
math learning.

CI 751AM. Integrating STEM in the Intermediate Classroom  0.5
credit hours
A professional learning opportunity aimed to increase student success
in science by focusing on the implementation of integrated STEM in the
intermediate classroom. Participants increase their (1) confidence in
implementing STEM instruction and content knowledge, (2) instructional level of iSTEM pedagogical skills leading to effective
lessons using the 5E process, (3) knowledge and factors in discourse,
assessment and curriculum to apply Kansas College and Career Ready
Standards for the Next Generation of Science Standards in their
instructional practice, and (4) focus on STEM instructional practices to
increase student attitude toward science, technology, engineering and
math learning.

CI 751AN. Creating Literacy Moments with the Current 6th-8th
Grade William Allen White Books  1 credit hour
Looks at five of the preselected books from the 2016 WAW 6th-8th
grade master list. Participants need to purchase/bring to class the five
preselected books and have read two prior to class. Participants gain
insight on how to incorporate the WAW books during teacher read-
 aloud time, small-group work, or literature circles with the use of specific comprehension strategies, vocabulary, writing prompts, close
reading, and accompanying informational text. Each participants leaves
the workshop with five unit guides.

CI 751AO. Designing the "WOW" Unit  1 credit hour
Participants research ways to make learning relevant, engaging and real.
Participants either individually or collaboratively build a unit that can
be used in the classroom using the research on connecting learning to
real-life.

CI 751AP. Social Emotional Learning in the School
Community  0.5-3 credit hours
Workshop designed to help the attendee understand the purpose of the Social, Emotional and Character Development Standards and how
these standards provide classrooms and schools with a framework for
integrating social-emotional learning (SEL) with character development
so that students learn, practice and model essential personal life habits
that contribute to academic, vocational and personal success.

CI 751AQ. Mentoring for Effective Instruction  1 credit hour
This targeted professional development series is designed to advance
the skills, abilities, and knowledge of mentors and coaches of early
career teachers. The series ensures that experienced teachers become
even more effective in their skills in advancing the practice of new
teachers, ultimately helping to improve student learning.

CI 751AR. Fostering Resiliency: Helping Children with
Challenging Life Situations Using Children’s Literature  0.5 credit hours
Teachers learn how to foster resiliency through instructional techniques such as: (a) increasing social bonding; (b) setting clear and consistent
boundaries; (c) teaching life skills; (d) providing care and support;
(e) setting and communicating high expectations; and (f) providing opportunities for meaningful participation, through the use of children’s
literature. Participants view, gather and develop resource plans using
recent picture book publications.

CI 751AS. Creating a Makerspace/Genius Hour in Your
Classroom  1 credit hour
Discover how to transform your classroom into a place where students want to come in and learn. A classroom where teachers create a space to
empower students of all levels to explore their own passions through
passion projects.

CI 751AU. New Horizons - I Miss Pluto!  1 credit hour
For the world-changing Apollo 11 mission, the average age of engineers working in Mission Control was only 28. When Columbia
first launched, it was 47. As the Baby Boom generation moves toward
retirement, this aging workforce will soon start to disappear and
need to be replaced, a problem recognized by NASA as well as many
other organizations. New Horizons for Kansas K-12 seeks to connect
educators to space science via the Cosmosphere and using NASA
content, helping to excite the next generation about NASA missions and
to encourage them to pursue STEM careers. Towards that goal this class
aligns well with the following NASA research priorities: Understanding
the universe and our origins through the study of deep space, new crew
vehicles including deep space and Mars, living and working in space.

CI 751AV. Space Agriculture for Kansas K-12  1 credit hour
Advances the three major education goals of the NASA Office of Education — to support U.S. innovation and competitiveness. Seeks
to increase the STEM workforce pipeline through the use of NASA
content. Focuses on bringing NASA content to educators who are
currently educating the next generation of people with extraordinary
knowledge in science and engineering. Focuses on the NASA
Office of Education’s mission of attracting and retaining students in
STEM disciplines by connecting informal and formal education,
communicating NASA content to the public, and ultimately using
NASA as an engaging method to bring the students into aerospace.

CI 751AY. Technology Tool Belt: Stress-Free Student-Centered
Applications  0.5 credit hours
In this professional learning course, elementary teachers learn about
free innovative technologies they can incorporate in their lessons to
improve their teaching practices today. Resources presented enable
teachers to easily add student-centered technology to their daily
classroom routine. Teachers formulate a standards-based weekly
plan implementing the technologies presented into center rotations.
This enables the teacher to monitor progress as a guide for students
instead of the traditional classroom structure with a teacher-directed
focus. Ideas for classroom preparations and set up are shared to make
the use of technology painless. Resources covered include Web 2.0
tools and interactive whiteboard SMART Notebook software that
engages students with learning activities. Technology used includes
laptops, video recording devices, a document camera, and an interactive
whiteboard. Students who have these devices available to them and
would like to learn easy ways to use them in the classroom, will greatly
benefit from this professional learning course. (All materials will be
provided for use during the course. Teachers are welcome to bring their
own laptops if they choose.)

CI 751CA. Enhancing Literacy Learning through Movement  0.5
credit hours
Offers curriculum integrating movement, physical activity, and literacy
in elementary education. Research of elementary teacher candidates’
implementation of integrating movement and literacy content via lesson
planning is shown. Participants not only engage in how to enhance
literacy learning through movement activities, but also explore and
implement practices in their own classrooms. Participants are asked to
reflect on organized movement and management procedures in their
own teaching experiences.
CI 751CB. Boost Classroom Learning with STEM Education 0.5 credit hours
Aims to increase student success in science by focusing on the implementation of STEM in the primary and intermediate classroom. Participants engage in a variety of STEM activities in small groups, explore the use of free STEM technology to support learning, and learn tips and tricks for facilitating STEM activities.

CI 751CC. Look What I Can Do! Tapping the Talents of Primary Students 0.5 credit hours
Provides teachers with the opportunity to design complex learning experiences based on discovery, inductive, deductive and inquiry approaches. Teachers learn why the approach works, see examples of primary students learning when a teacher uses the approach, then have the opportunity to collaborate in the design of standards-based tasks and lessons to use in the classroom for each model. Teachers are guided in the design of tasks that also promote student use of individual talents, many of which may not be fostered when using direct instruction. Teachers also dialogue about the pacing and assessment related to the complex tasks they design. Participants select one of the four lesson plans they complete and customize it to fit their classroom, teach the lesson, and then submit two reflections, one on the taught lesson and another on the remaining three models.

CI 751CD. Engaging K-8 Learners with Inquiry and Project-Based Strategies 0.5 credit hours
Inquiry and Project-Based learning are powerful instructional strategies that have shown increases in intellectual engagement as well as fostering deep understanding through the development of hands-on and minds-on activities. The 5E learning model develops the natural curiosity of K-8 students to provide an inquiry mentality of learning science, social studies and math. Using the NGSS and Common Core Standards, participants will learn to dissect the standards for critical content and develop engaging lessons. Through this professional learning course, participants will have the opportunity to observe and participate in lessons that correlate to the standards and are presented in an “activity before concept” method. This professional learning course will allow participants the opportunity to observe and develop lessons that can be utilized directly in their classroom and ultimately create an engaging environment.

CI 751G. Creating Literacy Moments with the 3rd-5th Grade William Allen White Books of 2016 0.5 credit hours
Looks at five of the preselected books from the 2016 WAW 3rd-5th grade master list. Participants need to purchase/bring to class the five preselected books and have read two prior to class. Participants gain insight on how to incorporate the WAW books during teacher read-aloud time, small-group work, or literature circles with the use of specific comprehension strategies, vocabulary, writing prompts, close reading, and accompanying informational text. Participants leave the workshop with five unit guides.

CI 752. Special Studies in Education 1-3 credit hours
For elementary and secondary school teachers. Repeatable with adviser's consent. Prerequisite: teacher certification or departmental consent.

CI 753. Special Studies in Education 1-3 credit hours
For elementary and secondary school teachers. Repeatable with adviser's consent. Prerequisite: teacher certification or departmental consent.

CI 754. Special Studies in Education 1-3 credit hours
For elementary and secondary school teachers. Repeatable with adviser's consent. Prerequisite: teacher certification or departmental consent.

CI 755. Special Studies in Education 1-3 credit hours
For elementary and secondary school teachers. Repeatable with adviser's consent. Prerequisite: teacher certification or departmental consent.

CI 758. Nature of Technology and Educational Implications 3 credit hours
Addresses issues regarding the nature of technology and how it impacts thinking and action related to learning and teaching. Includes examinations of historical and contemporary examples, with applications in classroom instruction, assessment and supervision. Integrates appropriate educational technology tools and instructional strategies for culturally, developmentally and linguistically diverse student populations. Course includes diversity content.

CI 760A. Creating an Effective Classroom 2 credit hours
Part of the core for a Master of Arts in Teaching. Participants conduct an initial examination of instructional methods, educational trends and effective practices for classroom management. Participants in the Transition to Teaching program will have secured (or have been cleared to secure) a teaching contract in an accredited school system. Participants in the Middle/Secondary Residency Program will have secured a position as a school district para-educator or as a WSU/Work Study intern in an accredited school system. Prerequisite: admission to the Transition to Teaching program or Middle Level Secondary Residency program.

CI 761A. Instructional Planning and Technology 2 credit hours
Intended as part of the core for a Master of Arts in Teaching. Addresses issues in instructional planning including: identifying appropriate learner goals, aligning goals with accepted standards, models of instruction, integrating technology into instruction, adapting instruction to meet individual student needs, including English language learners, and differentiated instruction. Concurrent enrollment in CI 743, Transition to Teaching or Residency Internship I, or Cooperative Education is required. Prerequisites: students in this course will have secured a teaching contract or paraeducator position in an accredited school system, will have met the prerequisites for admission to the Transition to Teaching or Middle Level Secondary Residency program at WSU and will have completed the summer induction course. Corequisite: CI 743.

CI 764. Interdisciplinary STEM Education: Entry Course 3 credit hours
Helps students learn methods of instruction in integrated STEM, using the lens of STEM content knowledge and modeling, inquiry and design practices. A set of methodologies that students can effectively adapt to a variety of situations beyond their specific disciplines are introduced. Students learn how to identify, develop, deliver and evaluate STEM instructional activities with models of project-based learning. Course includes a comprehensive overview of the theories of and instructional strategies for integrated STEM education. Students have various opportunities to evaluate curricula developed for integrated STEM education, as well as procedures for developing a new STEM curriculum. Class comprises a combination of lecture, experiential exercises, discussion, in-class presentations, videos, individual assignments and team assignments.

CI 769. Instructional Strategies, Technology Integration and Assessment 2 credit hours
Intended as part of the core for a Master of Arts in Teaching (Transition to Teaching and/or Middle/Secondary Residency Programs). Allows the student to explore a variety of instructional strategies, technologies and assessment techniques while learning how to adapt these strategies and techniques to meet the individual needs of the students. Prerequisites:
CI 743, 761A, 768, and continued employment by a school district. Corequisite: CI 744.

CI 771. Technology in the Classroom  1-2 credit hours  
Introduces classroom teachers to new technologies and their use in the classroom. Uses field trips and speakers to expose teachers to leaders in specific technology. Includes telecommunications, multimedia applications, integrated media and new hardware and operating systems. Prerequisite: instructor's consent.

CI 772. Integrating Technology Into the Curriculum  2-3 credit hours  
Covers skills and strategies needed for classroom teachers to use computers and computer-related technology to meet curricular goals and professional standards. Includes professional standards, classroom management, choosing appropriate software, assessment, teaching strategies and activities, and professional resources. A project-based course; educators develop materials and strategies to assist in integrating available technology into the curriculum.

CI 774. Teaching English as a Second Language  1-3 credit hours  
Examines current objectives for teaching English as a second language and a variety of methods and specialized techniques for obtaining these objectives. Students develop knowledge of criteria for evaluating curricula, teaching materials and professional literature related to teaching English as a second language and bilingual education. Students examine methods of selecting and adapting curricular ways to enhance the curriculum through developing activation plans for involving parent and community resources in the ESL/BE curriculum. Designed to meet the standards required for ESL/BE endorsement or certification in TESOL.

CI 775. Applied Linguistics: ESL/Bilingual Teacher(s)  3 credit hours  
Examines a broad picture of human language: what it is, what it is used for and how it works. Enables students to recognize uninformed statements about language, to examine personal beliefs and attitudes about language, and to learn to use basic tools to analyze language in particular as it relates to teaching English as a second language. Provides an introduction to most of the sub-fields of linguistics (e.g., phonetics, morphology, semantics, syntax, etc.).

CI 776. Second Language Acquisition  3 credit hours  
Surveys nativist, environmentalist and interactionist theories of second-language acquisition. Covers a broad introduction to the scope of second-language acquisition and bilingualism by reviewing substantive research findings as well as causes for differential success among second-language learners. Includes discussions over readings, collaborative activities and presentations involving application of theory to teaching practice.

CI 777. ESL Assessment  3 credit hours  
Examines legal, theoretical and practical considerations in the ESL/BE students. Explores a variety of established principles of language assessment, procedures for identification of language-minority students and applications for these procedures and techniques. Covers level placement, monitoring of language development and exit criteria for language programs. Introduces the desirable qualities of tests: validity, reliability, practicality and beneficial backwash.

CI 778. TESOL Content Test Preparation  3 credit hours  
Provides teacher candidates preparation for the licensure exam through summaries of ESOL topics in (a) linguist theories, (b) examination of student language production, (c) research-based teaching strategies, (d) assessment procedures and techniques, (e) cultural and professional matters, and (f) test-taking strategies. Prerequisite: senior standing for undergraduate students.

CI 780C. Technology and the Classroom: Young Children  1-2 credit hours  
Teaches effective use of a variety of hardware, software and peripherals in early childhood classroom settings (ages 3-9, grades PreK-3). Prerequisites: entrance into teacher education, a valid teaching certification or instructor's consent.

CI 780L. Technology in the Classroom: Language Arts  2 credit hours  
Enables classroom teachers to use computers and related technology in the language arts curriculum. Appropriate software is evaluated and used in planning for instruction.

CI 780M. Technology in the Classroom: Mathematics  1-2 credit hours  
Focuses on the integration of information and communication technology in mathematics. Explores mathematics-related software and online resources, instructional strategies and assessment techniques. Strongly focuses on the use of technology to meet the subject matter and technology and curriculum standards. Emphasizes building a community of reflective learners. Prerequisite: entrance into teacher education, valid teacher certificate/license, or instructor's consent.

CI 780S. Technology in the Classroom: Science  2 credit hours  
Assists teachers of science in integrating the use of technology appropriate for their classrooms. Explores software and online resources, instructional strategies and assessment techniques. Strongly focuses on the use of technology for communication and student assistance to meet the science and technology curriculum standards. Emphasizes building a community of reflective learners. Prerequisite: entrance into teacher education, valid teacher certificate/license or instructor's consent.

CI 781. Cooperative Education  1-4 credit hours  
Provides the candidate a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Graded Cr/N, Cr/NCr. CI graduate candidates are limited to any combination of 6 hours of pass/fail, S/U, and Cr/NCr credit toward the degree program.

CI 782. Internet in Classroom  3 credit hours  
Project-based course requires students to identify internet resources that best meet classroom curricular goals and plan instruction using those resources. Assumes all enrolled students have basic computing skills prior to enrolling in this class and access to a computer connected to the internet.

CI 783. Special Projects in Internet  1-2 credit hours  
Students explore and expand their knowledge of the internet. They complete a special project designed to use knowledge and experiences developed in CI 782. Students and instructor establish goals and activities appropriate for graduate-level study and applicable in an educational setting. Prerequisite: CI 782 or instructor's consent.

CI 784. Foundations of Education for Individuals with Exceptionalities  3 credit hours  
Addresses the basic foundations of special education across exceptionality areas. A general history of special education and its relationship to general education trends (as well as the disability movement as a whole) is discussed. Students are familiarized with important special education legislation and regulations, learn the role litigation has played in the development of the discipline, and study ethical issues in the provision of special education services. Course explains the cognitive, communicative, social/emotional, sensory and physical characteristics of students with mild/moderate (high incidence), moderate/severe (low incidence), and gifted exceptionalities and how these characteristics influence planning and instruction.
Issues related to the field of special education include: characteristics and learning needs, identification, theories of intelligence, diverse populations and curriculum differentiation. Course examines the roles of students, professionals, and families in meeting student needs. Course includes diversity content.

**CI 790. Special Problems in Education** 1-4 credit hours
Directed reading, activity or research under supervision of a graduate instructor. Prerequisite: departmental consent.

**CI 794. Diversity and Culture in a Global Society** 3 credit hours
Equips students to become multi-instructional leaders who practice cultural and social justice. Provides students with the necessary concepts of diversity to scaffold a paradigm shift from cultural awareness to cultural diplomacy. Enables students to become successful global citizens in the globalized world. Prerequisite: graduate standing or departmental consent.

**CI 795. Change, Creativity and Innovation** 3 credit hours
Focuses on key theories and elements related to organizational change, the creative process and innovation. Students develop an understanding of creative thinking processes to explore how those processes can impact change and lead to innovation. Prerequisite: graduate standing or departmental consent.

**CI 796. Family and Professional Collaboration** 3 credit hours
Assists the special educator in developing the skills to collaborate and consult with parents/family members, general educators, support personnel, paraprofessionals/teaching assistants, and community agencies to facilitate the needs of children with exceptionalities.

**Dance (DANC)**
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**DANC 130. Varieties of Dance** 1-2 credit hours
No previous experience in dance required. A different form of dance may be offered each semester. Repeatable for credit.

**DANC 130A. Ballroom/Swing** 1-2 credit hours
Introduces students to the fundamentals of contemporary, social and competitive ballroom dancing. Students learn the basics and variations in the East Coast Swing, triple and single rhythms, cha cha, salsa, waltz or any of the other popular ballroom dances the students wish to accomplish and time permits. Attention is given to building confidence, rhythmic understanding, leading and following, and a basic understanding of the origins of the dances and their cultural roots.

**DANC 130V. Hip Hop I** 1-3 credit hours
Introduces hip hop dance technique emphasizing work in body isolations, rhythmic patterns and directions/weight changes, basic steps, and combinations similar to those found in the dance industry today. Repeatable for credit.

**DANC 140. Art of The Dance** 3 credit hours

**DANC 150. Dance Workshop** 1-4 credit hours
Repeatable for credit.

**DANC 150A. Ballroom-Latin** 2 credit hours
Introduces students to the fundamentals of contemporary, social and competitive ballroom dancing. Students learn the basics and variations in the tango, rumba, cha cha, salsa, waltz or any of the other popular ballroom dances the students wish to accomplish and time permits.

**DANC 150Q. Workshop in Dance** 0 credit hours
Dance majors only. Repeatable for credit. Prerequisite: instructor's consent.

**DANC 180E. Performing Arts Seminar** 1 credit hour
Cross-listed as THEA 180E. An interdisciplinary introduction to the School of Performing Arts. Students study performance, design and production of theatre, music theatre, and dance. First semester students in the School of Performing Arts interact and collaborate with each other for a greater understanding of performing arts. Students crew one show on the season calendar. Students also break out into individual program areas of department-specific modules when appropriate.

**DANC 201. Modern Dance Technique I** 3 credit hours
Introduces study of basic positions, body alignment, stretches and strengthening exercises; emphasizes simple movement phrases to develop understanding of direction, rhythm and dynamics. Repeatable for credit.

**DANC 210. Ballet I** 3 credit hours
Introduces basic technique, positions, basic steps, proper body alignment, classroom structure, etiquette and ballet vocabulary. Repeatable for credit.

**DANC 215. Dance Improvisation** 3 credit hours
An introduction to the process of spontaneous movement discovery involving solo and group movement experiences. Improvisational exercises work to heighten the personal intuitive processes, the kinesthetic sense, and spatial and temporal awareness, allowing for individual ongoing discovery of potential movement resources for performance and choreography.

**DANC 225. Dance History: Ancient Civilization to Early 1900s** 3 credit hours
*General education advanced further study course.* Overview of dance history emphasizing the Western tradition in social, cultural and concert dance forms from ancient civilizations to early 1900s, dance in the Americas, and the origins and development of ballet.

**DANC 227. Mime/Physical Theatre I** 3 credit hours
An introductory course in crafting nonverbal theatre to create conceptual statements, short plays and abstract movement art. Student experiences gesture, isolations, flexibility, strength, emotional expression, genuine acting and fundamental mime theatre skills to see the range and possibilities in communicating nonverbally. Enhances both acting and dancing skills.

**DANC 230. Musical Theatre Dance** 3 credit hours
Introduces various musical theatre dance styles from different historical periods including social dance styles from 1900s through 1980s. Includes the dance audition and how to prepare and market the dancer for the stage. Repeatable for credit. Prerequisites: DANC 235 and/or instructor's consent.

**DANC 235. Jazz I** 3 credit hours
Introduces jazz technique, emphasizing work in body isolations, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit.

**DANC 240. Tap I** 3 credit hours
Introduces the principles of tap dance including rhythm, clarity of sound, syncopation and weight shift. Repeatable once for credit.
DANC 301. Modern Dance 2  3 credit hours  
Continuation of DANC 201 emphasizing movement phrases. 
Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 305. Choreography 1: Improvisation  3 credit hours  
Introductory course in the craft and art of making dances using improvisation and small assignments as the means for investigating movement concepts. Space, time and force factors, sound and musical forms, drama and literature, emotions, shape and path, solo, small and large group, and other concepts are experienced to inform the student of the range of possibility in making dances. Prerequisites: level two (intermediate) proficiency in modern dance, ballet and jazz techniques. Corequisite: appropriate-level modern dance or ballet technique class required.

DANC 310. Ballet 2  3 credit hours  
Continuation of DANC 210. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 315. Music For Dance  3 credit hours  
Study of tempo, meter and quality of sound as applied to movement. Exploration of appropriate music repertoire for dance. Study of musical form and style periods and applications to performance and choreography.

DANC 320. Dance Performance  1 credit hour  
Cross-listed as THEA 380E. Wichita Contemporary Dance Theatre, senior and/or choreography concerts, musical theatre, or outside performances approved by dance faculty. Repeatable for credit. Prerequisite: audition.

DANC 325. Dance History: 20th and 21st Centuries  3 credit hours  
General education advanced further study course. Focuses on the development of modern and contemporary dance of the 20th and 21st centuries in the Western theatrical tradition. Topics include: early modern forerunners and pioneers, the evolution of contemporary ballet, post-modern dance, new dance, and the impact of technology and fusion dance forms.

DANC 330. Musical Theatre Dance 2  3 credit hours  
Continuation of DANC 230 and further refinement of musical theatre dance styles. Emphasizes knowledge of past and present renowned Broadway choreographers. Integrates original choreography into coursework as well as performance methods. Repeatable for credit. Prerequisite: DANC 230 and/or instructor's consent.

DANC 335. Jazz 2  3 credit hours  
Continuation of DANC 235 at intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 340. Tap 2  3 credit hours  
Continuation of DANC 240. An advanced intermediate-level course emphasizing appropriate technique of intermediate tap skills and the continued development of intricate rhythms, musicality, weight distribution and variation of style. Repeatable once for credit. Prerequisites: DANC 240 and/or instructor's consent.

DANC 350. Workshops in Dance  1-4 credit hours  
Dance majors only. Repeatable for credit.

DANC 350R. Rehearsal Assistant - Dance  0 credit hours  
Participation course for exceptional dance students to spend a semester in an appropriate dance rehearsal setting assisting a faculty or guest choreographer. Meets in conjunction with scheduled rehearsal times. Course includes diversity content. Dance majors only. Repeatable. Prerequisite: junior standing or departmental consent.

DANC 350T. Teaching Assistant - Dance  0 credit hours  
Participation course for exceptional dance students to spend a semester in an appropriate dance course setting assisting a faculty instructor to hone their teaching skills. Meets in conjunction with assigned course. Course includes diversity content. Dance majors only. Repeatable. Prerequisite: junior standing or departmental consent.

DANC 360. Dance Practicum  1 credit hour  
Cross-listed as THEA 380. Practical training in the organization, presentation and technical aspects of production. May be organized in the following areas: design and construction of scenery, costumes or properties; the design, execution and cuing of stage lighting; stage makeup and sound; design and construction of costumes for dancers; the organization and practice of theatre management; and performance. May be repeated once for credit.

DANC 401. Modern Dance 3  3 credit hours  
Continuation of DANC 301. Upper-intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 405. Choreography II  3 credit hours  
Further work in improvisation and composition. Study of form in composition. Culminates in a performance of solo works, duets and small groups for an invited audience. Prerequisite: DANC 305. Corequisite: appropriate level modern dance or ballet technique class.

DANC 410. Ballet 3  3 credit hours  
Continuation of DANC 310. Upper-intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 415. Dance Kinesiology  3 credit hours  
Introduces principles of kinesiology for dance. Includes anatomy, physiology, and beginning concepts in body therapies and movement analysis. Stress structural and neuro-muscular analysis of the human body as it responds to the demands of dance.

DANC 435. Jazz Dance 3  3 credit hours  
Continuation of DANC 335 at a higher level of technical skill. Includes advanced kinetic memory, flexibility, isolation, sophisticated syncopation and reflex. Repeatable for credit. Prerequisites: DANC 235, 335 and/or instructor's consent.

DANC 481. Cooperative Education  1-3 credit hours  
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a professional environment. Repeatable for credit. Graded Cr/NCr. Prerequisite: departmental approval.

DANC 481I. Noncredit Internship  0 credit hours  
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

DANC 501. Modern Dance 4  3 credit hours  
Advanced level. Continuation of DANC 401. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 505. Choreography 3  3 credit hours  
Focuses on the choreographic process. Students create choreographic studies for more than one dancer using elements studied in Choreography 1 and 2 and exploring different choreographic approaches. Further exploration may include environmental, chance and collaborative choreographies and multimedia approaches. Prerequisite: DANC 405. Corequisite: appropriate level modern dance or ballet technique class.
DANC 510. Ballet 4  3 credit hours
Continuation of DANC 410. Advanced level. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 535. Jazz Dance 4  3 credit hours
Advanced level. Continuation of DANC 435. Emphasizes professional technique and performance quality. Repeatable for credit. Prerequisite: instructor's consent or by audition.

DANC 545. Methods of Teaching Dance 3 credit hours
Develops teaching skills for elementary schools, high schools, recreation centers, private and professional schools, and universities through lesson planning and in-class teaching practice. Prerequisite: DANC 401 or 410.

DANC 580. Senior Project 1 credit hour
Focuses on the process of choreographing and producing a dance concert for the completion of the dance major, under the supervision of a dance faculty mentor. A written paper and an oral review with the dance faculty support the concert. May be taken concurrently with DANC 505 with instructor's consent. Corequisites: appropriate level technique class, senior standing.

DANC 580A. Senior Project - BA 1 credit hour
Capstone of a dance major's educational experience. The project comprises a final project and research paper that demonstrates skill in self-evaluative writing, knowledge of principles learned in the dance emphasis and complimentary course of study culminating in a presentation to the dance faculty.

DANC 580F. Senior Project - BFA 1 credit hour
Focuses on the process of choreographing and producing a dance concert for the completion of the dance major, under the supervision of a dance faculty mentor. A written paper and an oral review with the dance faculty support the concert. Corequisites: appropriate level technique class, senior standing.

DANC 675. Directed Study 1-3 credit hours
Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

DANC 690. Special Topics in Dance 1-6 credit hours
For individual or group instruction. Repeatable for credit with departmental consent.

DANC 750. Dance Workshop 1-4 credit hours
Variable credit dance course for WSU graduate students, alumni and the Wichita community. Credit hour enrollment determines the varying course requirements. Repeatable for credit. Technique courses can be taken with instructor’s consent.

Decision Sciences (DS)
Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

DS 190. Selected Topics 1-3 credit hours
Repeatable with departmental consent.

DS 350. Introduction to Production and Operations Management 3 credit hours
An overview of the concepts, tools and techniques used in making managerial decisions related to the production or operations function of an organization. Topics include facility location and layout, forecasting, operations scheduling, quality control, inventory planning, and control work design and measurement. Prerequisites: junior standing, advanced standing.

DS 390. Special Group Studies in Decision Sciences 1-3 credit hours
Repeatable with departmental consent. Prerequisite: advanced standing.

DS 400. Principles of Global Supply Chain Management and Logistics 3 credit hours
Cross-listed as IB 400. Designed to provide an overview of supply chains and logistics focusing on issues related to supply, operations, logistics and integration in a global context. Current and relevant topics to discuss include purchasing management, supplier relationships, ethical and sustainable sourcing, resource planning, process management, global logistics and location decisions, process integration, and performance measures. Area multi-national companies (Koch, Cargill, Spirit, Cessna and other aviation companies, etc.) are featured as live cases/guest lectures. Prerequisites: junior standing, advanced standing.

DS 481. Cooperative Education 1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing and 2.250 GPA.

DS 491. Independent Study/Project 1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing and departmental consent.

DS 625. Global Procurement and Outsourcing 3 credit hours
Designed to expose learners to the latest supply chain trends and issues dealing with global purchasing and sourcing. Covered topics include global sourcing management, purchasing management, financial and operational strategies for sourcing and procurement, diversity in sourcing and procurement, supplier base management, risks in sourcing and procurement, ethical and sustainable sourcing. Real-life experience and practices by guest speakers from area multi-national companies (Koch, Cargill, Spirit, Cessna and other aviation companies, etc.) are featured. Course includes diversity content.

DS 660. Enterprise Systems 3 credit hours
Introduces the underlying need for integration in organizations that have traditionally operated with fragmented information systems. The focus is on ERP (enterprise resource planning) systems, but other e-commerce systems are discussed. Includes an overview of ERP systems, business processes and implementation issues. Covers relevant software packages. Not open to students with credit in DS 860. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

DS 665. Supply Chain Management 3 credit hours
Emphasizing global integration and coordination, this introductory course delivers the basic concepts and decision-making models critical to managing a global supply chain. Topics covered include supply chain design and operation, logistics strategies and network configuration, inventory management and risk pooling, the role of information technology in the supply chain, warehousing and material handling systems, supplier relations, and strategic alliances. Not open to students
with credit in DS 865. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

**DS 675. Spreadsheet Modeling for Decision Making  3 credit hours**
Cross-listed as FIN 675. Adopts a practical spreadsheet-based approach to the modeling of a wide variety of business problems. Concentrates on problem solving in an interdisciplinary context and developing spreadsheet skills. Not open to students with credit in DS 875 or FIN 675. Prerequisites: DS 350 and FIN 340 each with a grade of C+ (2.300) or better, junior standing, advanced standing.

**DS 690. Seminar in Selected Topics  1-5 credit hours**
Repeatable with departmental consent. Prerequisites: DS 350 with a grade of C+ (2.300) or better, junior standing, advanced standing.

**DS 750. Workshop in Decision Sciences  1-4 credit hours**
Prerequisite: junior standing.

**DS 755. Project Management  3 credit hours**
This hands-on and project-based technology course establishes fundamental guidelines for defining the process of project management and designing time-constrained projects. Covers core methodology for managing complex projects on time. Uses a software tool. Prerequisites: junior standing, advanced standing; students are strongly recommended to take DS 350 before taking DS 755.

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### Dental Hygiene (DH)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**DH 311. Preclinical Dental Hygiene  5 credit hours**
3 Classroom hours; 7 Lab hours. Presents the basic skills involved in the delivery of dental hygiene patient care, including infection control, disease prevention and instrumentation skills. Considers measures that can be employed to prevent oral disease and promote dental health. Laboratory instruction in instrumentation for removal of deposits from the teeth is included. Prerequisite: program consent.

**DH 314. Introduction to Periodontics  3 credit hours**
Covers the supporting structures of the teeth and an overview of both the biological and clinical aspects of periodontology. Enables dental hygiene students to recognize and differentiate periodontal health from disease, formulate appropriate treatment plans, select appropriate adjunctive therapies and recognize the role of the dental hygienist as a periodontal co-therapist in initial periodontal therapy and maintenance. Also includes periodontal surgery, antibiotics and antimicrobial agents, periodontal dressing, and sutures. Emphasizes the evaluation of a periodontal case study resulting in the development of a periodontal treatment plan. Prerequisite: program consent.

**DH 317. Clinical Radiology  4 credit hours**
3 Classroom hours; 3 Lab hours. Presentation of the theory of radiation production, usage and radiation safety. Development of skills in exposing, processing, mounting, evaluating and interpreting radiographs. Uses laboratory periods to gain proficiency in radiographic techniques.

**DH 318. Oral Anatomy, Histology & Embryology  3 credit hours**
Studies tooth morphology, arrangement, function and characteristics. Studies the development and microscopic anatomy of the oral cavity including hard and soft tissues. Emphasizes the role of morphology and embryology in the practice of dental hygiene.

**DH 319. Dental Materials  3 credit hours**
2 Classroom hours; 2 Lab hours. Covers the properties, uses, management and manipulation of dental materials. Includes laboratory experience with commonly used materials and procedures that are within the scope of dental hygiene practice. Prerequisite: program consent.

**DH 331. Dental Hygiene Concepts I  3 credit hours**
Prepares students to assess, plan, implement and evaluate the clinical care of patients. Emphasizes oral health promotion, dental hygiene diagnosis, emergency preparation, patient communication and motivation. Explores the development of professional behaviors and skills and further development of clinical skills. Prerequisite: program consent.

**DH 332. Dental Hygiene Clinic I  3 credit hours**
12 Lab hours. Providing patient care in a clinical setting. Stresses patient assessment, oral disease prevention and basic instrumentation techniques. Develops patient evaluation and treatment planning skills. Prerequisite: program consent.

**DH 333. Dental Hygiene Clinic II  2 credit hours**
Continued development of proficiency of clinical techniques emphasizing advanced periodontal instrumentation techniques. Class meets during summer pre-session. Prerequisite: program consent.

**DH 334. Introduction to Evidence-Based Practice  2 credit hours**
Cross-listed as NURS 325. Overview of the process of evidence based practice for health care. Emphasizes the discovery and analysis of evidence to support clinical practice. Open to nonmajors. Prerequisite: program consent.

**DH 335. General and Oral Pathology  3 credit hours**
Surveys general pathology of tissues and organs of human anatomy. Discusses dental pathology of the teeth, dental pulp and oral tissues with emphasis on clinical and radiographic recognition of those pathologies. Prerequisite: program consent.

**DH 348. Clinical Skills Update  1-3 credit hours**
Provides clinical remediation to graduate dental hygienists who wish to review and enhance clinical skills. Students develop a self-study plan to enrich their knowledge and skill above that offered in the dental hygiene core curriculum. Emphasizes identification of clinical skill level, development of remediation schedule, and self-evaluation skills. Student negotiates with dental hygiene program as to the hours of lecture and clinical practice needed to reach student’s goals. Graded C/NCR. Prerequisite: must be a graduate of an accredited dental hygiene program.

**DH 350. Pain Management  2 credit hours**
Updates the practicing dental hygienist in the didactic and clinical administration of infiltration and block anesthesia and the use of nitrous oxide. Emphasizes the mechanisms of pain, a thorough understanding of the pharmacology of dental drugs and their interactions with the client’s current conditions and medications, and clinical experience in the administration of infiltration and block anesthesia. Prerequisites: must be licensed dental hygienist and graduate of an accredited dental hygiene program.

**DH 360. Fundamentals of Advanced Professional Roles  2 credit hours**
Enhances the knowledge base of the degree completion student in fundamental competencies for advanced professional roles in dental hygiene. Topics include electronic and written communication, professional writing, interprofessional education, and evidence-based practice concepts. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 407. Ethics and Jurisprudence  3 credit hours**
The study of laws governing the practice of dentistry and dental hygiene as well as the economics and the ethics of the profession.
Includes application of ethical principles to real-life situations as well as practice management guidelines and practice philosophies.

**DH 410. Community Oral Health Management I 3 credit hours**
Covers dental public health and community dental hygiene, focusing on education and prevention. Covers the professional philosophy and foundations of dental health education in a community health context, as well as in-depth study of certain aspects of dental public health such as fluoridation, epidemiology and program development. Students develop dental health education materials. Prerequisite: program consent.

**DH 416. Pain Management 2 credit hours**
Provides the theoretical and practical knowledge necessary for management of dental pain. Focuses on mechanisms of pain, control of dental pain through the administration of topical anesthetics, infiltration and block anesthesia; use of nitrous oxide and recognition of local anesthesia-related complications and emergencies. Prerequisite: HS 301.

**DH 420. Educational Methodology in Dental Hygiene 3 credit hours**
Introduces learning theory and methodology related to clinical, laboratory and didactic instruction in dental hygiene. Students gain experience using best practices in course design to develop and evaluate teaching units and a course of instruction. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 430. Curriculum Design, Evaluation and Management in Dental Hygiene Education 3 credit hours**
Explores the theoretical and practical aspects of curriculum development, design, implementation and evaluation. Role of accreditation, classroom management, and faculty development and support are examined. Students develop a curriculum plan for a hypothetical dental hygiene program. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 431. Dental Hygiene Concepts II 3 credit hours**
Emphasizes developing problem solving abilities, managing patients with special needs and diverse backgrounds, and managing emergencies in the dental office. Seminar discussion of current and advanced clinical concepts as well as other topics related to the treatment of special needs patients. Prerequisite: program consent.

**DH 432. Dental Hygiene Concepts III 2 credit hours**
Includes discussion of dental specialties and rationale for treatment prescribed by the dentist, principles of care for mentally and physically challenged and geriatric patients. Prerequisite: program consent.

**DH 434. Dental Hygiene Clinic III 4 credit hours**
16 Lab hours. Students continue to develop competency in intermediate dental hygiene skills. Principles of periodontal techniques, such as root planing/debridement and supportive techniques are stressed. Comprehensive treatment planning and implementation of comprehensive care focuses on the special needs patient along with a diverse patient population. Continued development of professionalism, management and critical thinking skills are emphasized.

**DH 435. Dental Hygiene Clinic IV 4 credit hours**
16 Lab hours. Opportunity to reach competency in all clinical skills focusing on the periodontal patient and pain management. Emphasis is on decision making, problem solving, critical thinking, providing treatment for an increased number of patients, and appointment and time management. Focuses on comprehensive dental hygiene care to a diverse population. Prerequisite: admission to program.

**DH 440. Community Oral Health Management II 3 credit hours**
Includes examination of dental health delivery systems in community settings, with a focus on management of oral health care in alternative practice settings. Students evaluate dental health delivery in various community settings and identify oral health problems in a group or community. Students give presentations on dental health education. Prerequisite: program consent.

**DH 451. Issues in Dental Hygiene 2 credit hours**
Analyzes various issues in clinical or community dental hygiene focusing on issues ranging from concerns within the local practice setting to national policy issues. Examines theories and applications uniquely suited to the dental health care delivery system.

**DH 452. Population Health Management in Dental Hygiene 3 credit hours**
Addresses the dental hygienists role in management of oral health for populations with limited access to care. Students focus on oral health program development through evaluation and oral health promotion and communication strategies specific to the population. Prerequisite: admission to Degree Completion of Bachelor of Science.

**DH 456. Special Care Populations 3 credit hours**
Integrates concepts associated with providing oral health care to special needs populations. Emphasis is on assessment, planning, implementation, and evaluation of care for individuals with developmental, physical, mental or medically compromised health needs. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 462. Special Projects in Dental Hygiene 3 credit hours**
Individual study of selected topics to enhance the student's knowledge base and competencies related to didactic, clinical or community dental hygiene, alternative practice settings, or advanced professional roles. Course is designed using a self-study, student-directed format. Students are expected to develop personal objectives, projects/activities in consultation with faculty. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 465. Research and Evidence-Based Practice in Dental Hygiene 3 credit hours**
A practical approach to the application of evidence-based practice and foundational research concepts. Includes identification of types of research and research problems, literature analysis, and research methodology. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 470. Issues in Dental Hygiene 3 credit hours**
Analyzes various professional issues in clinical or community dental hygiene focusing on issues ranging from concerns within the local practice setting to national policy issues. Examines theories and applications uniquely suited to the oral health care delivery system. Prerequisite: admission to the degree completion Bachelor of Science.

**DH 481. Cooperative Education 3 credit hours**
An independent study course for the registered (licensed) dental hygienist to obtain college credit for work experience when accompanied by an academic endeavor determined by the student in consultation with a faculty advisor. Prerequisite: admission to the degree completion Bachelor of Science.

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**Earth, Environmental and Physical Sciences (EEPS)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**EEPS 700. Technical Sessions 1 credit hour**
Through seminar presentations by students, faculty and guest lectures, students critically analyze essential elements and skills of effective oral presentation of scientific research methodology, data and results.
to audiences of diverse backgrounds; learn techniques of effective use of visual display media, presentation styles and speaker-audience interactions. Must be taken for two semesters for maximum of 2 credit hours toward the degree. Prerequisite: graduate standing or instructor's consent.

EEPS 701. Computer Methods in Science 3 credit hours
1 Classroom hour; 4 Lab hours. Survey of computer applications commonly used by scientists, emphasizing nonstatistical applications. Includes computer-assisted instruction, data management, presentation packages, Internet resources, digital image analysis, graphics and spreadsheets, reference acquisition and management, desktop publishing, and specialized applications for modeling, simulations, mapping and time-series analysis. Lectures and demonstrations involve individual hands-on activities and student projects. Prerequisite: graduate standing or instructor's consent.

EEPS 702. Research Methods 1 credit hour
Essential elements and principles in scientific research, such as project design, funding, literature research, publication practices and issues of conflict of interest and commitment. Also addresses research misconduct and ethical issues in data acquisition, management, sharing and ownership. May include speakers from the library and research offices. Prerequisite: graduate standing or instructor's consent.

EEPS 710. Great Discoveries and Controversies in Science 3 credit hours
Foundation, history and insights that led to great discoveries in various scientific fields, and which caused great and continuing controversies in scientific theory, the advancement of science, and lessons and perspectives to be learned for future scientific research. Course involves lectures, seminars, literature research, essay writing and presentation by students. Course includes diversity content. Prerequisite: graduate standing or instructor's consent.

EEPS 720. Scientific Writing 1 credit hour
Procedure, organization, format and style of a variety of technical and scientific publication vehicles, such as abstracts, professional journal articles, government and industrial reports and paper and book reviews. Essential elements and skills of effective scientific written communication. Must be taken in conjunction with any course (except EEPS 889 and 890) that requires extensive writing. May be repeated two times for different courses for a maximum of 2 credits toward the degree. Prerequisite: EEPS 700.

EEPS 721. Current Issues in Global Environmental Science 3 credit hours
Introduces and uses basic concepts relating to ecosystems, habitats, environments and resources as a basis for understanding environmental problems at different spatial and temporal scales. An interdisciplinary approach frames these problems to facilitate understanding of inter-relationships required for environmental analysis, remediation and management. Course includes diversity content. Prerequisite: EEPS 710 or instructor's consent.

EEPS 760. Whole Earth Geophysics 3 credit hours
Examines the principles of physics as applied to both surface features and the interior configuration of the earth. Studies include an understanding and measurement of the physical properties of magnetism, heat flow, seismicity and gravity. These physical parameters are used to determine the internal structure and to explain the active processes of the earth. Prerequisites: GEOL 111, MATH 243 and PHYS 214 or equivalent, or instructor's consent.

EEPS 889 and 890) that requires extensive writing. May be repeated three times for any course except ECON 201/202, 301/302, 301H/302H.

ECON 201. Principles of Macroeconomics 3 credit hours
General education introductory course. An introduction to the determinants of income, output and employment. Emphasizes various macroeconomic theories and related policies. Includes money, banking and the macroeconomic effects of the global economy.

ECON 201H. Principles of Macroeconomics - Honors 3 credit hours
General education introductory course. An introduction to the determinants of income, output, and employment. Emphasizes various macroeconomic theories and related policies. Includes money, banking, and the macroeconomic effects of the global economy.

ECON 202. Principles of Microeconomics 3 credit hours
General education introductory course. An introduction to the study of markets and the behavior of household and business units. Special attention is paid to the role of competition in determining market performance. Other topics include contemporary public issues, such as government regulation, international trade and economics of the environment. Prerequisite: ECON 201.

ECON 202H. Principles of Microeconomics - Honors 3 credit hours
General education advanced further study course. An introduction to the study of markets and the behavior of household and business units. Special attention is paid to the role of competition in determining market performance. Other topics include contemporary public issues, such as government regulation, international trade and economics of the environment. Prerequisite: ECON 201.

ECON 231. Introductory Business Statistics 3 credit hours
An introduction to statistical inference, estimation and hypothesis testing. Includes summary measures, probability, random variables and their distributions, sampling distributions, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Uses commercial statistical packages to perform statistical data analysis. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite: MATH 111.

ECON 232. Statistical Software Applications for Business 1 credit hour
A computer lab focusing on applying statistical software to business analysis and decision making. Course restricted to business and engineering majors. Students in other colleges must request permission from the Business Advising Center. Prerequisite: MATH 111, BADM 160.

ECON 301. Intermediate Macroeconomics 3 credit hours
Introduces the concepts of economic growth, aggregate demand and aggregate supply. After developing theoretical foundations for these, policy applications are discussed, including such policy issues as unemployment, inflation, government and international trade deficits, and interest rates. Prerequisites: ECON 201, 202, junior standing.
ECON 302. Intermediate Microeconomics 3 credit hours
Theory of resource allocation by means of prices and markets. Economic choice, production, cost, supply and demand and market structure are discussed, as well as efficiency conditions in consumption, production, distribution and exchange. Prerequisites: ECON 201, 202, junior standing.

ECON 340. Money and Banking 3 credit hours
A study of the financial sector of the U.S. economy, emphasizing the role of money in determining inflation, interest rates and the level of economic activity. Includes the commercial banking and Federal Reserve systems, credit markets, interest rate theory and monetary policy. Prerequisites: ECON 201, 202, junior standing.

ECON 400. Economics in the Classroom Part I 3 credit hours
Prepares social studies teacher candidates to teach the economic concepts contained in the Kansas social studies standards for middle schools. Open only to students in the College of Education. Prerequisite: admission to teacher education, or instructor's consent.

ECON 401. Economics in the Classroom Part II 3 credit hours
Prepares social studies teacher candidates to teach the economic concepts contained in the Kansas social studies standards for high schools. Open only to students in the College of Education. Prerequisites: admission to teacher education and ECON 400, or instructor's consent.

ECON 403. Business and Economics Forecasting 3 credit hours
An application of statistical method to business and economics forecasting using real world data. Includes collection of data, survey of business indicators, and application of forecasting techniques such as moving averages, smoothing, regression, time series decomposition, and ARIMA. Prerequisites: ECON 201, 202, 231, and junior standing.

ECON 481. Cooperative Education 1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: ECON 201, 202, junior standing. 2.250 GPA.

ECON 481N. Internship 1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ECON 491. Independent Study/Project 1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

ECON 570. International Political Economy 3 credit hours
Cross-listed as POLS 570. Examination of policy decisions regarding exchanges of trade, money and labor that span national boundaries. Studies the interaction of politics and economics at the international level, as well as the modern history of the global economy. Economics often studies the material benefits and costs of different policies. Political science asks why these policies exist in the first place with a focus on who gets the benefits, who pays the costs, and how decisions about allocating benefits and costs are made. Course includes diversity content.

ECON 611. Economics of Sports 3 credit hours
Inquiry into the economic aspects of professional and intercollegiate sports. Includes industrial organization of sports, public finance of sports, and the labor economics of sports, as well as the unique competitive nature of the sports enterprise. Not applicable toward the MA in economics. Prerequisite: junior standing.

ECON 627. Economic History of the United States 3 credit hours
Cross-listed as HIST 515. Analysis of the basic factors in economic growth. Explores agriculture, trade and commerce, industrial development and the changing role of the government in economic activity. Prerequisites: ECON 201 and junior standing.

ECON 660. Labor Economics 3 credit hours
Introduction to labor economics surveying both theoretical and empirical research in this field. Includes labor markets, wage determination and human capital theory. Course includes diversity content. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 663. Economic Insecurity 3 credit hours
Cross-listed as AGE 663. Personal economic insecurity, such as unemployment, old age, health care, disablement and erratic economic fluctuations. Includes costs and benefits of government action to aid in meeting such insecurities. Course includes diversity content. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 672. International Economics and Business 3 credit hours
Cross-listed as IB 561. A survey of the economic foundations of international trade, finance and investment. Includes foreign exchange markets, regional integration, trade theories and instruments, U.S. trade policies and treaties, multinational companies, immigration, as well as differences in cultural, political and economic systems. Includes current events. Course includes diversity content. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 674. International Finance 3 credit hours
Examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: for undergraduate students, ECON 201, 202, FIN 340 with a grade of C+ (2.300) or better, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 675. International Finance II 3 credit hours
Repeatable for credit with departmental consent. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 676. International Finance III 3 credit hours
Repeatable for credit with departmental consent. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 677. International Finance IV 3 credit hours
Repeatable for credit with departmental consent. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 679. International Finance V 3 credit hours
Repeatable for credit with departmental consent. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 692. Group Studies in Economics 1-3 credit hours
Repeatable for credit with departmental consent. Prerequisites: for undergraduate students, ECON 201, 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 702. Mathematical Methods in Economics 3 credit hours
Introduces mathematical tools that are especially useful in economics, econometrics and finance. Includes a review of differential and integral calculus, an introduction to matrix algebra, and various constrained optimization and economic modeling techniques. Emphasizes economic applications and modeling. Prerequisites: for undergraduate students, calculus, ECON 201, 202, junior standing; for graduate students, calculus and the equivalent of ECON 201, 202.
ECON 709. Urban Economics 3 credit hours
Cross-listed as RE 709 and PADM 709. A survey of the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisites: for undergraduate students, ECON 201 and 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

ECON 731. Applied Econometrics I 3 credit hours
Studies regression techniques through business, finance and economics examples. Reviews the fundamentals of statistics and covers practical model building, data collection, use of statistical software packages, interpretation of regression results and various diagnostic tests. Prerequisites: for undergraduate students, ECON 201, 202, 231 each with a grade of C+ (2.300) or better, junior standing; for graduate students, the equivalent of ECON 201, 202, 231 each with a grade of C+ (2.300) or better.

ECON 740. Monetary Economics and Policy 3 credit hours
A study of monetary theory and policy. Analyzes historical and contemporary monetary issues using macroeconomic theories and empirical studies. Prerequisites: ECON 340, junior standing.

ECON 765. Public Sector Economics 3 credit hours
Cross-listed as PADM 765. Examination of theories of economic decision making and institutions, with a focus on how economic tools can be used to inform policy and management in the public and nonprofit sectors. Covers economic principles and discusses market failures and public policies intended to correct or alleviate market failure. Economic decision making tools for public and nonprofit management are also introduced.

ECON 781. Cooperative Education 1 credit hour
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience. Programs must be formulated in consultation with appropriate graduate faculty. May be repeated for credit up to 3 hours. May not be used to fulfill degree requirements. Graded Cr/NCr.

Educational Leadership (EL)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

EL 750. Experienced Administrator's Workshop 1-6 credit hours
Offers a variety of administrative topics.

Electrical Engineering (EE)
For a course to be used as a prerequisite, it must have been passed with a C- or better.

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

EE 281I. Noncredit Internship 0 credit hours
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Graded Cr/NCr. Prerequisite: departmental consent.

EE 281P. Cooperative Education 1 credit hour
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

EE 282. Circuits I 4 credit hours
3 Classroom hours; 2 Lab hours. Electric circuit principles and methods of analysis. Includes DC circuits, network theorems, capacitance and inductance, AC circuit analysis, phasor plane techniques, complex power and balanced three-phase circuits. Corequisite: MATH 243.

EE 284. Circuits II 3 credit hours
Includes circuits with mutually coupled elements, transfer functions emphasizing frequency response, two-port networks, Laplace transforms and application to transient circuit analysis, and the application of computer-aided analysis software toward circuit analysis and design. Prerequisites: EE 282, MATH 243. Corequisite: MATH 555.

EE 383. Signals and Systems 3 credit hours
Properties of signals and systems, convolution and its application to system response, Fourier series representation of periodic signals, Fourier transforms and continuous spectra, filters, time domain sampling and Z-transforms. Many of these topics involve discrete as well as continuous systems. Prerequisites: EE 284, MATH 555.

EE 463. Applied Engineering Electromagnetics 3 credit hours
Maxwell's equations in integral and differential form. Transient and steady state response of circuits containing transmission lines with emphasis on applications in communications and digital electronics. Additional topics in optics and electromagnetic radiation as time permits. Prerequisites: MATH 344, PHYS 314.

EE 477. Selected Topics in Electrical Engineering 1-4 credit hours
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

EE 477YL. Introduction to Programming with MATLAB for Electrical Engineers 1 credit hour
Develops a deeper understanding of electrical engineering related programing and analysis. MATLAB is a strong high-level programming language which is popular in science and engineering fields. Once a student learns to develop solutions to electrical engineering problems using MATLAB, the programming skills can be easily extended to other programming languages. These skills are critical for both industry and graduate studies. Covers vitalization, developing and solving equations for electrical engineering, symbolic toolboxes and advanced programeing methods for electrical engineering applications. Prerequisites: EE 282 and CS 211.

EE 481. Cooperative Education 1 credit hour
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating coursework with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignments and need not be enrolled in any other course. Can be repeated for credit. Graded Cr/NCr. Prerequisite: departmental consent.

EE 481P. Cooperative Education 1 credit hour
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

EE 481N. Internship 1 credit hour
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

EE 481P. Cooperative Education 1 credit hour
Provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.
job integrating coursework with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignments. Can be repeated for credit. Graded Cr/NCr. Prerequisite: departmental consent.

**EE 488.** Electric Machines and Transformers  4 credit hours
3 Classroom hours; 2 Lab hours. Theory and analysis of transformers, DC machines and AC machines. Includes single-phase and three-phase transformers, DC machines synchronous machines, and induction motors. Prerequisite: EE 282.

**EE 492.** Electronic Circuits I  4 credit hours
3 Classroom hours; 2 Lab hours. Introduces semiconductor devices and applications in discrete and integrated circuit design. Applications include, but are not limited to, op-amp circuits, rectification and transistor amplifiers. Corequisite: EE 284.

**EE 493.** Electronic Circuits II  4 credit hours
3 Classroom hours; 2 Lab hours. An investigation of the theory and application of discrete and integrated circuits. Includes op-amp construction, frequency response, feedback and stability, power amplifiers and nonlinear integrated circuits. Prerequisite: EE 492.

**EE 577.** Special Topics in Electrical and Computer Engineering  1-4 credit hours
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

**EE 577L.** Renewable Energy Engineering  3 credit hours
Analysis and design of renewable energy systems, including solar, wind, hydroelectric, geothermal, and biomass systems. Analysis and design of energy storage systems that integrate with renewable energy systems. Integration of renewable energy systems with the electric power supply system. Prerequisites: Physics 314 and EE 282.

**EE 577M.** Real-Time Signal Processing Applications  3 credit hours
In most digital signal processing operations, it is assumed that we have sampled signals which are considered as digital signals. Often in classroom educations, these signals are usually stored for subsequent retrieval or synthesized when needed, for convenience for demonstrations or computer-based assignments. However, this does not allow for real-time processing of the signals. "Real-time" processing means guaranteed delivery of data by a certain time. This undergraduate elective course is hardware based with hands-on simulations to introduce students the analysis, design, and implementation of real-time digital signal processing (DSP) applications. The course first briefly introduces basic DSP theory, then focuses on practical, step-by-step framework that provides hands-on experience in real-time DSP to reinforce the basic DSP theory. Students are expected to learn how to use/apply the DSP theory in real-time applications. Prerequisites: EE 383 or equivalent, CS 211.

**EE 585.** Electrical Design Project I  2 credit hours
3 Lab hours. A design project under faculty supervision chosen according to the student's interest. Does not count toward a graduate degree in electrical engineering, computer engineering or computer science. For undergraduates only. This class should be taken in the semester prior to the one in which the student is going to graduate. Prerequisites: senior standing, PHIL 354 or 385; and CS 411 or EE 492.

**EE 586.** Introduction to Communication Systems  4 credit hours
3 Classroom hours; 2 Lab hours. Fundamentals of communication systems; models and analysis of source, modulation, channel and demodulation in both analog and digital form. Reviews Fourier series, Fourier transform, DFT, probability and random variables. Studies in sampling, multiplexing, AM and FM analog systems, and additive white Gaussian noise channel. Additional topics such as PSK and FSK digital communication systems covered as time permits. Prerequisites: EE 383, IME 254.

**EE 588.** Advanced Electric Motors  3 credit hours
Advanced electric motor applications and theory. Includes single-phase motors, adjustable speed AC drive applications and stepper motors. Prerequisite: EE 488.

**EE 595.** Electrical Design Project II  2 credit hours
3 Lab hours. A continuation of EE 585. Will not count toward a graduate electrical engineering degree. Prerequisite: EE 585.

**EE 598.** Electric Power Systems Analysis  3 credit hours
Analysis of electric utility power systems. Topics include analysis and modeling of power transmission lines and transformers, power flow analysis and software, and an introduction to symmetrical components. Prerequisite: EE 488.

**EE 610.** Introduction to Quantum Computing  3 credit hours
Introduction to the theory and practice of quantum computing. Topics covered include the basics of quantum mechanics, Dirac notation, quantum gates and circuits, entanglement, measurement, teleportation and algorithms. Prerequisite: MATH 511.

**EE 684.** Introductory Control System Concepts  3 credit hours
Cross-listed as ME 659. An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria, and compensation design. Prerequisites: (1) EE 282 and MATH 555, or (2) EE 383.

**EE 688.** Power Electronics  4 credit hours
3 Classroom hours; 2 Lab hours. Deals with the applications of solid-state electronics for the control and conversion of electric power. Gives an overview of the role of the thyristor in power electronics application and establishes the theory, characteristics and protection of the thyristor. Presents controlled rectification, static frequency conversion by means of the DC link-converter and the cyclo converter, emphasizing frequency, and voltage control and harmonic reduction techniques. Also presents requirements of forced commutation methods as applied to AC-DC control and firing circuit requirement and methods. Introduces applications of power electronics to control AC and DC motors using new methods such as microprocessor. Prerequisites: EE 383, 488, 492.

**EE 691.** Integrated Electronics  3 credit hours
A study of BJT and MOS analog and digital integrated circuits. Includes BJT, BiMOS and MOS fabrication; application specific custom VLSI arrays, device performance and characteristics; and integrated circuit design and applications. Prerequisites: CS 194, EE 493.

**EE 697.** Electric Power Systems Analysis II  3 credit hours
Analysis, design, modeling and simulation of high-voltage electric power transmission systems and rotating generators. Simulations include short circuit studies, economic dispatch and transient stability. Prerequisite: EE 598.

**EE 726.** Digital Communication Systems I  3 credit hours
Presents the theoretical and practical aspects of digital and data communication systems. Includes the modeling and analysis of information sources as discrete processes; basic source and channel coding, multiplexing and framing, spectral and time domain considerations related to ASK, PSK, DPSK, QPSK, FSK, MSK, and other techniques appropriate for communicating digital information in both base-band and band-pass systems; intersymbol interference, effects
of noise on system performance, optimum systems and general M-ary digital systems in signal-space. Prerequisites: EE 586 and 754.

EE 732. Discrete Event Systems I 3 credit hours
Covers the fundamental concepts of modeling and analysis of discrete event systems, with an emphasis on understanding computer and communication networks. Course begins with an in-depth introduction to discrete event systems (state space, transitions, and system classification). Subsequent topics include languages and automata (untimed, timed and stochastic timed automata). A unified modeling framework centered on automata is followed towards achieving a better understanding of complex systems. Prerequisites: IME 254, MATH 511.

EE 754. Probabilistic Methods in Systems 3 credit hours
A course in random processes designed to prepare the student for work in communications controls, computer systems information theory and signal processing. Covers basic concepts and useful analytical tools for engineering problems involving discrete and continuous-time random processes. Discourses applications to system analysis and identification, analog and digital signal processing, data compression parameter estimation, and related disciplines. Prerequisites: EE 383 and IME 254.

EE 777. Selected Topics in Electrical Engineering 1-4 credit hours
New or special courses presented on sufficient demand. Repeatable for credit. Prerequisite: departmental consent.

EE 777C. Network Programming 1-4 credit hours
Introduces techniques for developing TCP and UDP network clients, servers, and applications. Topics covered include sockets, client/server design alternatives, concurrent processes and threads, web applications, and security. Programming-intensive course that assumes some experience with programming in a high-level language. Prerequisite: CS 300 (or an equivalent course).

EE 777OL. Digital Communications I Lab 1 credit hour
Lab objective is for the students to implement and explore each block in a wireless communications system signal chain by combing LabVIEW software and the National Instrument (NI) Universal Software Radio Peripheral (USRP) hardware. Covers pseudorandom bit generation, path loss in wireless radio frequency (RF) communication channel, forward error correction (FEC) channel coding, wireless digital communications modulation, demodulation, synchronization (timing recovery), bit error rate (BER), and a multiple-input and single-output (MISO) wireless system.

EE 782. Digital Signal Processing 3 credit hours
Presents the fundamental concepts and techniques of digital signal processing. Time domain operations and techniques include difference equations and convolution summation. Covers Z-transform methods, frequency-domain analysis of discrete-time signals and systems, discrete Fourier transform, and fast Fourier transform. Emphasizes the frequency response of discrete-time systems and the relationship to analog systems. Prerequisite: EE 383.

EE 784. Digital Control Systems 3 credit hours
Studies the effects of sampling and quantization, discrete systems analysis, sampled-data systems and Z-domain and state space design. Prerequisite: EE 684 or ME 659.

EE 790. Independent Study in Electrical Engineering 1-3 credit hours
Arranged individual, independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent.

EE 792. Linear Systems 3 credit hours
Review of mathematics relevant to state-space concepts. Formulation of state-variable models for continuous-time and discrete-time linear systems. Concepts of controllability, observability, stabilizability and detectability. Pole placement and observer design. State transformation techniques and their use in analysis and design of linear control systems. Prerequisite: EE 684 or ME 659.

EE 796. Electric Power Distribution 3 credit hours
Analysis, design, modeling and simulation of radial medium-voltage electric power distribution systems. Simulations include power flow and short circuit. Prerequisite: EE 598.

Engineering (ENGR)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ENGR 101. Introduction to Engineering 3 credit hours
Assists engineering students in exploring engineering careers and opportunities. Provides information on academic and life skills essential to become a successful engineering student. Promotes connections to specific engineering majors and provides activities to assist and reinforce the decision to major in engineering. Recommended for all new engineering students. Offered fall and spring.

ENGR 202. Service Learning in Engineering 1 credit hour
An intentional and thought-provoking application of classroom learning to active and engaging engineering work by participating in a group project that meets identified community needs. The course is project based, with a report and reflections. The project is identified by the student and could be mentoring or leading a team of students in an engineering service effort.

ENGR 360. Special Topics 1-4 credit hours
New or special topics presented on sufficient demand at the undergraduate level. Prerequisite: instructor's consent.

ENGR 482. Fundamentals of Engineering Review 1 credit hour
Covers the common subjects of the Fundamental of Engineering (FE) Exam in EE, ME and IME. Covers the mathematics, Engineering Probability and Statistics, Engineering Economy, Engineering Mechanics, and Electricity and Magnetism. Prerequisites: MATH 242, PHYS 314.

ENGR 501. The Engineer as Leader 3 credit hours
Develops engineering students for leadership roles soon after graduation. Covers leadership theory, leadership in the context of engineering (both formal and informal) and has several invited speakers. Students complete leadership reflections as well as other assignments. Not for graduate credit. Prerequisite: junior standing.

Engineering Technology (ENGT)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ENGT 281. Internship 1 credit hour
Introduces the student to engineering practice by working in industry in an engineering/technology related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Repeatable for credit.

ENGT 281L. Non-Credit Internship 0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

ENGT 301. Fundamentals of Engineering Technology 3 credit hours
Introduces students to engineering design concepts with an entrepreneurial mindset, engineering report writing, and engineering
technology software programs including Multisim and MS Project. Prerequisite: sophomore standing or departmental consent.

**ENGT 312. Applied Statics 3 credit hours**
2 Classroom hours; 2 Lab hours. Studies force systems, resultants and equilibrium, centroids of areas and centers of gravity of bodies; trusses, frames, beams, friction, and moments of inertia of areas and bodies. Prerequisite: PHYS 213. Corequisite: MATH 243 or MATH 252.

**ENGT 313. Applied Dynamics 1 credit hour**
Introductory concepts of applied dynamics including particle kinematics, force and acceleration methods for particles, and energy methods for particles. Prerequisites: (ENGT 312 or AE 223) and PHYS 213. Corequisite: MATH 243 or MATH 252.

**ENGT 320. Circuits Technology with Lab 4 credit hours**
3 Classroom hours; 2 Lab hours. Studies electric circuit technology principles and their applications. Includes DC circuits, network theorems, capacitance and inductance, AC, circuit analysis, phasor plane techniques, complex power and balanced three-phase circuits. Includes a laboratory. Prerequisite: MATH 242 or 251.

**ENGT 323. Introduction to Fluids 3 credit hours**
2 Classroom hours; 2 Lab hours. Provides a fundamental study of fluid mechanics in various applications. Studies include closed and open systems, conservation laws, velocity and acceleration fields, deformation of fluid elements, constitutive relations, flow boundary conditions, nonisothermal flows, dynamics of external flows, Euler and Bernoulli equations, turbomachinery and more. Prerequisites: (ENGT 312 or AE 223) and (MATH 243 or MATH 252) or equivalent.

**ENGT 330. Material Applications in Engineering 4 credit hours**
3 Classroom hours; 2 Lab hours. Presents an overview of structures, properties and applications of metals, polymers, ceramics and composites commonly used in industry. Develops problem-solving skills in the areas of materials selection, evaluation, measurement and testing. Experimentally studies material applications used in aircraft structures, including experiments with metals, polymers, ceramics and composites. Prerequisites: CHEM 211, MATH 252.

**ENGT 332. Aviation Safety and Security 2 credit hours**
Covers safety in aviation design, operation and maintenance, hazardous materials, airport environment issues, and security regulations for aviation. Explores the physiological and psychological factors relating to flight safety, emphasizing cause and effect of airplane accidents and related problem-solving processes. Includes a systems approach to safety program development and management. Prerequisite: junior standing.

**ENGT 334. Introduction to Strength and Mechanics of Materials 3 credit hours**
Provides students with a foundational knowledge of strength of materials, with an emphasis on applications and problem solving. Includes topics such as simple stresses and strains, shaft torsion, shear force and bending moment diagrams, beam stresses, combined stresses and experimental stress analysis. Prerequisites: (ENGT 312 or AE 223) and (MATH 243 or MATH 252) or equivalent.

**ENGT 348. Machine Elements 3 credit hours**
Applies statics, dynamics and strength of materials methods to the selection of basic machine components. Develops the fundamental principles required for selection of individual elements that compose a machine. Prerequisites: ENGT 313 and ENGT 334 or equivalent.

**ENGT 354. Statistical Process Control 3 credit hours**
Focuses on the applied aspects of statistical process control. Includes an introduction to probability and statistics, applied control charts, acceptance sampling, and lean six sigma concepts. Prerequisite: MATH 243 or 252.

**ENGT 361. Industrial Controls and Instrumentation 4 credit hours**
3 Classroom hours; 2 Lab hours. Cross-listed as IME 361. Introduces the principles of measurement and data acquisition, transmission and application in industrial and commercial systems. The theory and application of electronic programmable devices such as programmable logic controllers, temperature controllers, counters, etc., Ladder logic and input/output devices are emphasized. Laboratory exercises include loop wiring, calibration, controller configuration and troubleshooting. Prerequisite: ENGT 320.

**ENGT 370. Environmental Engineering Technology 3 credit hours**
Introduces students to the causes and effects of environmental problems, and to the engineering processes that can control them. Students get an overview of the major themes in the field of environmental engineering including the effect of human population growth and increased urbanization on the environment, energy consumption and production, water supply and treatment, air pollution and global climate change. Prerequisites: ENGT 301, CHEM 211; or departmental consent.

**ENGT 401. Senior Project I 3 credit hours**
Continuation of ENGT 401, Senior Project I. Prerequisites: ENGT 401, senior standing.

**ENGT 410. Robotics Technology 3 credit hours**
2 Classroom hours; 3 Lab hours. Cross-listed as IME 410. Examines systems using robotics in technology. Provides the fundamentals of manipulators, sensors, actuator, end-effectors, and product design for automation. Includes kinematics, controls, programming of manipulator, and simulation. Also covers artificial intelligence. Prerequisite: ENGT 361 or instructor’s consent.

**ENGT 411. Microcomputer-Based Mechanical Systems Technologies 3 credit hours**
2 Classroom hours; 3 Lab hours. Cross-listed as IME 411. Focuses on microcomputer-based real-time control of mechanical systems technologies. Familiarizes students with software methodologies used for real-time control. Includes laboratory sessions involving interfacing microcomputers to mechanical systems. Prerequisite: both ENGT 361 and 410; or instructor’s approval.

**ENGT 431. Aerodynamics and Performance 2 credit hours**
Covers theory of flight, aircraft structure and control, wind tunnel lab demonstrations, propulsion, performance and weight and balance. Prerequisite: ENGT 302.

**ENGT 440. Engineering Technology Management 3 credit hours**
Introduces the management and control of technologically based projects as they apply to engineering. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisites: IME 254, 255.

**ENGT 441. Analysis of Decision Processes in Technology 3 credit hours**
Provides decision analysis as it applies to capital equipment selection and replacement, process design, and policy development. Develops and applies explicit consideration of risk, uncertainty and multiple
attributes using modern computer-aided analysis techniques. Prerequisite: IME 255.

**ENGT 481. Cooperative Education 1 credit hour**
Introduces the student to engineering practice by working in industry in an engineering/technology related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCol unless preapproved by engineering technology program for technical elective credit hours. Repeatable for credit. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

**ENGT 481I. Noncredit Internship 0 credit hours**
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

**ENGT 481N. Internship 1 credit hour**
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCol. Prerequisite: departmental consent.

**ENGT 481P. Cooperative Education 1 credit hour**
Introduces the student to engineering practice by working in industry in an engineering/technology related job. Provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 credit hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Graded Cr/NCol unless preapproved by engineering technology program for technical elective credit hours. Repeatable for credit. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

**ENGT 490. Sustainable Power Generation 3 credit hours**
Provides the fundamentals of sustainable power generation including solar, geothermal, biomass, wind, hydro, tidal and wave. Covers embedded renewable generation: technical challenges, opportunities and connection in electrical transmission and distribution grids. Prerequisite: ENGT 360, Corequisite: ME 469.

**ENGT 491. Applied Fluid Mechanics 3 credit hours**
2 Classroom hours; 2 Lab hours. Covers fluid properties, fluid statics, fluid flow concepts, dynamic similitude, fluid resistance, ideal flow, compressible flow, and pneumatic and hydraulic applications. Prerequisite: ENGT 303.

**ENGT 492. Energy Management and Sustainability 3 credit hours**
Provides a study of the global energy situation and the interactions between human activities in the energy field and in the environment. Provides knowledge of available management systems and tools as well as technical mitigation methods relevant to the energy field that are applicable within the existing legal framework. Prerequisites: ENGT 360, IME 255.

**ENGT 497. Electrical Machines and Electronic Circuits 4 credit hours**
3 Classroom hours; 2 Lab hours. Covers introduction to three phase circuits; ideal, practical, single phase, three phase, and auto transformers; single phase and three phase induction motors; synchronous machines; DC shunt, series, compound machines, their characteristics, and armature reaction; introduction to semiconducting materials, ideal and practical diode and their characteristics, and introduction to transistors. Prerequisite: ENGT 320 or EE 282.

**ENGT 501. Cyber Operations 4 credit hours**
Covers concepts related to cyber attack, penetration testing, cyber intelligence, reverse engineering, and cryptanalysis. Students learn how security infrastructure integrates with the rest of the business and IT infrastructure through the use of hands-on projects. Prerequisite: MIS 310 with a C- or better grade, or instructor's consent.

**ENGT 510. Solar and Wind Engineering 3 credit hours**
2 Classroom hours; 2 Lab hours. Covers types of solar generation, solar radiation, sun path charts, shading effect, sizing of solar panels, inverters, batteries, V-I curves for solar panels, grid connected and off-grid solar system, types of batteries, NEC codes for solar systems, economic analysis of PV system, carbon footprint, wind power generation, advantages and disadvantages of wind power, comparison between the wind energy and solar energy, wind energy system economics and environmental aspects and impacts. Prerequisite: ENGT 320 or EE 282.

**ENGT 590. Independent Study in Engineering Technology 1-3 credit hours**
Arranged individual independent study in specialized areas of engineering technology under the supervision of a faculty member. Repeatable for credit. Prerequisite: consent of the supervising faculty member.

**ENGT 600. Water and Wastewater Treatment 3 credit hours**
Studies water quality constituents and introduces the design and operation of water and wastewater treatment processes. Prerequisites: ENGT 323, ENGT 370; or departmental consent.

**ENGT 601. Digital Forensics 3 credit hours**
Covers concepts related to hardware and software forensics, incident response, cyber crime, and cyber law enforcement. Students learn different aspects of computer and cyber crime and ways in which to uncover, protect, exploit, and document digital evidence. Students are exposed to different types of tools (both software and hardware), techniques and procedure, and are able to use them to perform rudimentary forensic investigations. Focuses on the entire lifecycle of incident response, including preparation, data collection, data analysis, and remediation. Case studies reveal the methods behind and remediation strategies for today's most insidious attacks. Prerequisite: ENGT 501 with a C- or better grade, or instructor's consent.

**ENGT 602. Cyber Physical Systems 4 credit hours**
Focuses on the methodology to conduct cyber security risk assessments for critical cyber and cyber-physical systems. Students learn risk assessment methodology techniques to: identify, classify, and analyze cyber threats and vulnerabilities in cyber and cyber-physical systems, conduct criticality and impact analysis, and create risk mitigation plans. Also, students learn how to design cyber-infrastructures to securely capture, process and manage cyber security data obtained from embedded systems deployed in industrial infrastructures, SCADA networks and control systems. Prerequisite: ENGT 501 with a C- or better grade, or instructor's consent.
ENGT 610. Hydraulics and Hydrology 3 credit hours
Studies water resources engineering topics and methods. Hydraulic
and hydrological concepts are explored through the application of
fundamental conservation laws and ecologically-based design theory.
Students apply the concept of fluid mechanics to pipe networks,
hydraulic machinery, and open channel flow, flow control devices,
flood routing, groundwater flow and management, and develop
quantitative approaches for answering questions in engineering
hydrology. Prerequisite: ENGT 323 or departmental consent.

ENGT 611. Cyber Risk Management 3 credit hours
Covers concepts related to cyber resilience, mission assurance,
disaster recovery, business continuity, security evaluation, and cyber
economics. Prerequisites: ENGT 601 with a C- or better grade, or
instructor's consent.

ENGT 612. Secure Web Development 3 credit hours
Covers concepts related to the development of secure web-based
systems, security mitigation strategies and secure coding, penetration
testing, and security in systems using advanced web technologies.
Prerequisite: ENGT 601 with a C- or better grade, or instructor's consent.

ENGT 620. Structural Analysis and Design 3 credit hours
Studies the functions of structure, design loads, reactions and force
systems; analysis of statically determinate structures including beams
trusses and arches; energy methods of determining deflections of
structures; influence lines and criteria for moving loads; analysis of
statically indeterminate structures including continuous beams and
frames. Prerequisite: ENGT 334 or departmental consent.

ENGT 664. Engineering Project Management 3 credit hours
Cross-listed as IME 664. Introduction to the design and control of
technologically-based projects. Considers both the theoretical and
practical aspects of systems models, organizational development,
project planning and control, resource allocation, team development
and personal skill assessment. Prerequisites: IME 255, (IME 254 or
ENGT 354), all with a C or better.

ENGL 100. English Composition 3 credit hours
General education foundation course. A required composition course
for non native-speaking students scoring below a certain level as
determined by a departmental placement examination or ACT scores.
Emphasizes reading and writing skills appropriate to academic
discourse. Integrates the writing process, rhetorical modes and library
skills into writing assignments related primarily to nonfiction readings.
Prerequisites: Qualifying score on ACT or placement exam, or
successful completion of ENGL 013 or ENGL 015. Substitutes as
ENGL 101 for non native-speaking students.

ENGL 101. College English I 3 credit hours
General education foundation course. Focuses on developing reading
and writing skills appropriate to academic discourse. Integrates
the writing process, rhetorical modes and library skills into writing
assignments related primarily to nonfiction readings. Prerequisite:
qualifying score on ACT or placement exam, or successful completion
of ENGL 011.

ENGL 102. College English II 3 credit hours
General education foundation course. Emphasizes critical reading,
research and argumentation. ENGL 102 should be taken after
ENGL 101 in the freshman year. Prerequisite: ENGL 101 with a C or
better.

ENGL 150. Workshop 1-4 credit hours
Repeatable for credit. Material varies according to the needs of
students.

ENGL 210. Composition: Business, Professional and Technical
Writing 3 credit hours
Provides instruction and practice in writing the kinds of letters, memos,
instructions and reports required in the professional world of business
and industry. Emphasizes both formats and techniques necessary for
effective and persuasive professional communication. Prerequisites:
ENGL 101, 102 or instructor's consent.

ENGL 210BA. Professional Writing Badge: Crafting Your Resume
and Cover Letter 0.5 credit hours
Emphasizes how to successfully compose a professional resume and
cover letter. Using open educational learning materials, students learn
how to write concise and professional business documents that are
directly applicable to the field of business. Students also learn about the
proper composition of these documents, discuss them with their peers,
and ultimately produce a resume and cover letter of their own. May be
"stacked" with ENGL 210BB, 210BC, 210BD, 210BE and 210BF for
ENGL 210 credit. Graded Bg/NBg.

ENGL 210BB. Professional Writing Badge: Professional
Correspondence, Emails and Memos 0.5 credit hours
Emphasizes how to successfully compose professional correspondence
including emails and memos. Using open educational learning
materials, students learn the basics of audience-specific, professionally
written communication for paper and paperless correspondence. In
addition to understanding best-practices for a variety of approaches,
students learn how to avoid common errors and misunderstandings.
May be "stacked" with ENGL 210BA, 210BC, 210BD, 210BE and 210BF for ENGL 210 credit. Graded Bg/NBg.

**ENGL 210BC. Professional Writing Badge: Writing for Social Media 0.5 credit hours**

Emphasizes how to successfully write for various social media. Using open educational learning materials, students learn how to develop a unique and professional social media tone directly applicable to their field of business. Students also learn about the proper written composition for social media, discuss written social media opportunities, and ultimately produce a professional blog of their own. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BD, ENGL 210BE, ENGL 210BF for ENGL 210 credit. Graded Bg/NBg.

**ENGL 210BD. Professional Writing Badge: Editing Social Media 0.5 credit hours**

Emphasizes how to successfully edit personal social media accounts to highlight professionalism. Using open educational learning materials, students learn how to analyze personal social media accounts for unprofessionalism in images and text. Students also learn about professional social media accounts and how they can be used in job searches and for professional networking. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BC, ENGL 210BE, ENGL 210BF for ENGL 210 credit. Graded Bg/NBg.

**ENGL 210BE. Professional Writing Badge: Researching Grants that Apply to You 0.5 credit hours**

Explores ways to successfully research and identify grants that apply to the student’s professional career. Using open educational learning materials, students learn about different resources available to them for grant research. Students also learn how to identify the most applicable grants for them or their company. At the conclusion of the course, students create a grant writing action plan they would potentially like to complete for one of the grants they have identified. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BC, ENGL 210BD and ENGL 210BF for ENGL 210 credit. Graded Bg/NBg.

**ENGL 210BF. Professional Writing Badge: Presenting Online 0.5 credit hours**

Emphasizes how to successfully complete an online presentation. Using open educational learning materials, students learn to prepare presentation materials. Students also learn about the proper etiquette of online presentations, discuss etiquette with their peers, and ultimately complete a successful online presentation for their instructor. May be "stacked" with ENGL 210BA, ENGL 210BB, ENGL 210BC, ENGL 210BD, ENGL 210BE for ENGL 210 credit. Graded Bg/NBg.

**ENGL 221. Chaucer & the Medieval World 3 credit hours**

*General education introductory course.* An introduction to Medieval literature and culture, introducing a variety of literary stories and genres representative of the social, economic and literary background of the late 14th century in England. Reading includes selected "Canterbury Tales" (in facing page translation), along with contextual readings in social history and chronicle. Prerequisites: ENGL 101, 102.

**ENGL 230. Exploring Literature 3 credit hours**

*General education introductory course.* Instruction in the critical reading of literature in its major traditional periods or genres (especially drama, fiction and poetry). Prereq or coreq: ENGL 102.

**ENGL 232. Themes in American Literature 3 credit hours**

*General education introductory course.* Instruction in critical reading and writing about representative works of American fiction, poetry, drama and the essay. Emphasizes understanding and appreciation of central themes and dominant ideas. Prereq or coreq: ENGL 102.

**ENGL 232R. Horror and the Supernatural 3 credit hours**

This survey course looks at classic and contemporary works of horror and the supernatural, emphasizing themes and ideas common to the genre. This course will examine various forms of literature, including fiction, poetry, short stories, plays, graphic novels, and film. The emphasis in this course is on style and character analysis. Prerequisites: ENGL 101, 102, and/or instructor's consent.

**ENGL 233. The Great Books: An Introduction 3 credit hours**

*General education introductory course.* An intensive reading of some of the foundational texts of the humanities, focusing on literary texts, but also incorporating major works of history, philosophy, theology and other areas of the liberal arts, from the classical period to today. Prerequisites: ENGL 101, 102.

**ENGL 240. Introduction to Shakespeare 3 credit hours**

*General education introductory course.* Surveys the plays and poetry of William Shakespeare, with attention to their literary and historical contexts, recent stage and film adaptations, and Shakespeare's continuing influence on popular culture. Prerequisites: ENGL 101, 102.

**ENGL 254. Modern British Literature 3 credit hours**

A survey of important works by major writers of the British Isles, including Ireland, in the 20th century. Prerequisite: ENGL 102.

**ENGL 273. Science Fiction 3 credit hours**

*General education introductory course.* Survey of key classic and contemporary works of science fiction and speculative literature, emphasizing themes and ideas common in the genre and its subgenres. Prerequisites: ENGL 101, 102.

**ENGL 276. The Literature of Sports 3 credit hours**

*General education introductory course.* Introduces the general education student to interpretations and representations of sports as a cultural phenomenon. Readings may include fictional and nonfictional texts and films. Prerequisites: ENGL 101, 102.

**ENGL 277. The Detective Story 3 credit hours**

*General education introductory course.* Introduction to detective fiction, covering classic authors in the genre such as Sir Arthur Conan Doyle and Agatha Christie, as well as contemporary authors, films and graphic novels, with emphasis on the genre's larger social and historical concerns. Prerequisites: ENGL 101, 102.

**ENGL 285. Introduction to Creative Writing 3 credit hours**

An introductory course; the techniques and practice of imaginative writing in its varied forms, primarily literary poetry and fiction. Prerequisites: ENGL 101, 102.

**ENGL 301. Fiction Writing 3 credit hours**

Primary emphasis on student writing of literary fiction. Students study form and technique by reading published works and apply those studies to the fiction they write. Course may be repeated once for a total of 6 hours credit. Prerequisite: ENGL 285 with a B- or better.

**ENGL 303. Poetry Writing 3 credit hours**

Primary emphasis on student writing of literary poetry. Students study form and technique by reading published works and apply those studies to the poetry they write. Course may be repeated once for a total of 6 hours credit. Prerequisite: ENGL 285 with a grade of B- or better.

**ENGL 305. Creative Nonfiction Writing 3 credit hours**

Primary emphasis is on student writing of imaginative nonfiction. Students study form and technique by reading published classical and contemporary works and applying those studies to the essay, the travel essay, the essay of place and nature writing. Course may be repeated once for a total of 6 hours credit. Course limit: 15. Prerequisite: ENGL 285 with a grade of B- or better.
ENGL 307. Narrative in Literature and Film  3 credit hours
Explores the relationship between literature and film, addresses
theoretical and practical issues involved in adaptation, and offers case
studies of adaptations of novels, short stories, plays and nonfiction
works. Provides comprehensive analysis of the narrative, historical and
stylistic contexts in which the adaptation of texts to screen takes place.
Prerequisites: ENGL 102, one college-level literature or film course.

ENGL 310. Nature of Poetry  3 credit hours
General education advanced further study course. Acquaints the
student with the variety of poetic forms and techniques. Notes
contributions of culture, history and poetic theory as background to
the works under study, but primarily emphasizes the characteristics of
poetry as a literary communication. Prerequisite: ENGL 102.

ENGL 315. Introduction to English Linguistics  3 credit hours
General education advanced further study course. Cross-listed as
LING 315. Introduction to linguistic principles, including phonological
and grammatical concepts.

ENGL 316. English Sentence Structure  3 credit hours
Cross-listed as LING 316. The basic rules of English syntax,
specifically designed for prospective teachers of English but open to all
students interested in English sentence structure.

ENGL 317. History of the English Language  3 credit hours
Cross-listed as LING 317. Linguistic and cultural development of
English. Specifically designed for prospective English teachers, but
open to all interested students. Prerequisite: ENGL 315 or departmental
consent.

ENGL 318. Dialectology  3 credit hours
Cross-listed as LING 318. An introduction to the study of regional
and social dialects of English. The relationship between language and
factors such as socioeconomic class, social networks, sex, nationalism
and geography. Course includes diversity content.

ENGL 320. The Nature of Drama  3 credit hours
General education advanced further study course. Acquaints the
student with drama as a form of literary expression. While introducing
a variety of plays drawn from different cultures and historical periods,
course focuses on the characteristics of drama, giving some attention to
dramatic history and theory. Prerequisite: ENGL 102.

ENGL 322. Origins of Western Literature  3 credit hours
General education advanced further study course. A study of the
literary forms that first appear in classical and Biblical literature and
reappear in the English literary tradition. Readings from mythology,
the classics and selected books of the Bible. Prerequisite: ENGL 102.

ENGL 323. World Literature  3 credit hours
General education advanced further study course. A survey of major
works of European, African, Asian and South American writers. The
aim of the course is to deepen appreciation and understanding of
individual works, to examine their relationship to other literature in
their tradition, and to achieve a sense of each work as an expression of
the culture that originated it. Prerequisite: ENGL 102.

ENGL 330. The Nature of Fiction  3 credit hours
General education advanced further study course. Acquaints the
student with narrative fiction in a variety of forms: the short story, short
novel and novel. Covers works of fiction drawn from different cultures
and historical periods; focuses on the characteristics of fiction, giving
some attention to historical development and to theories of fiction.
Prerequisite: ENGL 102.

ENGL 336. Women's Personal Narratives  3 credit hours
Cross-listed as WOMS 330. Explores the literary genre of the journal
as practiced by both historical and modern women. Examines works by
both well-known diarists and little-known notebook keepers. Students
complete in-class and out-of-class assignments and are encouraged to
do daily work in a journal of their own. Course includes diversity
content. Prerequisites: ENGL 101, 102.

ENGL 340. Shakespeare  3 credit hours
General education advanced further study course. A survey of the plays
and poetry of William Shakespeare, read with attention to the historical
and cultural contexts of his time. Prerequisite: ENGL 102.

ENGL 343. Great Plains Literature  3 credit hours
General education advanced issues and perspectives course. Covers
literature written about the region from Kansas north into southern
Canada and from the Mississippi River to the Rocky Mountains. Texts
include works by Willa Cather, O.E. Rolvaag and Mari Sandoz, as
well as works by contemporary authors including Native Americans.
Topics include contemporary environmental issues and the history of
exploration and settlement. Prerequisite: ENGL 102.

ENGL 344. Regional Literature  3 credit hours
General education advanced further study course. Introduces students
to the literature of a particular regional culture or cultures (e.g.,
literature of the American South, New England regionalism) and
examines how that literature relates to a larger national (American or
British) tradition. Prerequisite: ENGL 102.

ENGL 345. Studies in Comparative Literature  3 credit hours
General education advanced further study course. Studies
representative works in the Western and ancient Near Eastern literary
traditions emphasizing the contrasting relations between themes, types
and structures. Readings may be drawn from one or several periods and
may include works of fiction, drama, poetry, epic, romance, satire and
other types. Course includes diversity content. Prerequisite: ENGL 102.

ENGL 346. American Multicultural Literature  3 credit hours
Provides broad exposure to the literature of various cultures in the
U.S., including African-American, Native-American, Asian-American,
Chicana/o and immigrants from other cultures. Course includes
diversity content. Prerequisites: ENGL 101, 102.

ENGL 347. World Comparative Literature  3 credit hours
General education advanced further study course. Studies
emergent, contemporary literatures written in or translated
into English from Africa, Asia, Australia, the Pacific and the Americas.
Texts may include novels, poetry, plays, essays, films and other forms
of creative expression. Course includes diversity content. Prerequisites:
ENGL 101, 102.

ENGL 350. Major British Writers I  3 credit hours
General education advanced further study course. Covers the primary
writers in British literature from the beginnings through the 18th
century. Prerequisite: ENGL 102.

ENGL 361. Major British Writers II  3 credit hours
General education advanced further study course. Covers the primary
writers in British literature from the 19th century to the present.
Prerequisite: ENGL 102.

ENGL 362. Major American Writers I  3 credit hours
General education advanced further study course. Covers important
works of American writers from the beginnings to the end of the 19th
century. Prerequisite: ENGL 102.

ENGL 363. Major American Writers II  3 credit hours
General education advanced further study course. Covers important
works of American writers from the end of the 19th century to the present.
Prerequisite: ENGL 102.

ENGL 365. African-American Literature  3 credit hours
General education advanced further study course. A survey course;
acquaints the student with the most significant African-American
writers from the 1700s to the present. Covers early slave narratives and early slave poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem Renaissance and end with the 1970s. Course includes diversity content. Prerequisite: ENGL 102.

ENGL 375. Popular Literature  3 credit hours
General education advanced further study course. Studies various forms of popular literature (e.g., revolutionary literature, science fiction, Western fiction, detective novel) emphasizing both the literary merit of the works and the way they reflect popular tastes and values. Repeatable for credit with change of content. Prerequisite: ENGL 102.

ENGL 377. Graphic Novels  3 credit hours
General education advanced further study course. Introduces students to the history of sequential art and graphic novels. Explores social, cultural and aesthetic issues related to the form. Emphasizes the literary merit of the works and their relationship to other literary forms.

ENGL 380. Special Topics  1-3 credit hours
Topic selected and announced by individual instructor. Prerequisite: ENGL 102.

ENGL 390. The Bible as Literature  3 credit hours
Studies the Bible as a literary artifact through extensive readings in both Old and New Testaments. Points out literary techniques and discusses their meaning for the manner of composition of the Bible. Prerequisite: ENGL 102.

ENGL 401. Fiction Workshop  3 credit hours
Advanced course. Manuscripts are critiqued to develop skill in writing, rewriting, and polishing literary fiction. Repeatable for credit. Prerequisite: ENGL 301.

ENGL 403. Poetry Workshop  3 credit hours
Advanced course. Manuscripts are critiqued to develop skill in writing, rewriting and polishing literary poetry. Repeatable for credit. Prerequisite: ENGL 303.

ENGL 481. Cooperative Education  1-3 credit hours
Provides the student with practical experience, under academic supervision, that complements and enhances the student's academic program. Individual programs must be formulated in consultation with appropriate faculty sponsors and approved by departmental consent. Graded Cr/NCr.

ENGL 503. American Literature I  3 credit hours
The major fiction, poetry and nonfiction prose of the classic American period. Discussions may include the historical evolution of American letters, the development of the novel and romance, the transcendental period, and the rise of Western and regional literatures. Prerequisites: junior standing and one college literature course.

ENGL 504. American Literature II  3 credit hours
Fiction, poetry and drama from the late 19th century to after World War II. Readings also may include literary criticism and other types of nonfiction prose. Discussions cover themes, topics and literary forms inspired by the social and cultural movements and events of the first half of the 20th century. Prerequisites: junior standing and one college literature course.

ENGL 508. Critical Studies in Film  3 credit hours
Subjects announced each semester. Intensive analysis of a particular film genre, period, director or theme, giving special attention to the historical, cultural, theoretical and technical contexts in which the films were made. Repeatable once for credit with a change of content. Prerequisites: ENGL 102, one college-level literature or film course.

ENGL 512. Studies in Fiction  3 credit hours
Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 513. Studies in Poetry  3 credit hours
Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 514. Studies in Drama  3 credit hours
Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 515. Studies in Shakespeare  3 credit hours
Subjects announced each semester. Repeatable for credit, except by students who take ENGL 340. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 516. Studies in a Major Author  3 credit hours
Designed to allow in-depth study of the works of a major American or British author, emphasizing the development of that author's art and considering the work from a variety of critical perspectives.

ENGL 517. Scriptwriting I  3 credit hours
General education advanced further study course. Cross-listed as THEA 516. The writing of scripts for performance. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite: instructor's consent.

ENGL 518. Scriptwriting II  3 credit hours
General education advanced further study course. Cross-listed as THEA 517. The writing of scripts for performance. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite: instructor's consent.

ENGL 520. Epic and Romance  3 credit hours
Readings in classic and early Western narratives, beginning with Homer's Bronze-Age epic and ending with late medieval romance. Examines the literary conventions and cultural assumptions that typify these works. Pays particular attention to the historical shift in interest from epic to romance as a reflection of broad changes, not only in literary form and content, but also in social customs and worldview. Prerequisites: junior standing and one college literature course.

ENGL 521. Medieval Literature  3 credit hours
Works by writers of the eighth to 15th centuries, often thematically or historically focused. Readings may include lyric poetry, epic, romance, saga and drama. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 522. Renaissance Literature  3 credit hours
Works by writers of the 16th through the mid-17th centuries, often thematically or historically focused. Readings may include poetry, drama, fiction and nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 524. Restoration and 18th Century Literature  3 credit hours
Works by writers of the late 17th through the 18th centuries, often thematically or historically focused. Readings may include poetry, fiction, drama and nonfictional prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 526. Romantic Literature  3 credit hours
Works by writers of the late 18th and/or early 19th centuries, often thematically or historically focused. Readings may include fiction, poetry, drama, and/or literary criticism or other nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.

ENGL 527. Victorian Literature  3 credit hours
Works by writers of the mid to late 19th century, often thematically or historically focused. Readings may include fiction, poetry, drama, and/or literary criticism or other nonfiction prose. Prerequisites: junior standing and one college literature course, or instructor's consent.
ENGL 532. Modern British Literature  3 credit hours
Irish and English literature of the 20th century. Subjects announced each semester. Repeatable once for credit with change of topic. Prerequisites: junior standing and one college literature course.

ENGL 533. Contemporary Literature  3 credit hours
Modern literature, primarily British and American, since 1950. Subjects announced each semester. Repeatable once for credit. Prerequisites: junior standing and one college literature course.

ENGL 536. Writing by Women  3 credit hours
Cross-listed as WOMS 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters. Course includes diversity content.

ENGL 540. Introduction to Critical Theory  3 credit hours
Introduces students to critical literary theory. Topics may include readings in gender theory, historicism, psychoanalytical theory, cultural criticism, Marxism, reader-response theory and deconstruction. May also offer a survey of classical and early-modern critical methodologies from Plato to the formalist schools of the early 20th century. Prerequisites: English 102 and/or instructor's consent.

ENGL 546. Studies in Ethnic Literature  3 credit hours
The study of literature by a specific ethnic group or groups in the United States or Great Britain. Content varies by instructor, and subjects are announced each semester. Fosters an appreciation for the unique literary tradition of a distinct ethnic group or groups and gives students some understanding of the larger historical and national contexts in which that tradition emerged. Course includes diversity content. Repeatable once for credit with a change in topic. Prerequisites: junior standing and one college-level literature course.

ENGL 550. Independent Reading  1-3 credit hours
For majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in coursework. Repeatable once for credit. Prerequisites: ENGL 102 and departmental consent.

ENGL 560. Grammar and Style in Composition  3 credit hours
Explores writing at the sentence and paragraph levels. Students learn to craft stylish, surprising and impactful sentences and paragraphs suited to various kinds of writing. Examines the social, cultural and political dimensions of English usage, such as correctness, the teaching of grammar, and new writing technologies. Because of its combined emphases on practice and theory, this course should appeal both to students who wish to enhance their writing skills and to those interested in teaching English. Prerequisites for undergraduates: English 101 and 102.

ENGL 576. Advanced Studies in the Graphic Novel  3 credit hours
General education advanced further study course. Designed to allow in-depth study of the graphic novel with special emphasis on critical responses. Readings may be thematically or historically focused. Prerequisites: junior standing, ENGL 377, and at least one other college literature course or instructor's consent.

ENGL 580. Special Studies  1-3 credit hours
Topic selected and announced by the individual instructor. Repeatable once for credit. Prerequisites: junior standing and one college literature course or departmental consent.

ENGL 581. Composition Practicum  1 credit hour
Required for all teaching assistants in English. Does not count for credit toward the MA or MFA degree. Focuses on techniques and strategies for teaching composition. Each participant enrolls in the syllabus group appropriate to the composition course he or she teaches. Repeatable for credit. Graded S/U. Prerequisite: appointment as a graduate teaching assistant in the department of English.

ENGL 585. Writer's Tutorial: Prose Fiction  3 credit hours
Tutorial work in creative writing in literary fiction with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 586. Writer's Tutorial: Poetry  3 credit hours
Tutorial work in creative writing in literary poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing director.

ENGL 590. Senior Seminar  3 credit hours
In-depth study of a specialized literary topic. Emphasis is on focused readings, interactive debate, individual research and the presentation of research reports and essays. Topics vary according to the specialization of the instructor. This is a required capstone course for the English major and should be taken during a student's final year of study. Prerequisite: completion of 18 hours toward the major. Not available for graduate credit.

ENGL 667. English Syntax  3 credit hours
Cross-listed as LING 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: ENGL 315 or equivalent, or departmental consent.

ENGL 668. Field Methods of Linguistics  3 credit hours
Cross-listed as LING 668. Students learn how to collect and analyze data from a language unknown to them by interacting with a native speaker – course language consultant. Students gain some familiarity with the phonetics, phonology, morphology and syntax of the language, while developing techniques for studying an unfamiliar language more generally and for managing the data collected. Course includes diversity content. Repeatable three times for a total of 9 credit hours. Prerequisite: ENGL/LING 315.

ENGL 672. Studies in Language Variety  3 credit hours
Cross-listed as LING 672. Introduces the study of language variety with special attention to regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: ENGL 315 or departmental consent.

ENGL 680. Theory and Practice in Composition  3 credit hours
Introduces theories of rhetoric, research in composition and writing programs, and practices in schools and colleges. Students investigate the process of writing, analyze varieties and samples of school writing, and develop their own writing skills by writing, revising and evaluating their own and others' work. Designed especially for prospective and practicing teachers; may not be taken for credit by students with credit in ENGL 780.

ENGL 681. Editing American English  3 credit hours
Students master the rules and conventions of grammar, sentence structure, spelling, punctuation, usage and mechanics, and learn how to apply them while they are revising and editing a written text. Students work as tutors in the writing center to learn and understand the practical application of editing rules. Includes instruction in the conventions of Editing Standard English (also known as Edited American English) and in methods of effective tutoring. Prerequisites: ENGL 101, 102.

ENGL 686. Professional, Technical and Scientific Writing and Editing  3 credit hours
Introduces students to editing and writing in professional, scientific, technical and medical fields. Through careful reading and analysis of exemplary technical and scientific documents, students gain exposure to numerous writing genres produced for different audiences and contexts. They practice writing in several forms, which may include research summaries, press releases, procedures, specifications, infographics,
public service announcements, fact sheets and popular science writing. Assignments help strengthen students' rhetorical awareness, as well as the precision, clarity and readability of their writing.

ENGL 700. Introduction to Graduate Study in English 3 credit hours
Prepares students to perform effectively in graduate classes in English. Covers: (1) basic bibliographical tools; (2) terminology both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study, and the relevance of other disciplines, such as psychology, to literature; and (4) the writing of interpretative and research essays. Maintains a balance between criticism and research throughout the semester.

ENGL 703. Seminar in American Literature I 3 credit hours
Advanced study of major issues and themes in fiction, poetry and nonfiction prose from the early American period to the Civil War, with attention to the social and cultural contexts that shaped the literary history of the colonial period and the early nation. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 704. Seminar in American Literature II 3 credit hours
Advanced study of major issues and themes in fiction, poetry and nonfiction prose from the post-bellum period to 1920, with attention to the social and cultural contexts that shaped such trends as realism and modernism. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 705. Seminar in American Literature III 3 credit hours
From 1920 to 1970. Advanced study of major issues and themes in fiction, poetry and nonfiction prose from 1920 to the contemporary period, with attention to the social and cultural contexts that shaped such trends as modernism and postmodernism. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 712. Graduate Studies in Fiction 3 credit hours
Selected topics in the development of the form and content of prose fiction. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 713. Graduate Studies in Poetry 3 credit hours
Selected topics in forms, techniques and history of poetry. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 714. Graduate Studies in Drama 3 credit hours
Selected topics in the history and nature of dramatic literature. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 715. Seminar in Chaucer 3 credit hours
Advanced study of Chaucer's major works. Readings are in Middle English and include selections from the Canterbury Tales, Troilus and Criseyde, the dream visions, the lyrics, and a limited number of comparative readings in other late 14th century authors such as Langland, the Gawain-Poet and Gower. Emphasis is placed on close reading and interpretation of the text, and on the historical context of Chaucer's work, which involves study of subjects such as the black plague, the peasants' revolt, guilds, fairs, chivalry, trade and healing. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 720. Seminar in Old English 3 credit hours
Cross-listed as LING 720. Advanced course in Old English language and literature. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf and the elegiac poems in the original. Some literature, including all of Beowulf, is read in translation. Particular attention is given to close reading and interpretation of the text, and to important literary and cultural features of the period and its Norse heritage. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 721. Seminar in Medieval Literature 3 credit hours
Advanced study of selected works from old and middle English literature and continental literature of the medieval period, with an emphasis on close reading as well as the social and cultural context of the readings. Content varies at the discretion of the instructor. Readings may include epic, romance, drama, lyric and satire, as well as examples of discourse — oratory, history, memoir, political writings, philosophy — and major works and authors such as Beowulf, Cynewulf, Wulfstan, Chretien de Troyes, Marie de France, Chaucer, the Gawain-Poet and Malory. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 722. Seminar in Renaissance Literature 3 credit hours
Advanced study of works by important writers of the 16th and earlier 17th centuries. Content varies at the discretion of the instructor. Offerings may be thematically or historically focused, and may include poetry, drama, fiction or nonfiction prose. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 724. Seminar in Restoration and 18th Century British Literature 3 credit hours
Advanced study of major selected works and authors of the period between 1660 and 1789, covering the crucial genres of drama, poetry, the essay and the novel. Content varies at the discretion of the instructor. Study may include satire, political discourse, comedy, tragedy, parody, and/or innovative forms such as the novel and fictionalized biography. Canonical figures such as Congreve, Dryden, Pope, Swift, Fielding and Johnson may figure prominently. Historical contexts are emphasized. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 726. Seminar in Romantic Literature 3 credit hours
Advanced study of the authors, genres, themes and/or movements in late 18th and early 19th century literature, with content varying at the discretion of the instructor. Possible topics might include Romantic-era women writers, the historical contexts of the French Revolution and British imperialism, the rise of the novel, the canonical Romantic poets (Blake, Wordsworth, Coleridge, Shelley, Byron and Keats), the development of mass print culture, and/or representations of sublime landscapes, solitary meditation and European travel. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.
ENGL 728. Seminar in Modern British Literature  3 credit hours
Advanced study of the authors, genres, themes and/or movements in British literature (1900 to 1980). Possible topics may include the British novelists (Conrad, Lawrence, Woolf, Forster, Joyce, Waugh, Greene, Amis, Durrell, Burgess, etc.) and; the British poets (Housman, Yeats, Lawrence, Eliot, Auden, Thomas, Hughes, etc.); the playwrights (Shaw, Beckett, Eliot, Coward, Maugham, etc.). The seminar may also focus on additional poets, novelists and dramatists, such as modernism, postmodernism, etc. Repeatable once for credit with change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 730. Seminar in Victorian Literature  3 credit hours
Advanced study of the authors, genres, themes and/or movements in Victorian literature (1832-1900). Possible topics might include the Victorian novelists (William Thackeray, Charles Dickens, George Eliot, Anthony Trollope, Thomas Hardy, Rudyard Kipling, etc.); the Victorian poets (Tennyson, Browning, Arnold, Arthur Hugh Clough, Dante, Gabriel Rossetti, Christina Rossetti, George Meredith, Algernon Charles Swinburne, etc.); the Victorian prose writers (Carlyle, Mill, Newman, Ruskin, Arnold, Pater, etc.). The seminar may also focus on themes within Victorian literature, such as the Young England movement, the Higher Criticism and its effects, the Woman Question, industrialization and labor, or the Victorian Empire. Repeatable once for credit with a change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 733. Seminar in Contemporary Literature  3 credit hours
Covers selected topics in the literature of the last quarter-century, including literature in translation. Deals with a broad range of authors and genres. Repeatable for credit with change of content and departmental consent. Prerequisite: completion of or concurrent enrollment in ENGL 700, or permission of English graduate coordinator.

ENGL 780. Advanced Theory and Practice in Composition  3 credit hours
For teaching assistants in English. Review of new theories of rhetoric, recent research in composition, and new promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations and techniques and may propose projects for further special study.

ENGL 781. Graduate Cooperative Education  1-3 credit hours
Similar to ENGL 481 in design and content, this course provides the student with practical experience, under academic supervision, that complements and enhances the student's academic program. Individual programs must be formulated in consultation with appropriate faculty sponsors and approved by departmental consent. Graded Cr/NCr. Prerequisites: ENGL 700 and at least 12 total hours in graduate English courses.

ENGL 785. Current Theories in the Teaching of Writing  3 credit hours
Examines current areas of interest in rhetoric and composition. Specific topics vary from semester to semester but may include digital and multimedia composition; online writing instruction; language diversity; writing program administration; place, space, and embodiment; transfer; and assessment. Students explore the teaching of writing in settings other than first-year composition, such as writing across the curriculum and writing in the disciplines, undergraduate writing majors, and business, technical, and professional writing. Students leave this course with a fuller understanding of current research in rhetoric and composition and the many types of writing instruction available at colleges and universities.

ENGL 787. Writing and Invention  3 credit hours
Examines invention as a canon of rhetoric, a stage in the writing process, and a product of thinking, writing or making. Students survey theories of invention as they are expressed in rhetorical theory, composition pedagogy, historical works, and/or literature. Students consider the relationships among invention, originality and creativity, and the ways in which these concepts impact the teaching of English.

**Entrepreneurship (ENTR) Department of Management**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ENTR 310. The Entrepreneurial Experience  3 credit hours
*General education introductory course.* Overview of the study of entrepreneurship, including its economic foundations, the principles of venture creation, financial sources of capital and strategy/business plan creation. Explores the entrepreneurial mentality and philosophy toward risk-taking, innovation and creativity. Prerequisites: ENGL 101, 102, COMM 111.

ENTR 403. Marketing Research  3 credit hours
Cross-listed as MKT 403. Studies the design and implementation of research procedures that support systematic and objective decision making for marketing planning and strategy development. Prerequisites: ECON 231, 232; MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

ENTR 420. Developing a Marketing Plan  3 credit hours
Cross-listed as MKT 420. Emphasizes the analysis and tools required in the development of a marketing plan for a new or existing organization. With extensive use of traditional and web-based research, the student develops a marketing plan that positions the firm to achieve a competitive advantage in the marketplace. Prerequisites: ENTR 310, MKT 300, or instructor's consent, junior standing, advanced standing.

ENTR 440. New Venture Feasibility Analysis  3 credit hours
*General education advanced further study course.* Focuses on identifying the sources of business opportunities, understanding industry characteristics that are more or less favorable for new ventures, generating business ideas, evaluating the feasibility of business ideas, and investigating appropriate business models prior to formal business plan development. Prerequisite: junior standing for nonbusiness students.

ENTR 455. Entrepreneurial Finance  3 credit hours
Cross-listed as FIN 455. Exposes students interested in business start-up or management of a growing firm to the principles, methods and tools used in financial planning, analysis and control of the small business enterprise. Covers short-term financial planning and control, creation of pro forma financial statements and business valuation techniques. Presents how and where to seek financing via a variety of debt and equity sources. Prerequisites: ENTR 310, FIN 340, junior standing, advanced standing.

ENTR 481. Cooperative Education  1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing and 2.250 GPA.
ENTR 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ENTR 491. Independent Study/Project  1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

ENTR 605. Technology Entrepreneurship  3 credit hours
The innovative transformation of ideas and technical knowledge (intellectual property) into commercially useful applications is a key driver of economic development. Students are immersed in the process of moving intellectual property from mind to market. Technology commercialization concepts, tools and techniques are applied to active technologies from university research, students, community and national research lab sources. Students evaluate the potential for intellectual property to be the basis for a startup enterprise or licensed to an existing business. Prerequisite: junior standing.

ENTR 608. Selling and Sales Force Management  3 credit hours
Cross-listed as MKT 608. Analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300 with a grade of C+ (2.300) or better, MKT 405.

ENTR 620. Growing and Managing an Entrepreneurial Firm  3 credit hours
Focuses on the organization, operation, marketing and financial management of an ongoing entrepreneurial firm. Emphasizes the strategic management of growth associated with a rapidly changing business, as distinguished from small business management, which could include small enterprise units that are static. Teaches the practical aspects of managing a growing business on a day-to-day basis. Practical application to intrapreneurship, such as growing a division or department within a larger organization. Prerequisites: ENTR 310, and junior standing or instructor's consent, advanced standing.

ENTR 668. New Venture Development  3 credit hours
Emphasizes the development of a comprehensive business plan around a unique product or service idea that satisfies a customer need or solves a customer problem. Focuses on conceptualizing a value proposition and business model for a new venture and validating each with customers and industry experts. Financial and organizational principles associated with entrepreneurial finance including financial structuring of the firm, pro forma development of financial statements, and the capitalization of the firm are also examined. Provides opportunity to pitch and present one's business concept and plan as well as to learn how to evaluate the business ideas of others. For undergraduate students only. Prerequisites: ENTR 440, 455, senior standing.

ENTR 690. Special Topics in Entrepreneurship  1-3 credit hours
Advanced course with in-depth study of emerging topics in entrepreneurship. Repeatable with instructor's consent. Prerequisites: ENTR 310, junior standing or instructor's consent, advanced standing.

ENTR 705. Technology Entrepreneurship  3 credit hours
Students explore issues surrounding the transformation of knowledge into commercially useful products, services and viable businesses. Course employs a hands-on experiential approach using current active technologies from the university, community or national research laboratories. Market validation, opportunity recognition, intellectual property protection (patents, copyright, trade secrets) and valuation are core learning elements employed in the commercial-potential evaluation process. Evaluation documents produced in the course are provided to intellectual property owners to aid moving a technology into commercial markets. Prerequisite: junior standing.

ENTR 706. Seminar in New Product and Technology Development  3 credit hours
Cross-listed as MKT 706. Provides a form to the function of idea commercialization. Examines the product development practices of successful, innovative companies and focuses on how customer needs can be translated into products and innovations. Students explore idea generation, market validation, prototype development, product concept testing, product launch strategies, post launch product evaluation, and managing innovative teams. Students apply learning through developing and testing a product idea that solves a customer problem.

ENTR 750. Workshop in Entrepreneurship  1-4 credit hours
Prerequisite: junior standing.

Ethnic Studies (ETHS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ETHS 100. Introduction to Ethnic Studies  3 credit hours
General education introductory course. Orientation to the nature and scope of ethnic studies. Emphasizes the unique nature of the experience of ethnic groups in this country. Also studies communication and its relationship to behavior in the United States. Course includes diversity content.

ETHS 210. Fundamentals of Cross-Cultural Communications  3 credit hours
General education introductory course. Examines the effects of different cultures on language and methods of communicating. Also studies communication and its relationship to behavior. Course includes diversity content.

ETHS 320. Martin Luther King  3 credit hours
Studies the life and philosophy of the Rev. Dr. Martin Luther King, Jr. Emphasizes Dr. King's motivation, obstacles he faced, and the impact of his life on the civil rights movement and race relations in the United States. Course includes diversity content.

ETHS 330. Ethnic America, 1500-1924  3 credit hours
General education advanced further study course. Cross-listed as HIST 332. An introduction to the ethnic experience from the 1500s to the 1920s. Themes include the context of emigration, immigration laws, nativism and exclusion, adaptation and acculturation, community development and political empowerment. Course includes diversity content.

ETHS 331. The Black Family  3 credit hours
General education advanced further study course. Examines the fictional and factual images of black American families from slavery to the present. Focuses on the adaptive abilities of poor, working class and middle class black families. Course includes diversity content. Prerequisites: ETHS 100, 210, or instructor's consent.
ETHS 332. The Native American 3 credit hours
General education advanced further study course. Examines contemporary issues facing the Native American, focusing on the Osage tribe. Course includes diversity content.

ETHS 334. Ethnic America in the 20th Century 3 credit hours
General education advanced further study course. Cross-listed as HIST 333. An in-depth study of the ethnic experience in the 20th century. Major historical topics include identity formations, inter-generational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws, and transnationalism. Course includes diversity content.

ETHS 350. Workshop 1-4 credit hours
Focuses on the nature and scope of ethnic studies. Emphasizes the unique nature of the experiences of specific American ethnic groups. Course includes diversity content.

ETHS 360. Dealing with Diversity 3 credit hours
General education advanced further study course. Discusses the pluralistic nature of U.S. society. Equips students with skills to live and work within a diverse society, with particular attention on the global community. Course includes diversity content.

ETHS 370. The Black Experience in America 3 credit hours
Examines the status of blacks in American society. Emphasizes the status of blacks in the current and historical social, economic and political framework of this country. Course includes diversity content.

ETHS 380. Native American Tribal Systems 3 credit hours
An overview of three tribes from different parts of the U.S. Covers historical background, discussion of governments, and information about culture and prominent individuals through lecture, discussion and movies. Course includes diversity content.

ETHS 381. Special Topics 1-3 credit hours
Detailed study of topics in ethnic studies with particular emphasis established according to the instructor's expertise. Course includes diversity content.

ETHS 381AC. Issues and Perspectives on African Women and Globalism 3 credit hours
General education advanced issues and perspectives course. Cross-listed as WOMS 383, WOMS 513. For those whose primary notions of Africa derive from little or unconfirmed information. Uses research, writing and other expressions by African women to present women of Africa derive from little or unconfirmed information. Uses research, writing and other expressions by African women to present women of Africa. Course includes diversity content.

ETHS 381AD. African-American Historical Experience 3 credit hours
Provides a panoramic examination of the African-American experience. Chronologically, it covers life in Africa before the trans-Atlantic slave trade to the present day. It focuses on the social, political and economic development of the transplanted Africans in the United States. Course includes diversity content. Prerequisites: junior, senior or graduate status.

ETHS 400. The Black Child 3 credit hours
Examines the historical impact of the black experience on black childhood, growth and development. Emphasizes the social, educational and psychological theories, perspectives and interventions applied to black child-rearing. Exposes students to good practices at home, school and in urban communities that build a healthy sense of self among children. Focuses on contemporary issues and concerns of parents, professionals and others assisting black children with the transition into adult life. Course includes diversity content. Prerequisites: ETHS 100, 210 or equivalent, or instructor's consent.

ETHS 410. African American Male 3 credit hours
Examines the impact of racism on the role and lifestyle of the African-American male in American society. Course includes diversity content. Prerequisites: ETHS 100, 210, or instructor's consent.

ETHS 481. Cooperative Education 1-4 credit hours
Allows the student to examine the impact of minority status in the work environment. Examines interpersonal interactions, communication, acceptance in and adjustment to the multicultural work environment. Course includes diversity content. Graded program consent.

ETHS 481N. Internship 1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ETHS 491. Urban Seminar 3 credit hours
Examines the impact of racism on the role and lifestyle of the African-American male in American society. Course includes diversity content. Prerequisites: 2.00 GPA, ETHS 100 or 210, or instructor's permission. Corequisite: must be currently enrolled in at least 3 hours in addition to ETHS 491.

ETHS 512. Diversity and Aging 3 credit hours
General education advanced further study course. Cross-listed as AGE 512. Introduces students to issues in aging that are unique to minority older adults. Demonstrates differences in the aging experience by race/ethnicity and addresses the differential patterns of health and illness in later life in relation to race/ethnicity, gender and culture. In addition, the student develops an appreciation for how race/ethnicity affects mental and social dimensions of life. Attention is given to the impact on the social, financial and health aspects of those who speak a language other than English. Course perspective is interdisciplinary, taking into account the physical, psychological, interpersonal and social influences which shape our understanding of the challenges older minorities face when relocating to the United States. Course includes diversity content.

ETHS 540. Advanced Cross-Cultural Communication 3 credit hours
General education advanced further study course. Special topics in human relations. Course includes diversity content. Prerequisite: ETHS 210.

ETHS 545. Cross-Cultural Communication Theory 3 credit hours
An examination of current cross-cultural communication theory and its impact on contemporary cross-cultural issues. Course includes diversity content.

ETHS 579. Asian Women in Modern History 3 credit hours
Cross-listed as HIST 579 and WOMS 579. Examines women's historical and contemporary experiences in Asian America and eight major countries in modern Asia. Covers topics on Asian women’s activism in relation to nationalism and women's rights. Investigates Asian women's roles and statuses in the family and society and their educational attainment and contributions to the export-oriented industrialization of the Asia-Pacific region. Examines the intra-regional
migration of female guest workers among various countries in Asia. Traces the ways in which the changes in immigration laws during the 20th century affect patterns of Asian women's migration to the United States. Introduces writing that integrates Asian women's lives and Asian American experiences into the discourses on ethnicity, national origin, class, gender and sexual orientation in the United States and the Asia-Pacific region. Course includes diversity content.

ETHS 580. Individual Projects: Ethnic Studies 1-3 credit hours
Students conduct independent research related to a specific ethnic group. Course includes diversity content. Repeatable for a total of 6 hours. Prerequisite: 50 hours of Wichita State credit or program consent.

ETHS 725. Concepts of Cross-Cultural Communication 3 credit hours
A critical survey of the concepts of cross-cultural communication. An in-depth examination of the rationale used to evaluate different ethnic groups' language and behavior. Provides a conceptual understanding of special implications and necessary adaptations of communication to, between and among diverse ethnic groups in our society. Course includes diversity content.

Finance (FIN)
Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

FIN 140. Personal Finance 3 credit hours
Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to meet individual financial goals through various investment media emphasizing risks and returns. Exposes the student to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making.

FIN 340. Financial Management I 3 credit hours
Studies corporate organization, types of securities and types of financial institutions. Includes analysis of risk and rates of return and long-term investment decisions. Prerequisites: ACCT 210, junior standing, advanced standing.

FIN 390. Special Group Studies in Finance 1-3 credit hours
Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

FIN 440. Financial Management II 3 credit hours
Studies long-term financing decisions and financial planning. Also includes working capital management, mergers and acquisitions, and international financial management. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 450. Applied Financial Analysis 3 credit hours
Uses Microsoft Excel to apply and reinforce the concepts learned in FIN 340 and 440. Students completing this course have a strong functional knowledge of how to use Excel to analyze financial problems. Excel skills developed include using absolute and relative cell references to efficiently build spreadsheet models, correct use of Excel's built-in financial functions, and other related topics. Course is application oriented, using concepts from FIN 340 and 440 as subjects for the financial models built in class. In the process, students gain a new, deeper understanding of these concepts, and are exposed to more advanced versions of the theories developed in earlier classes. FIN 440 and 450 may be taken concurrently. Prerequisites: FIN 340, 440 with grades of C+ (2.300) or better, junior standing, advanced standing.

FIN 455. Entrepreneurial Finance 3 credit hours
Cross-listed as ENTR 455. Exposes students interested in business start-up or management of a growing firm to the principles, methods and tools used in financial planning, analysis, and control of the small business enterprise. Covers short-term financial planning and control, creation of pro forma financial statements, and business valuation techniques. Presents how and where to seek financing via a variety of debt and equity sources. In order for FIN 455 to count as a FIN elective for the finance major or minor, the student must have a C+ or better. Prerequisites: ENTR 310, FIN 340 (with a C+ or better), junior standing, advanced standing.

FIN 481. Cooperative Education 1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing, advanced standing, and 2.500 GPA.

FIN 481N. Internship 1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

FIN 491. Independent Study/Project 1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

FIN 610. Insurance & Risk Management 3 credit hours
Covers the concepts of insurance and risk management. Topics include risk identification and analysis, risk management, legal aspects of insurance, structure of the insurance industry, regulation, reinsurance, underwriting, financial issues and analysis, policy analysis, and an overview of many types of personal and commercial insurance including: automobile, homeowner's, property and casualty, umbrella, commercial general liability, errors and omissions, directors and officers, health insurance (including traditional indemnity, HMO and PPO), disability, long-term care and life. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 611. Real Estate Finance 3 credit hours
Cross-listed as RE 611. Covers the institutions and instruments used to finance residential and commercial properties, and provides essential knowledge and skills for students who are interested in a career as a commercial banker, mortgage banker or an analyst or investor in mortgage-related securities. Topics include fixed-rate and alternative mortgage instruments, financial analysis and decision making, residential mortgage underwriting, mortgage market regulations, primary and secondary mortgage market structure and institutions, and mortgage-backed securities. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 618. Real Estate Investment Analysis 3 credit hours
Cross-listed as RE 618. Covers the tools and techniques used to evaluate the financial profitability of real estate investments, as well as real estate decisions affecting businesses. Students learn about pro
FIN 620. Investments  3 credit hours
An analysis of investment risks, financial information and industry characteristics. Examines corporate, government, municipal and financial institution securities and other investment types. Presents personal portfolio construction, supervision and management. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 622. Future and Options Markets  3 credit hours
Presents an overview of the futures and options markets. Discusses basic theoretical concepts as well as the practical issues of hedging and speculating in these markets. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 625. International Financial Management  3 credit hours
Cross-listed as ECON 674 and IB 625. A study of the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 631. Fixed Income Securities and Markets  3 credit hours
An analysis of the market for fixed-income securities from the investor's point of view. Emphasizes pricing of these securities and an understanding of the factors that determine the structure and level of interest rates. Portfolio management techniques and the use of derivatives are also covered. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 632. Bank and Financial Institution Management  3 credit hours
Presents and analyzes asset and liability management by banks and financial institutions. Also covers financial institution structure, management, regulation, and operations. Covers risk management topics in detail. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 635. Commodity & Energy Trading  3 credit hours
Focuses on trading in commodity and energy markets. Introduces how commodity and energy markets function, emphasizing trading and hedging strategies. Explores the control systems trading firms need in place to manage market, credit, and liquidity risks, as well as the financial accounting, regulatory compliance, and tax issues that arise from trading. Much of the classwork is hands-on exercises. Students engage in a simulated commodity and energy trading game and use real-world database management software from Allegro Development. Students also have the opportunity to interact with local business experts in commodity and energy trading throughout the semester. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

FIN 660. Cases in Finance  3 credit hours
This case-centered course is designed as the capstone course for the finance major and provides an exploration of the problems and operations for which the financial decision maker is responsible, emphasizing current best practices for various types of financial analyses. Should be taken at the end of a finance student's degree program. Prerequisites: FIN 440 and two 600-level finance electives with a grade of C+ (2.300) or better in each, junior standing, advanced standing.

FIN 675. Spreadsheet Modeling for Decision Making  3 credit hours
Cross-listed as DS 675. A practical spreadsheet-based approach to the modeling of a wide variety of business problems. Concentrates on problem solving in an interdisciplinary context and developing spreadsheet skills. Not open to students with credit in DS 675 or 875. Prerequisites: DS 350, and FIN 340 each with a grade of C+ (2.300) or better, junior standing, advanced standing, or instructor's consent.

FIN 750. Workshop in Finance  1-4 credit hours
Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing.

Fine Arts (FA)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

FA 110. Introduction to the Fine Arts  3 credit hours
General education introductory course. A team taught introduction to significant developments in the fine arts, with an emphasis on culture, history, politics, technology, identity and globalization.

FA 150. Workshop  1 credit hour
Intensive study of topics related to fine arts. Differing topics are denoted by a letter following the course number (i.e., 150C, 150P, etc.).

FA 301. An Introduction to Entrepreneurship in the Arts  3 credit hours
General education advanced further study course. Helps students focus on business and marketing aspects of the arts. An examination from the artist's perspective of techniques for launching a career in the arts. Gives attention to elementary concepts of marketing artistic talents, goal setting, financing, legal issues and public demographics.

FA 310. Arts & Technology  3 credit hours
General education advanced further study course. Multimedia, high-technology, fast-paced presentations describing each of the art disciplines (music, theatre, movies, dance, visual arts) in relation to new technologies. Approaches each discipline from the perspective of performance, pedagogy and history with presentations on computer (hardware and software), synthesizer, audio and video recordings, and CD-ROM. Presents ideas and information on how technology has affected the arts and how the arts have actually affected technology.

FA 481. Cooperative Education  1-2 credit hours
Field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. May be repeated for credit. Prerequisite: satisfactory academic standing prior to the first job assignment.

FA 481N. Internship  1-2 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

FA 590. Special Topics in the Fine Arts  1-4 credit hours
For group instruction. May be repeated for credit. Involves interdisciplinary upper-division/graduate-level topics with the fine arts (music, art, dance and theatre). Prerequisite: senior undergraduate or graduate standing or instructor's consent.

FA 710. Seminar in Creativity and Innovation  1-3 credit hours
As one of four core courses in the Master of Innovation Design, the purpose of this seminar is to help the student better understand
and appreciate the subject of creativity. To that end, this course focuses on developing new ways of thinking which are different from those typically learned in single discipline design programs. The seminar provides many opportunities to apply these new ways of thinking through class exercises, possible course projects, and conversations with a wide array of guests who have prospered through the incorporation of creativity/innovation into what they do professionally. Students learn techniques for improving the flexibility and originality of their thinking and explore approaches used by others to create and sustain high levels of innovation. Topics include: personal thinking preferences, everyday creativity and eliminating mental blocks, creative thinking techniques, idea selection approaches, teaming techniques for creativity, conditions that promote creativity, design for interaction, disruptive technologies, and intellectual property. Seminar uses fun and hands-on activities to stimulate innovation. Repeatable for credit.

FA 750. Workshop 1-4 credit hours
Intensive study of topics related to fine arts. Differing topics are denoted by a letter following the course number (i.e., 750C, 750U, etc.).

Forensic Sciences (FS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

FS 450. Forensic Identification of Marijuana 1 credit hour
Focuses on the botanical and chemical background necessary for the identification of marijuana. Students gain practical experience in the microscopic and chemical analysis of the marijuana plant. Prerequisites: BIOL 210, 211, CHEM 211, 212.

FS 451. Forensic Identification of Narcotics and Other Illicit Substances 1 credit hour
Provides a background in selected analytical chemistry procedures used in the forensic lab to ensure a specific qualitative identification of various licit and illicit controlled substances. Students gain experience in the theory and application of various colorimetric, chromatographic and spectrophotometric techniques used in the modern forensic lab. Prerequisites: BIOL 210, 211, CHEM 211, 212.

FS 452. Forensic Toxicology Alcohol 1 credit hour
Provides a didactic background for understanding the pharmacology/toxicology of alcohol. Students gain an understanding of the testing of biological fluids for alcohol, the interpretation of the results, including various pharmacokinetic calculations used in forensic settings, and the application of alcohol results in a judicial arena. Prerequisites: BIOL 210, 211, CHEM 211, 212.

FS 453. Forensic Serology 1 credit hour
Provides a background in the detection, characterization and identification of biological fluids. Students gain a fundamental background in the characteristics of blood, saliva and semen, and practical hands-on experience in the forensic analytical techniques used in their detection and identification. Prerequisites: BIOL 210, 211, CHEM 211, 212.

FS 454. Fingerprint Development and Analysis 1 credit hour
Provides an understanding of the development of fingerprint classification systems, and the detection, collection and preservation of latent fingerprints. Students gain practical hands-on experience using various powders and chemicals for development and recovery of latent fingerprints. Prerequisites: BIOL 210, 211, CHEM 211, 212.

FS 455. Forensic Arson Analysis 1 credit hour
Provides exposure to the detection and classification of various flammable chemicals used in arson fires. Students gain exposure to the analytical techniques used in the laboratory investigation of suspicious fires. Prerequisites: BIOL 210, 211, CHEM 211, 212.

FS 498. Seminar in Forensic Sciences Techniques I 3 credit hours
Part one of the comprehensive academic-year-long overview of how forensic science techniques influence the criminal investigation process. Students receive instruction from faculty in the chemistry, biological sciences, anthropology and criminal justice departments. Prerequisites: FS 450, 451, 452, 453, 454, 455, 495, 498, CJ 420.

FS 499. Seminar in Forensic Sciences Techniques II 3 credit hours
Part two of the comprehensive overview of how forensic science techniques influence the criminal investigation process. Students receive instruction from faculty in the chemistry, biological sciences, anthropology and criminal justice departments. Prerequisites: FS 450, 451, 452, 453, 454, 455, 498, CJ 420.

French (FREN)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

FREN 111. Elementary French I 5 credit hours
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work.

FREN 111H. Elementary French I - Honors 5 credit hours
Develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite: one unit of high school French, FREN 111, or departmental consent.

FREN 112. Elementary French II 5 credit hours
Further develops the four fundamental skills in language learning (listening, speaking, reading and writing) in an appropriate cultural context. Requires daily classroom and language laboratory work. Prerequisite: one unit of high school French, FREN 111, or departmental consent.

FREN 150. Workshop in French 1-4 credit hours
Repeatable for credit.

FREN 150G. Francophone Cinema 2 credit hours
Intended for individuals with limited knowledge of French language and culture. Francophone cinema presents movies in French with English subtitles. Discussions provide insights into Francophone cultures.

FREN 150L. French for Global Exchange 2 credit hours
Intended for individuals with no proficiency or extremely limited knowledge of French language and culture. Introduces learners to basic concepts and information about the French culture and language to facilitate engagement and communication in Francophone countries.

FREN 210. Intermediate French 5 credit hours
General education introductory course. Continues to develop the four fundamental language skills: understanding, speaking, reading and writing; emphasizes conversation and cultural readings. Prerequisite: two units of high school French or FREN 112 or departmental consent.

FREN 210H. Intermediate French - Honors 5 credit hours
General education introductory course. Continues to develop the four fundamental language skills: understanding, speaking, reading
and writing; emphasizes conversation and cultural readings. Honors section. Prerequisite: two units of high school French or FREN 112 or departmental consent.

FREN 215. French Study Abroad  3-6 credit hours
Transfer of credit from a French-speaking university in (A) grammar, (B) conversation, (C) reading.

FREN 223. Intermediate French Readings I  3 credit hours
General education advanced further study course. Intensive reading of diverse literary works in French. Course satisfies the LAS literature requirement. Prerequisite: FREN 210 or equivalent.

FREN 223H. Intermediate French Readings I - Honors  3 credit hours
General education advanced further study course. Intensive reading of diverse literary works in French. Course satisfies the LAS literature requirement. Honors section. Prerequisite: FREN 210 or equivalent.

FREN 300. Intermediate French Readings II  3 credit hours
General education advanced further study course. Intensive reading and analysis of French literary works of all periods. Course satisfies the LAS literature requirement. Prerequisite: FREN 223 or equivalent.

FREN 300H. Intermediate French Readings II - Honors  3 credit hours
General education advanced further study course. Intensive reading and analysis of French literary works of all periods. Course satisfies the LAS literature requirement. Honors section. Prerequisite: FREN 223 or equivalent.

FREN 324. Intermediate Conversation and Composition  3 credit hours
Improves oral and written proficiency through vocabulary acquisition and interactive grammar exercises. Prerequisite: FREN 210 or equivalent.

FREN 324H. Intermediate Conversation and Composition - Honors  3 credit hours
Improves oral and written proficiency through vocabulary acquisition and interactive grammar exercises. Honor section. Prerequisite: FREN 210 or equivalent.

FREN 398. Travel Seminar in French  1-4 credit hours
An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science and economics, while visiting historic places of interest. Prerequisite: departmental consent.

FREN 481. Cooperative Education  1-6 credit hours
Field placement integrating theory with a planned and supervised professional experience which complements and enhances the student's academic program. Individualized programs formulated in consultation with, and approved by, appropriate faculty sponsors. Repeatable for credit. Graded Cr/NCr. Prerequisite: FREN 324 or departmental consent.

FREN 501. French for Business  3 credit hours
Designed for French speakers at the intermediate level seeking to communicate accurately in professional situations and especially for those pursuing parallel studies in business or management. Prerequisite: FREN 324 or departmental consent.

FREN 505. Advanced French Phonetics  3 credit hours
2 Classroom hours; 2 Lab hours. Cross-listed as LING 505A. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future French teachers. Prerequisite: any 200-level course or departmental consent.

FREN 515. Major Topics in French  1-4 credit hours
Special studies in (A) language, (B) literature, (C) commercial French, (D) the language laboratory, (E) music, (F) composition, (I) problems in teaching French, (J) civilization, (K) translation, (L) conversation, and (M) phonetics. Repeatable for credit. Prerequisite: departmental consent.

FREN 520. Novel and Film  3 credit hours
Analysis and discussion of celebrated French novels together with major film versions of the same. The status of the image in relation to the works' historical and cultural contexts is the focus. Prerequisite: FREN 300.

FREN 525. Advanced French Conversation  3 credit hours
Designed to increase proficiency in spoken French. Assignments include oral reports, dialogs and work in the language laboratory. Prerequisite: FREN 324 or departmental consent.

FREN 526. Advanced French Composition and Grammar  3 credit hours
Emphasizes theme writing, original compositions and detailed study of modern French grammar. Prerequisite: FREN 324 or departmental consent.

FREN 540. French Literature in English Translation  3 credit hours
General education advanced further study course. Topic varies. May be used to satisfy the LAS literature requirement and may count toward a French major or minor if readings and papers are done in French.

FREN 541. French Literature of Africa and the Caribbean in Translation  3 credit hours
General education advanced further study course. A study of the concept of Negritude through the works of major African and Caribbean writers. No knowledge of a foreign language is necessary. May be used to satisfy the LAS literature requirement and may count toward a French major or minor if readings and papers are done in French.

FREN 551. French Civilization: The Middle Ages to the Restoration  3 credit hours
Emphasizes key aspects of the civilization of France as seen in its art, architecture, political structure, social evolution and intellectual traditions. Interdisciplinary course complements studies in French language and literature. Classwork and required readings are in French. Pre- or corequisite: FREN 300.

FREN 552. Contemporary French Civilization  3 credit hours
Emphasizes the major events, themes, ideas, trends and movements in French civilization since the Revolution. Interdisciplinary course complements French language and literature courses. Classwork and readings are in French. Pre- or corequisite: FREN 300.

FREN 623. Seminar In French  2-3 credit hours
Seminar in French literature, language or civilization. Repeatable for credit. Prerequisite: FREN 300.

FREN 629. Medieval French Literature  3 credit hours
Analysis and discussion of major French works from 900 to 1500, the literary movements to which they pertain, and the place of individual authors in the overall tradition. Prerequisite: FREN 300.

FREN 630. Renaissance French Literature  3 credit hours
Analyze and discusses major French works, 1500-1600. Prerequisite: FREN 300.

FREN 631. 17th Century French Literature  3 credit hours
Prerequisite: FREN 300.
FREN 632. 18th Century French Literature 3 credit hours  
Prerequisite: FREN 300.

FREN 633. 19th Century French Literature 3 credit hours  
Prerequisite: FREN 300.

FREN 634. 20th Century French Literature 3 credit hours  
Prerequisite: FREN 300.

GEOL 101. General Geology 4 credit hours  
A general survey of the Earth, the concepts of its origin, structure, composition, and history, and the natural processes operating to create the Earth's physical environment. May require field trips. Prerequisite: junior standing.

GEOL 102. Earth Science and the Environment 4 credit hours  
An overview of the Earth, the concepts of its origin, structure, composition, materials, structure, landforms and history, and natural processes operating to create the Earth's physical environment. May require field trips into the earth laboratory. Credit not allowed in both GEOL 102 and 111.

GEOL 111. General Geology 4 credit hours  
A general survey of the Earth, the concepts of its origin, structure, composition, materials, structure, landforms and history, and natural processes operating to create the Earth's physical environment. May require field trips into the earth laboratory. Credit not allowed in both GEOL 102 and 111.

GEOL 235. Meteorology 3 credit hours  
An introductory study of the atmosphere and its properties and the various phenomena of weather. Includes a brief survey of important principles of physical, dynamic, synoptic and applied meteorology. Does not apply toward a major or minor in geology. Requires field trips at the option of the instructor. Prerequisite: instructor's consent.

GEOL 300. Energy, Resources and Environment 3 credit hours  
Studies the dependence of human beings on the Earth's metallic, nonmetal, industrial mineral, energy, soil and water resources; the methods for their discovery and recovery; their uses, and the influence of economics, politics and social institutions in determining how exploitation affects the natural environment and our standard of living. Course includes diversity content. Prerequisite: any introductory course in biology, chemistry, geology or physics.

GEOL 302. Earth & Space Sciences 3 credit hours  
A general survey of the physical environment, including elements of geology, geography, meteorology, climatology, oceanography and astronomy. May require field trips.
GEOL 310. Oceanography  3 credit hours
*General education advanced further study course. Geologic origin of ocean basins and sea water; dynamics of waves, tides and currents; physical and chemical properties of sea water, diversity of life in the oceans, economic potential, law of the sea, and the effect of people on the marine environment.

GEOL 312. Historical Geology  4 credit hours
2 Classroom hours; 4 Lab hours. *General education advanced further study course. Systematic review of earth history and its preservation in the rock record using field evidence for sequences of physical, biological and tectonic events in selected areas. Also includes the origin and evolution of life. Field trips required. Prerequisite: GEOL 102 or 111 or 302 or equivalent.

GEOL 320. Mineralogy and Optical Mineralogy  4 credit hours
1 Classroom hour; 6 Lab hours. Elementary crystallography. A study of the origin, composition and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associations and identification, and optical recognition via thin-section petrography. May require field trips. Prerequisites: GEOL 102 or 111; CHEM 103 or 211; MATH 112 or 123.

GEOL 324. Petrology & Petrography  3 credit hours
1 Classroom hour; 4 Lab hours. The origin, distribution, occurrence, description and classifications of igneous, metamorphic and sedimentary rocks with laboratory emphasis on their hand-sample and optical (thin-section petrographic) recognition. Prerequisite: GEOL 320.

GEOL 430. Field Studies in Geology  2-6 credit hours
Off-campus, systematic field study in a selected area of geologic significance. Course is given upon demand and may be repeated for credit when locality and content differ. Where appropriate, travel, lodging and board costs are charged.

GEOL 481. Cooperative Education  1-6 credit hours
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Graded Cr/NCr. Prerequisite: departmental consent.

GEOL 526. Sedimentary Geology  3 credit hours
2 Classroom hours; 2 Lab hours. Origin, classification, primary structures and physiochemical processes controlling deposition of sedimentary rocks. Reviews diagenesis of carbonate rocks and evaporites. Includes a survey of modern and ancient sedimentary depositional environments and petrographic study of sedimentary rocks in thin sections. May require field trips. Prerequisite: GEOL 102 (with lab) or 111.

GEOL 540. Field Map Methods  3 credit hours
6 Lab hours. Field mapping methods with special reference to use of level, compass, barometer, alidade and airphoto. Field trips required. Prerequisite: GEOL 102 (with lab) or 111 or GEOL/GEOG 201.

GEOL 544. Structural Geology  3 credit hours
2 Classroom hours; 2 Lab hours. Stress-strain theory and mechanics of rock deformation, description, and genesis of secondary structural features in crustal rocks resulting from diastrophism, elements of global tectonics, and laboratory solution of geologic problems in three dimensions and time. May require field trips and field problems. Prerequisites: MATH 112 or 123; GEOL 312; and GEOL 324 or 526.

GEOL 552. Physical Stratigraphy  3 credit hours
2 Classroom hours; 2 Lab hours. Description, classification, methods of correlation and determination of relative ages of stratigraphic rock units; stratigraphic principles and practice, importance and use of biostratigraphy, the nature of cyclic sedimentation and controls on deposition, elements of sequence stratigraphy, measurement and correlation of stratigraphic sections in outcrops. Requires field trips. Prerequisites: GEOL 312, 526.

GEOL 560. Geomorphology and Land Use  3 credit hours
Identification of landforms and their genesis, processes producing landforms, the influence of geomorphology in aspects of natural hazards such as landslides, floods, earthquakes and volcanic activity; soil erosion, drainage basin modification, coastal and desert environments, mineral resource exploitation, and their effects on humans; importance of these influences in environmental management and land-use planning. Prerequisite: GEOL 111 or GEOL 102 or GEOL/GEOG 201.

GEOL 562. Regional Geology of the United States  2 credit hours
A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology of the U.S., including its national parks, and their interrelationships. Requires field trips (instructor's option). Prerequisite: GEOL 102 or 111 or GEOL/GEOG 201.

GEOL 564. Remote Sensing Interpretation  3 credit hours
2 Classroom hours; 2 Lab hours. Introduces interpretation techniques for most types of images acquired by remotely positioned means. Physical principles that control various remote sensing processes using the electromagnetic spectra are applied to geology, land use planning, geography, resource evaluation and environmental problems. Derivative maps generated from a variety of images. May require field trips. Prerequisite: GEOL 102 or 111 or GEOL/GEOG 201.

GEOL 570. Biogeology  3 credit hours
2 Classroom hours; 2 Lab hours. *General education advanced further study course. Systematic survey of major fossil biogeological materials, analysis of the origin and evolution of life, and paleoecological interpretation of ancient environments and climates. Includes hand lens and binocular microscopic examination of major fossil biogeological materials. Includes application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology and paleogeography. Cites examples from fields of invertebrate, vertebrate and micropaleontology, and palynology. May require museum and field trips. Prerequisite: GEOL 312.

GEOL 574. Special Studies in Paleontology  3 credit hours
2 Classroom hours; 2 Lab hours. *General education advanced further study course. A systematic study in selected areas of biogeology and paleontology. Content differs, upon demand, to provide in-depth analysis in the fields of: (A) invertebrate paleontology, (B) vertebrate paleontology, (C) micropaleontology, (D) palynology, and (E) paleoecology. Gives appropriate laboratory instruction in the systems, taxonomy and biogeological relationships within the selected fields listed. May require field trips. Repeatable for credit to cover all five areas listed.

GEOL 621. Geochemical Cycling  3 credit hours
Capstone course. The geochemistry of earth materials and the important geochemical processes; cycles operating on and within the atmosphere, hydrosphere and lithosphere through time; anthropogenic effects on these cycles today. Prerequisites: GEOL 102 (with lab) or GEOL 111 and CHEM 211; or instructor's consent.

GEOL 630. Field Studies in Geology  2-6 credit hours
Off-campus, systematic field study in a selected area of geological significance. Course given upon demand, repeatable for credit when locality and/or content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor's consent.

GEOL 630B. Tropical Marine Environment  3 credit hours
Off-campus, systematic field study in a selected area of geological significance. Course given upon demand, repeatable for credit when
locality and/or content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor's consent.

**GEOL 640. Field Geology  6 credit hours**
Capstone course. Field investigation of sedimentary, igneous and metamorphic rock units and their structures. Includes the application of mapping methods in solving geologic problems. Held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps and an accompanying report are due on campus during the sixth week. Prerequisite: GEOL 324, 540, 544, 552.

**GEOL 650. Geohydrology  3 credit hours**
2 Classroom hours; 2 Lab hours. Capstone course. The hydrologic cycle, physical and chemical properties of water; fluid flow through permeable media, exploration for and evaluation of groundwater, water quality and pollution, and water law. Prerequisites: GEOL 552, MATH 242 and 243; or instructor's consent.

**GEOL 657. Earth Science Instructional Methods  3 credit hours**
Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest scientific laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite: senior standing and department chairperson's permission.

**GEOL 678. Geologic Perspectives on Climatic Change  3 credit hours**
Capstone course. Modern climate and climactic changes and analysis of climactic deterioration; systematic study of geologic evidence of climate change through time. Emphasizes theoretical causes, feedback mechanisms and recognition of effects on climactic perturbations in the rock record. Prerequisites: GEOL 312, 526.

**GEOL 680. Geologic Resources and the Environment  3 credit hours**
2 Classroom hours; 2 Lab hours. Occurrence and origin of metallic and nonmetallic economic mineral deposits, laboratory examination of ores and industrial minerals. Occurrence and supply, regeneration and future demand for water and soil resources, and fossil and nuclear fuels. Studies environmental aspects of resource exploitation and use, generation and disposal of waste, environmental hazards, and reclamation. May require field trips. Prerequisite: GEOL 324.

**GEOL 682. Petroleum Geology  3 credit hours**
2 Classroom hours; 2 Lab hours. The origin, migration and accumulation of oil and gas in the earth's crust; reservoir trap types in common hydrocarbon fields, origin and types of porosity systems, and distribution of world petroleum supplies. Introduces subsurface study techniques. May require field trips. Prerequisites: GEOL 526, 552.

**GEOL 684. Methods of Subsurface Analysis  2 credit hours**
1 Classroom hour; 2 Lab hours. Methods of remotely logging and describing the geologic occurrence of subsurface strata; characterization of subsurface strata, including laboratory analysis of recovered subsurface samples; application to petroleum geology, mineral resource evaluation and environmental geology. Prerequisites: GEOL 312, 526, 552; or instructor's consent.

**GEOL 690. Special Studies Geology  1-3 credit hours**
Systematic study in selected areas of geology. Offered on demand; repeatable for credit when content differs. Requires laboratory work or field trips (instructor's option). Prerequisite: instructor's consent.

**GEOL 690AO. History of Geology  3 credit hours**
The course examines the historical development of Earth science from prehistoric to modern times. The course analyzes the various techniques of data collection and interpretation that were used throughout history.

**GEOL 690AP. Petroleum Engineering: An Introduction for Geoscientists  3 credit hours**
An introduction to the theory and application of petroleum engineering to oil and gas exploration and development. Oriented to students with a geology or geoscience background.

**GEOL 698. Independent Study in Geology  1-3 credit hours**
Independent study on special problems in selected areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics, and (k) petroleum. Requires a written final report. Prerequisite: consent of sponsoring faculty.

**GEOL 702. Environmental Science I  5 credit hours**
3 Classroom hours; 4 Lab hours. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes chemical cycling, atmospheric chemistry, aquatic chemistry and phase interactions. The laboratory portion addresses local environmental problems from a risk assessment perspective. GEOL 702 and 703 (or equivalent) are required for all graduate students in the EEPS master's program. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership. Prerequisite: acceptance in the EEPS master's program or instructor's consent.

**GEOL 703. Environmental Science II  5 credit hours**
3 Classroom hours; 4 Lab hours. Advanced theoretical and applied principles of the interdisciplinary study of environmental science. Includes environmental chemical analysis, environmental toxicology, aquatic microbial biochemistry, environmental biochemistry, water treatment, photochemical smog and hazardous waste chemistry. The laboratory portion addresses local environmental problems from a risk assessment perspective. GEOL 702 and 703 (or equivalent) are required for all graduate students in the EEPS master's program. Prerequisite: GEOL 702 or instructor's consent.

**GEOL 720. Geochemistry  3 credit hours**
The chemistry of natural aqueous solutions and their interaction with minerals and rocks; thermodynamics and kinetics of reactions; emphasizes application to sedimentary environments and environmental problems. Requires some laboratory work. Prerequisites: GEOL 324 and CHEM 212 or instructor's consent.

**GEOL 724. Soils  3 credit hours**
Geologic analysis of soil types, their formation, occurrence and mineralogy; soil management and conservation, environmental aspects of soil occurrence including stability studies, pollution and reclamation.

**GEOL 726. Carbonate Sedimentology  3 credit hours**
2 Classroom hours; 2 Lab hours. The origin and genetic description of carbonate particles, sediments and rocks, mineralogy and textural classifications, depositional environments in carbonate rocks and analysis of modern and ancient depositional system. May require field trips. Prerequisites: GEOL 526, 552 or equivalents.

**GEOL 727. Carbonate Diagenesis  3 credit hours**
2 Classroom hours; 2 Lab hours. Analyzes diagenesis of carbonate sediments and rocks. Includes mineralogic stability in natural waters, meteoric, marine and deep-burial diagenesis, dolomitization processes and products, trace-elements and isotopes as diagenetic tools, cathodoluminescence and X-ray diffraction studies of carbonates; origin and porosity. Prerequisite: GEOL 726 or instructor's consent.

**GEOL 740. Basin Analysis  3 credit hours**
A practical course in analysis of petroleum-bearing or other sedimentary basins; emphasizes detailed subsurface mapping to
GEOL 745. Advanced Stratigraphy  3 credit hours
Analysis of stratigraphic sequences at the local to global scales in terms of sequence stratigraphic concepts and high-resolution interpretation of depositional sequences (from outcrop and subsurface data); seismic sequence stratigraphy, and significance of unconformities in sequence identification and development; local to global correlation of sequences and sea level history through time; cratonic sequences of North America. Required seven-day field trip. Prerequisites: GEOL 312, 526, 726.

GEOL 751. Advanced Geohydrology  3 credit hours
Integrations of practical and theoretical coverage of subsurface fluid flow as applied to shallow aquifers. Covers the mass transport in both the saturated and vadose zones as well as the occurrence and movement of nonaqueous fluids. Covers groundwater quality, sources of groundwater contamination, retardation of contaminants, retardation and attenuation of dissolved solids, and the response of inorganic and organic substances to subsurface aqueous and framework chemistries. Computer simulation models used whenever practical along with detailed analysis of case histories, including those related to environmental geoscience. Prerequisites: GEOL 650, 681, MATH 344, or instructor's consent.

GEOL 752. Climatic Evolution of Earth  3 credit hours
Basics of climatology and paleoclimatology, and recognition of paleoclimatic indicators in the rock record. Climatic changes at different scales in Earth history and possible causes, and nature of climactic records. Roles of climate change on the evolution of Earth's biosphere, hydrosphere, atmosphere and lithosphere. Field trip(s) may be required. Prerequisite: GEOL 721, graduate standing, or instructor's consent.

GEOL 760. Exploration Geophysics  3 credit hours
Introduces the theory and application of geophysical techniques for hydrocarbon, mineral and groundwater prospecting. Includes use of seismic techniques, instrumentation for acquisition on land and sea, seismic processing, structural and stratigraphic modeling, 3-D seismic exploration, and seismic refraction techniques. Prerequisites: completion of geology undergraduate math and physics requirements; MATH 344 or 555; GEOL 324, 544, instructor's consent.

GEOL 781. Advanced Numerical Geology  3 credit hours
Involves practical implementation of algorithms and computer code. Includes the analysis of multivariate techniques and the development of the computer/algorithm skills needed to handle very large databases. Covers standard statistical approaches to data analysis, treatment of applied linear algebra and matrix theory; the application of linear and nonlinear discriminate analysis, various factor analytic techniques, hard and fuzzy clustering, linear and nonlinear unmixing analysis, and other forms of data modeling. Prerequisites: GEOL 681 or equivalent, competence in one or more high level computer languages, MATH 344 or 555, and instructor's consent.

GEOL 795. Earth and Space Physics  3 credit hours
Cross-listed as PHYS 795. An introduction to the geosciences and astrophysics of the solar system. Topics include the surface, interior and atmospheres of the planets with a comparative planetology approach, and the sun-planet system including solar physics and the effect of the sun on the earth's environment and geologic history. Prerequisites: PHYS 313-314, and MATH 242, or EEPS 721, or instructor's consent.

German (GERM)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

GERM 111. Elementary German I  5 credit hours
General education introductory course. Reviews and completes the presentation of German grammar offered in GERM 111 and 112. Students are offered the opportunity to further develop their oral proficiency in German and to begin focusing attention on their reading and writing skills in a variety of contexts. Prerequisite: GERM 112 or equivalent, or two units of high school German.

GERM 210. Intermediate German I  5 credit hours
General education advanced further study course. Intensive reading and discussion of short German literary works (poems, short stories) combined with intermediate-level review of German grammar and expansion of German vocabulary. This course is required to continue the study of German at the upper-division level (i.e., GERM 300 and above). Prerequisite: GERM 210 or equivalent.

GERM 224. Intermediate German II  3 credit hours
General education advanced further study course. The development of oral fluency. Prerequisite: GERM 210, 224, or concurrent enrollment in 224.

GERM 300. Intermediate German Readings  3 credit hours
General education advanced further study course. Reading and analysis of German short stories, prose selections from major contemporary works, and poetry, combined with oral and written practice and advanced grammar review. Prerequisite: GERM 224 or instructor's consent.

GERM 325. Intermediate German Conversation and Composition  2 credit hours
Emphasizes development of written skills as conversational practice continues. Prerequisite: GERM 225 or instructor's consent.

GERM 341. German in the European Context  3 credit hours
General education advanced issues and perspectives course. Selected topics on significant aspects of life and thought in Germany. Emphasizes the modern period with special attention to the interrelation of cultural trends in the European context. A knowledge of German is not required.

GERM 344. Intermediate German II  1-3 credit hours
General education advanced further study course. Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: GERM 223 or equivalent.

GERM 505. German Phonology  2 credit hours
Course deals with corrective pronunciation (articulation of German speech sounds and intonation) as well as formal phonetic analysis. Teaches students the International Phonetic Alphabet in order to
improve their use of German dictionaries and possible comparison of
German dialects. Prerequisites: GERM 224, 225, or instructor's consent.

**GERM 526. Advanced German Grammar and Composition  3 credit hours**
Continues the advanced grammar review begun in GERM 300 and
focuses on developing German writing skills, including the ability to
express oneself with grammatical accuracy and stylistically appropriate
vocabulary. Prerequisite: GERM 300 or instructor's consent.

**GERM 650. Directed Studies In German 1-3 credit hours**
Enrollment in any of the areas listed takes place only upon consultation
with the department and agreement with the instructor concerned:
(A) Introduction to the Study of German Literature; (B) Survey I:
From the Medieval Period Through the Age of Goethe; (C) Survey
II: 19th Century to 1945; (D) Contemporary Literature, including the
literatures of East and West Germany, 1949-1989; (E) Special Topics in
Literature, repeatable once for credit; (F) Special Topics in Language,
repeatable once for credit. Prerequisite: GERM 300 or instructor's consent.

**Graphic Design (ARTG)**
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-
division; 500 to 799 = undergraduate/graduate.

**ARTG 110. Vector Applications  1 credit hour**
Introduction to using vector drawing applications like Adobe Illustrator
to create artwork.

**ARTG 111. Pixel-Based Applications  1 credit hour**
Introduction to using pixel-based applications like Adobe Photoshop to
create artwork.

**ARTG 112. Layout Applications  1 credit hour**
Introduction to using layout applications like Adobe InDesign to create
artwork.

**ARTG 216. Typography I  3 credit hours**
Introduces the study and use of type and typefaces in design, including
history, comping skills, stylistic considerations, grid structures, working
with copy, and visual and informational hierarchical arrangement upon a
single page. Prerequisites: ARTF 136, 145.

**ARTG 234. Introduction to Graphic Design  3 credit hours**
Studies graphic design theory, application of design principles in
communication problems, mark/symbol making and basic layout
principles. Prerequisites: ARTF 136, 145.

**ARTG 235. Graphic Design Concepts  3 credit hours**
Studies graphic design theory, philosophy, history and approaches to
creative problem solving including brainstorming, concept generation
and application of solutions. Prerequisites: ARTF 136, 145.

**ARTG 238. Graphic Materials and Processes  3 credit hours**
Explores the possibilities of paper manipulation including cut-paper
embossment, box building, pop-up structures, and assorted binding and
presentation techniques. Prerequisites: ARTF 136, 145.

**ARTG 316. Typography II  3 credit hours**
Studies type as form, symbol and communication with exploration of
letterforms and their applications using traditional and computer skills
and media. Prerequisite: acceptance to the graphic design BFA program
or ARTG 216 and instructor's consent.

**ARTG 334. Exploration of Graphic Design Media  3 credit hours**
Building on the principles covered in ARTG 234 and 235. An emphasis
is placed on using original imagery in each project. Prerequisites:
ARTG 235, acceptance to the graphic design BFA program.

**ARTG 335. Sequential Media  3 credit hours**
Emphasis on sequential design and the investigation of color in
graphic design problem solving. Repeatable for credit. Prerequisites:
ARTG 316, 334.

**ARTG 337. Drawing for Visual Communication  3 credit hours**
Applied drawing for graphic design. Prerequisite: acceptance to the
graphic design BFA program or instructor's consent.

**ARTG 338. Applied Design  1-3 credit hours**
Experiencing design and production for the marketplace within
the context of a design studio/agency or in-house environment.
Prerequisites: ARTF 136, 145.

**ARTG 339. Package Design  3 credit hours**
Box construction and surface treatment in product design. Prerequisites:
ARTG 238, 334.

**ARTG 354. Professional Practices in Graphic Design  1 credit hour**
Research into and practical application of professional practices,
portfolio development, business skills and career planning specific to
the field of graphic design. Requires attendance at professional design
events and creation/maintenance of a professional portfolio. Repeatable
for credit. Prerequisite: acceptance to the graphic design BFA program.

**ARTG 434. Graphic Design Campaigns  3 credit hours**
Publication design, identity and sequence. Prerequisite: ARTG 335.

**ARTG 435. Graphic Design Capstone  3 credit hours**
Use of media and formats to create visually cohesive advertising and
promotional campaigns. Prerequisite: ARTG 434.

**ARTG 437. Drawing for Visual Communication II  3 credit hours**
Concentration in editorial and narrative illustration emphasizing
visualization and creative problem solving while exploring a variety
of color media and techniques. Prerequisite: ARTG 337 or instructor's
consent.

**ARTG 445. Senior Terminal Project  1-3 credit hours**
Supervised independent study. Students in their final two semesters
must present a plan of study for and complete a design project. Project
and plan of study must be approved by the graphic design faculty.
Repeatable for credit. Prerequisite: senior standing in graphic design.

**ARTG 481. Cooperative Education  1-8 credit hours**
Provides practical field experience, under academic supervision, that
complements and enhances the student's academic program. Graded Cr/
NCr. Prerequisite: departmental consent.

**ARTG 481N. Internship  1-3 credit hours**
Complements and enhances the student's academic program by
providing an opportunity to apply and acquire knowledge in a
workplace environment as an intern. Graded Cr/NCr. Prerequisite:
departmental consent.

**ARTG 490. Graphic Design Applications  3 credit hours**
Focuses on emerging technologies for various media. Repeatable for
credit. Prerequisite: acceptance to the graphic design BFA program or
instructor consent.

**ARTG 491. Interactive Design  3 credit hours**
Introduction to the history, theories, concepts, production techniques
and software necessary to produce interactive design solutions for
the marketplace. Repeatable for credit up to 9 hours. Prerequisite:
acceptance to the graphic design BFA program or instructor's consent.

**ARTG 493. Book Design and Production  3 credit hours**
A laboratory course encompassing all facets of the book including
design, type composition, proofreading, illustration, manufacturing,
binding materials (cloths, paper and boards), distribution, copyright,
to recommend PH strategies for change in a project, community setting, opportunities for enhancing the effective implementation of change. Understanding how and why people react to change, and identifying individuals leading change, including values, conflict and power. Listed with PSY 346. Examines factors influencing the effectiveness of individuals leading change, including values, conflict and power. Studies the human side of organizational change focusing on understanding how and why people react to change, and identifying opportunities for enhancing the effective implementation of change. Students reflect on their own leadership development and work in teams to recommend PH strategies for change in a project, community setting, or organization. Honors section.

**HMCD 310. Introduction to the U.S. Health Services System 3 credit hours**

General education advanced issues and perspectives course. Designed to provide students a common background in how the U.S. health services system is organized, how health services are delivered and the mechanisms by which health services are financed in the United States. Provides an overview of the U.S. health services system and its key components, including the organization and management of the system, resource development (health care work force, health facilities and biomedical technology), the economic support system and the delivery system.

**HMCD 325. Introduction to Epidemiology 3 credit hours**

Introduces students to the science and methodology of disease and risk surveillance in public health. It presents the foundations and structure used to solve medical and environmental health problems in the community with a primary focus on the health status of individual populations and special populations as they relate to health promotion and disease prevention.

**HMCD 326. Emerging Health Care Issues of the 21st Century 3 credit hours**

General education advanced issues and perspectives course. Taught by experts inside and outside the College of Health Professions. An in-depth study of emerging health care issues in a rapidly changing health care environment. Addresses current and critical health care issues facing the community locally, nationally and abroad. Presents historical coverage of medical issues of the 21st century as a means of understanding contemporary issues.

**HMCD 327. Introduction to Global Health Issues 3 credit hours**

Overview of the complex health problems and challenges facing low and middle-income countries which experience the highest rates of global morbidity and mortality. Addresses strategies to improve the health status of these vulnerable populations, to appreciate how social, behavioral, economic and environmental factors influence the health of the population, and to implement techniques to prevent premature death and disability. Course content assists the learner by developing a broad view of global health problems and solutions. Course includes diversity content.

**HMCD 328. Introduction to Alternative and Complementary Medicine 3 credit hours**

A fundamental and basic knowledge of medical therapies that are alternatives to or complementary of traditional Western medicine. Covers naturopathy, traditional Chinese medicine, homeopathy, botanical medicine, massage therapy, chiropractic, etc. Examines research evidence for effectiveness and how these therapeutic approaches may blend with and complement the more traditional clinical approach. Combines didactic presentations with a mix of demonstrations by alternative health care providers, visits by patients, case studies and small group presentations.
HMCD 330. Community Health and Development  3 credit hours
Introduces concepts, theories and methods used to understand the social determinants of health as well as organizational and system responses to health disparities and community resource needs. Examines the meaning of the key terms health, community, community building, and community development within historical and contemporary perspectives. Students learn the distinction between community health and healthy communities and the importance of starting with such questions as whose community?, whose health? and for whose benefit? Students review several approaches for identifying community needs, including the use of secondary data sources, interview methods, focus groups and surveys. Finally, students examine the role of creative leadership in providing the link between knowledge about the community and effective social change. Course includes diversity content.

HMCD 333. Organizational Behavior and Leadership in Health Organizations  3 credit hours
Designed to familiarize students with the classic themes and perspectives from the field of organizational behavior. Emphasizes the application of this material to leadership in health care through lecture, group and individual examination of the literature, analysis of case studies and personal assessment.

HMCD 342. Introduction to Financing Health Care Systems  3 credit hours
Provides some basic tools for nonfinancial managers. Introduces students to the language, concepts and practices of financial management encountered in the administration of health care facilities. Emphasizes understanding and application of general financial concepts to the health care setting. Concepts include, but are not limited to, assets, liabilities, net worth, revenue, expenses, cost, cost classifications, cost behavior, break-even analysis, recording of financial operations, development and analysis of financial statements, cost allocation methods, types of budgets used in health care settings and their purposes, and planning, monitoring and controlling financial operations. Examples of various types of health service organizations are examined.

HMCD 344. The Role of Culture in Health Care  3 credit hours
Examines the importance of culturally-informed care as a professional responsibility in health services, and is designed to critically examine cultural competency and the underlying challenge of responding to health disparity. Cultural context constructs the ways people frame, define, react to and treat illness and other health risks. Many factors, such as age, identity, ethnicity, education, religion, income, family tradition, status and ability shape individual illness experience. When combined with influences such as power, hierarchy in medicine, authority, resource allocation and technology, differences between patient’s and provider’s understanding of and response to illness can result in poor health outcomes. Students are challenged to increase awareness and understanding of diversity to build a foundation for providing culturally-responsive, person-centered systems and approaches to care.

HMCD 354. Health Politics  3 credit hours
Examines how public policies affecting health care and public health are created within legislatures, courts and the executive branch of federal government through the political actions of individuals and groups with vested interests. In an attempt to clarify an invariably messy and complex process, students tour through history to view and analyze health policy developments as they occurred in each presidential administration from FDR through the current presidency.

HMCD 356. Introduction to Health Care Administration and Policy  3 credit hours
Introduction to the underlying principles, practices and concepts of health services administration both from an individual and organizational perspective. Covers planning, decision making, influencing and effecting change. Emphasis is placed on how health care policy, an organization's external and internal environment, and technology influence organizational strategy, design and function.

HMCD 403. Health Education and Health Promotion  3 credit hours
Introduces students to concepts fundamental to the practice of health education and health promotion. Provides an overview of major health behavior theories, principles and strategies drawn from the behavioral science disciplines. Students examine how health behavior theory and conceptual models guide the development and implementation of effective health promotion interventions. Students learn the importance of collaboration in effecting social change, the philosophical, ethical and theoretical foundations of the professional practice of health education and health promotion in school, community, worksite and patient education programs. Contemporary health education philosophy, Healthy People: The Health Objectives for the Nation, the Certified Health Education Specialist process, ethical issues in health, and current and future issues in health education and health promotion are discussed. Prerequisite: HMCD 325.

HMCD 413. Introduction to Social and Behavioral Aspects of Public Health  3 credit hours
Course is based on the assumption that public health is a multi-disciplinary field aimed at reducing preventable morbidity and premature mortality, and promoting a higher quality of life in populations and groups through health intervention. While recognizing that biological, physical and medical care factors contribute to population health outcomes, this course emphasizes the relationship of behaviors as well as social and political structures to health outcomes. Highlights the importance of both local contexts and global practice for understanding and improving health. A social ecological framework forms the conceptual basis of the course, focusing attention on interactions between four levels of factors: individual, interpersonal, community and population. Designed to encourage an appreciation of the wealth of conceptual and methodological approaches in the social and behavioral sciences that can inform public health practice and research.

HMCD 416. Introduction to Environmental Health  3 credit hours
Introduces students to the importance of the environment to human health by examining the causes and controls of major environmental health problems. Topics are structured around the things individuals and societies do that result in environmental health hazards - including energy production, industry, food production, and the modern lifestyle - as viewed through both a local and global lens. Emphasizes environmental risk factors to susceptible populations and how they translate into public health policy and prevention. Students learn ways to protect and enhance their health, and to influence the quality of the environment. Includes lecture, film, group analysis and reflection.

HMCD 428. Health Care Organization  3 credit hours
Covers concepts and issues of management, organization and operation of health care organizations, stressing the unique character of health care delivery organizations. Emphasis is on types of health organizations, leadership and managerial roles, organizational structure and dynamics, the external environment, quality assessment and improvement, planning and marketing with a focus on synthesizing resources and capabilities to meet organizational goals.
HMCD 443. Social Marketing  3 credit hours
An introduction to the field of social marketing as it is used to improve the health of the public. Students examine the concept of social marketing and learn how to apply social marketing principles and techniques to health behavior change and improvement of health services management and community development. Includes essential aspects of the social marketing process: the use of a consumer orientation to develop and market intervention techniques, audience analysis and segmentation strategies, the use of formative research in program design and pretesting of intervention materials, channel analysis for devising distribution systems and promotional campaigns, the employment of the marketing mix concept in intervention planning and implementation, and evaluation techniques for social marketing campaigns. Students are introduced to the limitations, challenges and successes of social marketing. Prerequisites: HMCD 344 and senior standing in the HMCD program or instructor's consent.

HMCD 460. Public Health Sciences Practicum  3 credit hours
Enables students to apply skills and knowledge through a supervised field training experience in a health care setting that complements the student's interests and career goals. Enables students to gain practical experience as professionals under conditions conducive to educational development. Students may select, with the consent of the practicum coordinator, an internship in an appropriate health or social service organization. Requires participation in a broad fieldwork component, completion of a focused project component, and a written report of the experience. May be repeated for credit, up to 6 hours. Prerequisites: HMCD program prerequisites: HP 203 or 303; HMCD 310, ECON 231 or STAT 370 or PSY 301 or SOC 501 or CESP 704; COMM 302 or 311 or 313 or 325 or 328 or ENGL 210. HMCD program core courses: HMCD 325, 330, 333, 342, 344, 356. Students must also be admitted to the HMCD professional program.

HMCD 470. Capstone Seminar in Health Services Management and Community Development  3 credit hours
For students in the last semester of their program of study. Provides an opportunity to develop skills and apply learning from across the curriculum to a series of issues and problem solving situations in public health. Students develop a model for professionalism required by those working in the field, assess and evaluate ethical decision-making situations which integrate the program core, build capacity for lifelong learning, and complete an applied group project that synthesizes content and knowledge from across the curriculum. Prerequisites: HMCD program prerequisites: HP 203 or 303; HMCD 310, ECON 231 or STAT 370 or PSY 301 or SOC 501 or CESP 704; COMM 302 or 311 or 313 or 325 or 328 or ENGL 210. HMCD program core courses: HMCD 325, 330, 333, 342, 344, 356. Students must also have senior standing and be admitted to the HMCD professional program.

HMCD 478. Health Economics  3 credit hours
Approaches health economics by following the "flow of funds" to describe the incentives and organizational structure of the health care system in the United States. Examines transactions between patients and providers, the role and results of insurance, and government involvement and some of the history of the U.S. health care system. Also considers national health spending and public health from a macroeconomics perspective.

HMCD 481. Cooperative Educational Field Study  1-8 credit hours
Provides the student with a field study that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. May be repeated for credit. Prerequisite: instructor's and cooperative education coordinator's consent.

HMCD 490. Independent Study  2-3 credit hours
Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to 6 hours. Prerequisite: program consent.

HMCD 621. Supervisory Management in Health Care Organizations  3 credit hours
A study of supervisory management concepts and techniques that apply to health care organizations and programs. Emphasis is on understanding the health care environment and its various health care settings, the identification of issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead health care work teams. Identifies, analyzes and solves problems that clinical department heads, supervisors and other health related mid-management personnel encounter in their work. The principles of effective management techniques-planning, decision making, organizing, budgeting, time management, leadership, direction, delegation, communication, motivation, discipline, performance appraisal, management of change, teamwork, effective meetings, working with unions, quality improvement and career development are covered. Prerequisite: HMCD 310.

HMCD 622. Human Resources Management in Health Care Organizations  3 credit hours
Intended for clinical health care professionals who have responsibility for managing people in health care organizations. Also intended for health care management students who will have responsibility for managing people in health services organizations. An introduction to the essential theories, components and issues of human resources management in the health care field. Includes the study of the effectiveness of the human resources management function, employee recruitment, selection, training, performance appraisal, benefits and compensation, employee relations and other relevant legal requirements affecting employment. Covers issues of contemporary relevance for human health services resources departments such as employee health and safety, employee assistance programs, occupational stress and job burnout, violence in the workplace and work/family issues. Students are required to learn and to demonstrate the ability to analyze human resources problems and to present sound solutions. Students are expected to learn and demonstrate effective group working skills as they join small groups and engage in collaboratively solving a number of human resources management problems.

HMCD 624. Community Development Methods  3 credit hours
Builds on the foundation of public health by examining a variety of advanced methods, theories and skills used for community development. Students familiarize themselves with the approaches used to assess and improve health outcomes in a community context and familiarize themselves with how to effectively apply these approaches. Includes lecture, group and individual projects, fieldwork and visiting lectures from practicing community development professionals.

HMCD 625. Special Topics in Health Services  3 credit hours
Designed to provide students with the opportunity to explore, in detail, a selected current topic relevant to health services management and community development. Students review current research related to the selected topic, provide weekly presentations, engage in discussion and produce a term paper. Also includes lecture and guest arrangements from outside the department and the institution.

HMCD 642. Financing Health Care Services  3 credit hours
Examines the principles of financial analysis and management used in health care institutions, which are most useful to nonfinancial
personnel. Emphasizes understanding and application of general financial concepts crucial to the health setting; considers financial organization, sources of operating revenues, budgeting and cost allocation methods. Uses examples for various types of health service organizations. Prerequisite: senior standing in the HMCD program, or instructor's consent.

**HMCD 643. Intro to GIS  3 credit hours**
Skills-based course introduces a group of software tools used in health care and many other professions to analyze and model spatial data. These powerful epidemiological tools provide mechanisms to track and map health and disease indicators, to explore clusters of risk factors and their relationships, and to better manage health care and social service resources. Properly applied, they illuminate community needs and promote efficient and effective program responses. GIS’s outstanding integrative abilities are increasingly valued by those who need to synthesize multiple information streams in their decision making. Furthermore, the resulting visual displays, with their ability to improve communications between researchers, administrators, government officials, and the public, are increasingly found in policy debates and educational forums. Prerequisite: HMCD 325 and senior standing in the HMCD program, or instructor's consent.

**HMCD 644. Program Planning and Evaluation  3 credit hours**
Introduces students to the planning, development and evaluation of health programs through the use of lecture, group projects and individual presentations. Students familiarize themselves with a variety of approaches available in the field of program planning. Emphasizes the application of this material to the development of a program plan.

**HMCD 648. Concepts of Quality in Health Care  3 credit hours**
Addresses quality management in health services organizations, with a focus on a systematic approach to meet the Institute of Medicine's aim to provide care that is safe, effective, patient-centered, timely, efficient and equitable. The history and current status of quality management initiatives, as well as the role of quality in organizational strategic management are presented. Students learn the role of quality from theory to application in a broad base of organizational settings.

**HMCD 660. Administrator-in-Training (AIT) Long-Term Care Practicum  3-9 credit hours**
Needs for health services will increase dramatically in the future because of the rising increase in the elderly population. A broad range of services, including long-term care, is required to address the health care needs of the older population. The Administrator-in-Training (AIT) Practicum is an academic long-term care administrator-training program. The purpose of the AIT is the development of a professional competency and personal code of ethics for the field of long-term care administration. The course prepares students for the state nursing home administrator licensure examination. The 480-clock-hour practicum is completed in a licensed long-term care facility, under the guidance of an approved preceptor. Prerequisite: instructor's consent.

**Health Professions (HP)**
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**HP 101. Introduction to the University  3 credit hours**
Assists students in acquiring the academic and life skills essential to become a successful college student. Provides information, resources, and support to promote opportunities for success. Introduces and uses resources within the university and the community. Recommended for all degree-bound students entering WSU for the first time.

**HP 150. Workshop in Health Professions  1-10 credit hours**
Intensive study of special topics related to health professions practice, education and research.

**HP 151. Career Networking Experience  1 credit hour**
Offers students the opportunity to participate in a mentoring relationship with a WSU health professions alum. Students experience what it’s like working in a career they are considering; interact with professionals in their chosen career, and become part of the professional culture of the work place. Seminars taught by WSU faculty/staff provide in-depth information regarding stress management, corporate communication, job search skills and networking. Graded Cr/NCr. Prerequisites: instructor's consent, at least 12 credit hours completed, and 2.500 GPA.

**HP 201. Exploring the Health Professions  2 credit hours**
Introduces the health care field with an overview of today's health care system. Explores the attributes needed to be a health professional, the coping mechanisms needed, what it means to be a student in the professional programs, and health care challenges from both a patient's and provider's point of view. Introduces various health professions and allows students to explore a field of their choosing. Corequisite: HP 151.

**HP 203. Medical Terminology  2 credit hours**
Provides the foundation of medical terminology for individuals who need a familiarity of the medical language. Ideal for preprofessional students preparing for one of the health professions or students currently enrolled in a health professions program. Also valuable for individuals such as medical records technicians, medical transcriptionists, medical secretaries, medical insurance personnel, administrators in health care and pharmaceutical representatives.

**HP 303. Medical Terminology  3 credit hours**
Provides the foundation of medical terminology and its application to the health care environment. Ideal for preprofessional students preparing for one of the health professions or a student currently in a health professions program. Emphasizes accurate interpretations and analysis of patient, hospital and other medical records. Students cannot receive credit for both HP 203 and HP 303.

**HP 325. Selected Topics  1-4 credit hours**
Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of a particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Repeatable to a maximum of 6 credit hours with program consent, upper-division status.

**HP 325BA. Badge: How Does it Work? The Anatomy and Physiology of the Human Breast  0.5 credit hours**
Breasts are the only human secretory gland that is not fully matured at birth. Breast development is an ongoing process with critical milestones during puberty, pregnancy and immediately after birth. Progressing through Badge 1, course explores the physiological and hormonal development of the breasts and the biological specificity of breastmilk.

**HP 325BB. Badge: Breastfeeding the Neonate - The 1st 40 Days  0.5 credit hours**
Newborn infants know how to move to the breast, latch and suckle at birth, but to learn and establish breastfeeding takes work and persistence over the first 40 days. Progressing through Badge 2, course explores a neonate’s capabilities, establishing the milk supply and challenges of the early days of breastfeeding.

**HP 325BC. Badge: Supporting the Mother-Infant Dyad  0.5 credit hours**
Supporting the breastfeeding dyad & family begins by building a relationship, thorough and continuing assessments, frequent
encouragement and problem solving. Progressing through Badge 3 coursework builds history taking, assessment and problem solving skills as well as providing anticipatory guidance for returning to work, adding complementary foods and weaning.

HP 325BD. Badge: Perinatal Breastfeeding Education & Support 0.5 credit hours
While it would seem breastfeeding should be an innate skill, many cultures lost this heritage as formula feeding became the standard method of providing infant nutrition. Education, support and frequent examples are key elements of protecting and promoting breastfeeding. Progressing through Badge 4, course focuses on developing curricula for and educating adult learners.

HP 325BE. Badge: Healthy Pregnancy, Healthy Breastfeeding, Healthy Life 0.5 credit hours
Progressing through Badge 5, course investigates the interface among lifestyle, pregnancy/birth and lactation. Focus is on maximizing maternal and infant health across the lifespan.

HP 325BF. Badge: Breastfeeding and Human Lactation - Past, Present & Future 0.5 credit hours
Breastfeeding and human lactation are not only a personal decision and action, but are also a matter of societal concern on many levels. In Badge 6, course reviews the history of breastfeeding and human lactation. Additionally, it considers possible actions to address local, state, federal and international issues and policy.

HP 330. Cancer: Perspectives and Controversies 3 credit hours
General education advanced issues and perspectives course. Historical and contemporary information regarding trends, distribution and causes of cancer. Discusses pertinent issues and controversies about cancer from the perspectives of cancer prevention and treatment, economics, sociology, psychology and politics.

HP 430. Impact of Disease Upon Global Events 3 credit hours
General education advanced issues and perspectives course. Designed to provide a background for discussions of pathological determinants/trends that influence events in history including those involving emerging and re-emerging diseases.

HP 570. Selected Topics 0.5-4 credit hours
Lecture/discussion; focuses on a discrete area content relevant to the health disciplines. In-depth study of a particular topic or concept, including didactic and current research findings and technological advances relevant to the topic. Repeatable to a maximum of 6 credit hours with program consent, upper-division status.

HP 570BA. Care of Populations Badge: Public Health Science 0.5 credit hours
Focuses on the core competency for Public Health Professionals, Public Health Science Skills, Tier 1. Focuses on the science of public health practice which integrates, competencies, essential services, retrieval of evidence, and core functions toward the goal of improving the health of populations. As part of the course requirements, the student completes step 1 of an integrated community health assessment and health improvement plan.

HP 750. Workshop in Health Professions 1-4 credit hours
An opportunity for intensive study of special topics related to health profession practice, education or research.

Health Sciences (HS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

HS 290. Foundational Human Anatomy and Physiology 5 credit hours
General education introductory course. Designed to give students a foundational understanding of the anatomy and physiology of the human body. Emphasizes the basic anatomy of each body system and develops an understanding of normal human physiologic processes of each system. Students are challenged to begin thinking clinically so as to prepare them for a future in health professions. In correlation with lectures, lab sessions are required weekly to provide a hands-on understanding of the content. Students may receive credit for only one of the following: HS 290 or BIOL 223.

HS 301. Clinical Pharmacology 3 credit hours
Surveys therapeutic terms, drug actions, dosage, toxicology and application of drugs in the clinical setting. Prerequisites: BIOL 223 or HS 290 or equivalent, and CHEM 103 or 211 or equivalent or instructor's consent.

HS 315. Head and Neck Anatomy 2 credit hours
An in-depth study of the landmarks, muscles, nerves and vascular supply of the head and neck region. Prerequisites: BIOL 223 or HS 290, and enrollment in dental hygiene program.

HS 331. Principles of Dietetics & Nutrition 3 credit hours
A study of human dietetic and nutritional needs in the clinical setting. Covers composition and classification of foods, vitamins and their function, food and public health laws, and nutrition under special conditions. Gives a detailed application of dietetic and nutritional knowledge applied to various clinical conditions.

HS 400. Introduction to Pathophysiology 4 credit hours
Focuses on the essential mechanisms of disordered function which produce common diseases. Discusses some common diseases, but as examples of the basic processes covered, not as a part of an exhaustive inventory. Presents health professionals with accessible, usable and practical information they can broadly and quickly apply in their clinical or laboratory experience, or use as a basic pathophysiology course before taking the more specific professionally related pathophysiology courses. Prerequisite: BIOL 223 or 534 or HS 290.

HS 480. Professionalism in Health Care 3 credit hours
Designed to familiarize students with the factors influencing successful professionalism in the health care setting. Emphasizes the application of course material to the development of the student's health care career. Course format includes lecture, group and individual examination of the literature, analysis of case studies, interprofessional education, and fieldwork. Prerequisites: HS program core courses (HMCD 310, 325, 333 356; HP 303; PHIL 327).

HS 550. Kidney Function and Disease for Health Professions: Glomerular Filtration and Renal Blood Flow 1 credit hour
First in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite: BIOL 223 or HS 290.

HS 551. Kidney Function and Disease for Health Professionals: Tumoral Processing of Glomerular Filtrate 1 credit hour
Second in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite: HS 550.
HS 552. Kidney Function and Disease for Health Professionals: Regulation of Extracellular Fluid Osmolarity 1 credit hour
Third in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite: HS 551.

HS 553. Kidney Function & Disease for Health Professionals: Potassium, Kidney Diseases & Diuretics 1 credit hour
Fourth in a series of four courses developed for students preparing for health professional programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science) who have a desire to expand their background in kidney physiology before entering these fields. Prerequisite: HS 552.

HS 560. Cranial Nerves I: Embryology 2 credit hours
First in a series of two courses developed for students who have a desire to expand their background on the cranial nerves before entering a health professional field (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degree in the sciences (e.g., biology, exercise science). Prerequisite: BIOL 223 or HS 290.

HS 561. Cranial Nerves II: Anatomy & Physiology 2 credit hours
Second in a series of two courses developed for students who have a desire to expand their background on the cranial nerves before entering a health professional field (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degree in the sciences (e.g., biology, exercise science). Prerequisite: BIOL 223 or HS 290.

HS 570. Neuroscience for Health Professionals: Peripheral Nervous System 1 credit hour
First in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisite: instructor's consent.

HS 571. Neuroscience for Health Professionals: Ascending and Descending Pathways 1 credit hour
Second in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisite: HS 570 or instructor's consent.

HS 572. Neuroscience for Health Professionals: Brainstem and Cerebellum 1 credit hour
Third in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisites: HS 570, 571.

HS 573. Neuroscience for Health Professionals: Forebrain 1 credit hour
Fourth in a series of four courses developed for students preparing for health professions programs in a variety of settings (e.g., nursing, physician assistant, physical therapy, medical degrees), or advanced degrees in the sciences (e.g., biology, exercise science, biochemistry) who have a desire to expand their background in neuroscience before entering these fields. Prerequisites: HS 570, 571, 572.

HS 583. Anatomy of the Body Cavities 3 credit hours
The gross anatomy of the human body cavities presented in a four-week summer term using a regional approach. Teams of eight students dissect the thoracic, abdominal, and pelvic cavities on human cadavers, emphasizing cardiovascular, respiratory, gastrointestinal, and urogenital systems. Prerequisite: BIOL 203 or 223.

HS 600. Advanced Clinical Anatomy 5 credit hours
Structured to present the human body using a regional approach. Emphasis on learning gross anatomy with a clinical mindset. In addition to lectures, the students use dissected cadavers, skeletal specimens, radiographic films and anatomical models. Designed for those students who desire to pursue a degree within health professions and who would like to deepen their knowledge of human anatomy and its application to clinical scenarios. Prerequisite: BIOL 223 or HS 290.

HS 700. Gross Anatomy 6 credit hours
3 Classroom hours; 9 Lab hours. Study of the structure of the human body emphasizing integration of anatomical information with human functional abilities. Prerequisites: four semesters of biological sciences and instructor's consent.

HS 710. Applied Clinical Pharmacology 3 credit hours
Discusses clinical applications of selected drug classes commonly prescribed in the primary care setting as well as the follow-up management of common chronic diseases. Discusses pharmacological management as to pharmacokinetics, dosages, mechanisms of action (at molecular and systemic levels), side effects, drug interactions, contraindications, therapeutic use and expected outcomes. Emphasizes the practical application of this knowledge in various patient populations of all ages as well as rational drug selection and monitoring. Methodology includes lecture presentations, group discussions, clinical case studies, assessment of recent literature, homework assignments, quizzes and exams. Prerequisites: HS 301, admission to graduate health professional program or PA professional program, or instructor's consent.

HS 711. Pharmacological Management of Acute and Chronic Diseases 3 credit hours
Discusses the clinical application of specific categories of drugs used in the treatment of several common acute and chronic diseases. Presents pharmacokinetics, mechanisms of action, dosages, side effects and monitoring parameters of medications as they are used in these diseases and in various patient populations. Facilitates clinical application of this knowledge through case studies, class discussions and reviews of the latest medical literature. Prerequisites: admission to graduate nursing program and department consent, or completion of HS 710 and admission to PA professional program.

HS 712. Administration of Hospital-Based Education 3 credit hours
2 Classroom hours; 2 Lab hours. Historical perspective of hospital health education, resources and requirements for providing institution-wide educational services, identification and analysis of educational needs, hospital's role in community health planning and program evaluation.

History (HIST)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

HIST 100. The Human Adventure: World Civilization Since 1500 3 credit hours
General education introductory course. An introductory history of the human experience during the past five centuries, with attention to the
major social, cultural, economic and political traditions of Asia, Africa and the Americas as well as Europe. Course includes diversity content.

HIST 101. World Civilization to 1500  3 credit hours
General education introductory course. Introduces great world civilizations before 1500, both Western (Near East, Greece, Rome, Medieval and Renaissance Europe) and non-Western (China, Japan, India, sub-Saharan Africa and the Americas). Readings help define civilization, stress the individual contributions of each culture to world civilization, and examine the interactions and influences between cultures. Course includes diversity content.

HIST 102. History of Western Civilization Since 1648  3 credit hours
General education introductory course. Introductory survey of the political, social, cultural and economic developments in Europe from 1648 until the present day that have shaped our world. Covers the development of constitutional democracies, the rise of totalitarian dictatorships, the emergence of mass society and the middle class, and revolutionary developments in politics and technology.

HIST 104. Topics in World History  3 credit hours
Familiarizes students with creative and/or nontraditional ways of examining world history. Possible topics include how contemporary society uses world history in film, the evolution of social issues through first-person accounts from a variety of cultures across the globe, or other topics and approaches.

HIST 110. Russian Studies  3 credit hours
Cross-listed as POLS 110. Team-taught by faculty from history, political science and modern and classical languages and literatures. Prepares students wishing to pursue additional courses and/or programs in Russian history, Russian language and literature, Russian government and politics, and/or international relations, including business. Covers medieval, Czarist, Soviet and present day (post-Soviet) Russia.

HIST 131. History of the United States: Colonial to 1865  3 credit hours
General education introductory course. Begins with the native peoples who occupied this continent and continues through the Civil War. Explores the origins and development of the United States, including the influence of the Puritans, the struggle for independence, the quest of the 19th century hippies to find utopia, and the challenge to abolish slavery. Examines the formation of our institutions, major political and economic issues, and the expansion of the country’s boundaries.

HIST 132. History of the United States Since 1865  3 credit hours
General education introductory course. Examines the rapid change characterizing the period of U.S. history from the Civil War to the present. Studies the growth of big business, reform movements, and the emergence of the U.S. as a world power. Explores how political, social and economic factors—such as WWI, WWII, Korea and Vietnam—continue to affect Americans and present a challenge to democracy within a growing diverse population that tests traditional institutions.

HIST 150. Workshops in History  3 credit hours
Workshop on a variety of history topics. Different topics have different letters added to the course number.

HIST 150U. Chisholm Trail  0.5 credit hours
Kansas is considered the crossroads for many of the historic trails of the Old West. In its heyday, from the late 1860’s through the 1880s, the Chisholm Trail served as a cattle pipeline from Texas ranches to the stockyards and railroad hubs in Abilene, Newton, Wichita, and Caldwell. It was an economic lifeline for Kansas, helping to promote the railroad and making ranching more profitable. 2017 marks the 150th anniversary of the trail.

HIST 150V. Conflict on the High Plains  0.5 credit hours
In the Age of Manifest Destiny and westward expansion, settlers often collided with Native Americans who had already called this territory home for generations. The escalation of these collisions eventually led to the involvement of the United States Army, and what is known today as the Indian Wars. A series of conflicts on the High Plains will be closely investigated and diagnosed to see did History get these stories right? Has the information changed since then? What were the accounts of the parties involved? And, what is the current view/climate of the situation? This course will explore all of these questions and more.

HIST 150W. New Kansas - Trappers, Missionaries and Travelers - the story of Kansas before 1854  0.5 credit hours
Long before Kansas became a state, it was a wide-open territory — unexplored by the Euro-Americans, untamed by Christian missionaries and home to native American tribes. Explorers, pioneers, politicians and soldiers came to the area lured by the opportunity to acquire land for farms and homes, business opportunities, and the desire to make a free state. These people endured many hardships including storms, drought, sickness, starvation and raids. In this class we will take an in-depth look at the settlement of Kansas and the colorful characters who called it home. We will also look at how the state’s geography, native American tribes and the religious views of its inhabitants still impact our state today.

HIST 225. Your Family in History  3 credit hours
Bridges the gap between history and genealogy through demonstrations of the kinds of research techniques available to those who are interested in creating a family history. Students demonstrate understanding of these techniques in a family history project.

HIST 300. Introduction to Historical Research and Writing  3 credit hours
Basic hands-on instruction in historical research methodology, writing and criticism. Students do individual research and write articles and book reviews, a lengthy research paper, and critiques of their colleagues’ paper drafts. Goal is for students to be capable of conducting historical research and presenting findings in a professional manner. Required of history majors.

HIST 302. American Popular Culture  3 credit hours
Examines American popular culture from the Civil War to the present. Explores how popular music, cinema, pulp magazine literature, comics, television and fashion have developed over time to reflect changes in society, its myths, and its values.

HIST 306. The U.S. Century: Decades of Change  3 credit hours
General education advanced further study course. An examination of the major social and political events of the turbulent 20th century. Beginning with the assassination of William McKinley, this course explores the U.S. participation in wars, the economic and social crises of the Great Depression, and the reform movements of the “American Century.”

HIST 308. A History of Lost Civilizations  3 credit hours
General education advanced issues and perspectives course. A comparative examination of lost civilizations of both the Old World and New World, including the Sumerians, Hittites, Minoans, Mycenaens, Etruscans, Mohenjo-Daro, Khymers, Incas, Mayas and Aztecs.

HIST 310. Special Topics in History  1-3 credit hours
May be taken only twice for credit toward a history major.

HIST 310A. Internship in Public History  3 credit hours
Complements and enhances the student’s academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.
HIST 312. Modern Latin America  3 credit hours  
*General education advanced further study course.* Begins with the wars for independence, continues with the challenges to achieve nationhood, and concludes with an examination of major social, political and economic issues Latin American nations faced in the 20th century. Roles of Bolivar, Santa Anna, Evita and Castro are key components. *Course includes diversity content.*

HIST 314. English History  3 credit hours  
*General education advanced further study course.* English history from the beginning of the Stuart period to the present.

HIST 315. Modern German History  3 credit hours  
Surveys German history from the end of the Napoleonic era in 1815 to the fall of the Berlin Wall in 1989.

HIST 317. The Holocaust  3 credit hours  
*General education advanced further study course.* Investigates the conditions within European society which led to and ultimately culminated in the murder of approximately six million Jews. *Course includes diversity content.*

HIST 318. The Holocaust in Film  3 credit hours  
Examines ways the Holocaust has been represented in film and uses the material to evaluate the problematic nature of historical representation in film.

HIST 320. Russian History Survey  3 credit hours  
*General education advanced further study course.* A survey of Russian history from A.D. 862 to the present.

HIST 321. The Vietnam Conflict  3 credit hours  
*General education advanced further study course.* Studies U.S. participation in Vietnam. Includes the French experience in Indochina, U.S. troop buildup, the Tet Offensive in 1968, and the anti-war movement at home. Examines political factors as well as military strategy, tactics, and major battles.

HIST 324. Modern East Asian History  3 credit hours  
A comparative survey of the modern era in the history of China and Japan from approximately 1800 to the present. Considers indigenous and external factors for the political, economic and social developments of these societies, as well as their current roles in international affairs.

HIST 325. Survey of Public History  3 credit hours  
A survey of the various arenas where public history takes place; an introduction to the tools and techniques that historians use to present historical research in non-academic settings.

HIST 330. The Americans: Conflict and Consensus in the Development of American Society and Culture  3 credit hours  
*General education advanced issues and perspectives course.* A topical examination of selected historical phenomena and personages in the evolution of American democratic society as interpreted by historians and literati.

HIST 332. Ethnic America 1500-1924  3 credit hours  
*General education advanced further study course.* Cross-listed as ETHS 330. An introduction to the history of the ethnic experience from the 1500s to the 1920s. Themes include the context of emigration, immigration laws, nativism and exclusion, adaptation and acculturation, community development and political empowerment. *Course includes diversity content.*

HIST 333. Ethnic America 20th Century  3 credit hours  
*General education advanced further study course.* Cross-listed as ETHS 334. An in-depth study of the ethnic experience in the 20th century. Major historical topics include identity formation, intergenerational conflict, class differentiation and social mobility, the politics of ethnicity, resistance and civil rights movements, the racialization of immigration laws and transnationalism. *Course includes diversity content.*

HIST 340. World War II  3 credit hours  
*General education advanced further study course.* An introduction to the background and causes of World War II, as well as the military, diplomatic, economic, psychological and scientific dimensions of the war. Considers the legacy of the war in light of the postwar world.

HIST 348. History of Baseball  3 credit hours  
Explores the evolution of America's national pastime and examines the relationship between baseball and the development of American culture, society and character. Examines the development of the sport as a uniquely American game, its heroes and bums, champions and cheaters, fans and critics, labor and owners.

HIST 352. Classical Mythology  3 credit hours  
Cross-listed as GREEK 325 and LATN 325. Studies the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes, and important sagas such as Achilles, Odysseus and the Trojan War. Sources are mainly literary, e.g., Homer, Hesiod, Virgil and Ovid, but the course also includes Greek art. All readings in English; requires no previous knowledge of Latin or Greek.

HIST 357. Women in the Ancient World  3 credit hours  
*General education advanced further study course.* Examines the myth and realities of women's lives in the traditional societies of ancient Greece and Rome. Explores how women's social and economic roles varied from culture to culture and how they changed over time from the age of primitive matriarchy to the Christian era. Investigates the influence of these cultures on our own.

HIST 359. Greek World  3 credit hours  
*General education advanced further study course.* Surveys Greek history from the Minoans to Cleopatra. Examines the early relations between the Greeks and other ancient civilizations such as Assyria and Egypt, the birth and decline of democracy in Athens, the world empire of Alexander the Great, and the later influence of Greek culture on the Roman world. Also discusses trade, law and family life.

HIST 362. The Roman World  3 credit hours  
*General education advanced further study course.* Surveys Roman history and culture from the Etruscans to Constantine the Great, the first Christian emperor. Examines the history, social structure and economy of Rome and the Roman world to answer the questions: what made Rome great and what led to her eventual decline? Includes warfare, slavery and family life.

HIST 399X. Communism and the Cold War in Film  3 credit hours  
This course will be an exploration of how the communist regimes of 20th century Europe have been represented on film. It will be a 300-level class with no prior expertise. The goal is for students to learn both about communist societies as well as using film to study history.

HIST 481. Cooperative Education  1-3 credit hours  
The cooperative program covers work done at museums or archival divisions of libraries. Cannot be included for a history major or minor. Graded Cr/NCr. Prerequisite: departmental consent.

HIST 481N. Internship  1-3 credit hours  
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.
HIST 501. American Colonies  3 credit hours
General education advanced further study course. Colonization of the New World emphasizing the British colonists and their development.

HIST 502. American Revolution and the Early Republic  3 credit hours
General education advanced further study course. Examination of selected phases of the Revolutionary, Confederation and Federal periods.

HIST 503. Age of Jefferson & Jackson  3 credit hours
General education advanced further study course. Examines the eras of Thomas Jefferson and Andrew Jackson; that is roughly the period from 1800 to 1850. During that time, the United States experienced tremendous territorial growth, cultural ferment and reform movements, engaged in two major international wars and a number of Indian conflicts, and moved toward the sectional showdown over slavery that culminated in a bloody civil war. The focus is on political, social and military history, as America expanded from the Mississippi River across the North American continent.

HIST 504. Civil War  3 credit hours
General education advanced further study course. Explores the origins and history of the bloodiest war this nation has ever fought. Students study antebellum America, focusing on the sectional differences between North and South, the institution of slavery, the abolitionist crusade, and the battlefields of the Civil War.

HIST 505. The United States, 1865 to 1920  3 credit hours
General education advanced further study course. Examines the political, economic, social and cultural developments during the Gilded Age and Progressive Era. Students read articles, books, and primary documents to trace the experiences of the American nation and people as they transform from a growing nation into a global power with special focus on topics such as Reconstruction, political and economic corruption and reform, industrialization, the development and mechanization of the trans-Mississippi West; the rise of corporations, railroads, cities and the American State; and the challenges of African Americans, immigrants and women. In the end, students should walk away from the course with a better, more in-depth understanding of the history of, and major historical debates concerning, the Gilded Age and Progressive Era in the United States.

HIST 506. The Vietnam Conflict  3 credit hours
General education advanced further study course. Studies U.S. participation in Vietnam. Includes the French experience in Indochina, U.S. troop buildup, the Tet Offensive in 1968, and the anti-war movement at home. Examines political factors as well as military strategy, tactics and major battles.

HIST 507. United States 1900-1945  3 credit hours
General education advanced further study course. Major topics explored include World War I, the Great Depression, and World War II. While this period in U.S. history is noteworthy for conflict, consensus in the form of Progressivism, the New Deal, and the emergence of the modern presidency also characterize these decades. An examination of political leadership is a major component of this course. The emphasis, however, is "history from the bottom up" as the lives of ordinary Americans are examined.

HIST 508. United States Since 1945  3 credit hours
General education advanced further study course. In this time period, the United States emerged as a world leader. Although the Cold War became a defining force both at home and abroad, "hot" wars in Korea and Vietnam also produced social, economic and political repercussions in the United States. Course explores major issues and events of the period with a focus on international relations, the Civil Rights Movement, and the growth of the imperial presidency.

HIST 509. The African-American Historical Experience  3 credit hours
Provides a panoramic examination of the African-American experience. Chronologically, it covers life in Africa before the trans-Atlantic slave trade to the present day. It focuses on the social, political and economic development of the transplanted Africans in the United States. Course includes diversity content. Prerequisites: junior, senior or graduate status.

HIST 510. 20th Century African American History  3 credit hours
The 20th century witnessed a dramatic transformation of the African-American community. As the century began, the vast majority of African-Americans lived in the rural South. At century's end, the vast majority of African-Americans lived in urban areas across the U.S. Besides the demographic relocation of black America, the 20th century also witnessed the Black Freedom Movement (comprised of the Civil Rights and Black Power movements), which dramatically changed the social, economic and political status of blacks. Course examines these and other aspects of the African-American experience during the pivotal 20th century.

HIST 511. Women in Early America, 1600-1830  3 credit hours
Focuses on women and gender in U.S. history between 1600 and 1830 by examining the lives, experiences, and interactions with social, political and economic systems of women. Students read articles, books, and primary documents that examine women’s experiences from the first colonial contact with Native Americans to the dawn of the first women’s movement in the 19th century. Focuses specifically on colonization, regionalism, the roles of race and ethnicity in the construction of gender, women in religious life, the impact of the American Revolution, Republican Motherhood, and women's contributions to the public sphere and market economy. In the end, students should walk away with an understanding of women in early U.S. history and of the major historical debates concerning women’s and gender history.

HIST 512. Women and Reform in America, 1830-Present  3 credit hours
Focuses on women, gender, and reform in U.S. history from 1830 to 2000 by examining the lives, experiences, and interactions with social, political and economic systems of women. Students read articles, books, and primary documents that examine women’s experiences from the emergence of a domestic economy in the 1830s to 21st century popular culture with specific focus on topics such as the Cult of True Womanhood, slavery, Civil War and Reconstruction, Progressivism, suffrage, WWI, post-war feminism, and popular culture. In the end, students should walk away with an understanding of women in early U.S. history and of the major historical debates concerning women’s and gender history.

HIST 515. Economic History of the United States  3 credit hours
Cross-listed as ECON 627.

HIST 517. Constitutional History of the United States  3 credit hours
General education advanced further study course. The evolution of the American constitutional system from English and Colonial origins through the Civil War.

HIST 517H. Constitutional History of the United States  3 credit hours
General education advanced further study course. The evolution of the American constitutional system from English and Colonial origins through the Civil War. Honors section.
HIST 518. Constitutional History of the United States  3 credit hours
General education advanced further study course. American constitutional development from Reconstruction to the present.

HIST 521. Diplomatic History of the United States to 1914  3 credit hours
General education advanced further study course. Beginning with the Colonial era, this course examines the diplomatic history of the United States to the brink of American participation in the First World War. Focuses on the movement toward independence, territorial expansion across the continent, the Civil War and the emergence of America as a world power.

HIST 522. Diplomatic History of the United States Since 1900  3 credit hours
General education advanced further study course. Examines American diplomatic history during the 20th century; that is, from the era of Theodore Roosevelt and the "big stick" through the presidency of Bill Clinton. This was a period when the United States emerged as a major player in global affairs, engaged in numerous military conflicts, waged a cold war against the "evil empire" of the Soviet Union, and ultimately stood alone as the world's only economic and military super power.

HIST 525. American Military History  3 credit hours
General education advanced further study course. Surveys the American military heritage and its role in shaping the modern United States. Studies the history of warfare from frontier conflicts during the Colonial period through Desert Storm; focusing on the most significant wars and battles, and the evolution of military institutions and their impact on American social, economic and political traditions.

HIST 526. The Civil Rights/Black Freedom Movement  3 credit hours
A detailed examination of the mid-to-late 20th century phenomenon known as the Black Freedom Movement, which consisted of the (passive-resistance) Civil Rights Movement and the (more aggressive) Black Power Movement.

HIST 527. African-American Business History  3 credit hours
Surveys the history of African-Americans as entrepreneurs and business people. Drawing from a commercial tradition dating back to pre-trans-Atlantic Africa, business minded blacks overcame a variety of obstacles (such as slavery and Jim Crow segregation) to establish a commercial presence in America. Besides chronicking these efforts, the course also examines why African-American business history has traditionally received minimal attention in both the realms of American business history and African American history.

HIST 528. History of Wichita  3 credit hours
General education advanced further study course. A history of Wichita, Kansas, 1865-present, emphasizing the lessons of local history for future planning and its importance to an individual citizen's sense of place.

HIST 530. American Woman In History  3 credit hours
General education advanced further study course. Examination of the history, status and changing role of women in American society. Course includes diversity content.

HIST 531. American Environmental History  3 credit hours
General education advanced further study course. Examines the historical, physical, economic, scientific, technological and industrial interactions of the peoples of America with their environment. Emphasizes the period 1800-present. Course includes diversity content.

HIST 532. Women in Ethnic America  3 credit hours
Cross-listed as WOMS 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender and sexuality in women's lives. Course includes diversity content.

HIST 533. The American City: from Village to Metropolis  3 credit hours
A study of urbanization and urban life from Colonial times to the present-changing lifestyles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments, and the influence of new technology and forms of business organization.

HIST 535. History of Kansas  3 credit hours
General education advanced further study course. History of the Kansas region from Spanish exploration to the present, emphasizing the period after 1854.

HIST 536. Survey of American Indian History  3 credit hours
General education advanced further study course. Surveys the history of Native American nations from prehistoric times to the present. Includes the process of European colonization and indigenous responses, the strategies of accommodation, assimilation and resistance, and the resurgence of tribalism in the 20th century. Course includes diversity content.

HIST 538. The American West in the 20th Century  3 credit hours
General education advanced further study course. Explores the growth of the trans-Mississippi West in the 20th century, emphasizing political development, economic growth, cultural manifestations, the role of minority groups, and the impact of science and technology.

HIST 541. Modern France  3 credit hours
General education advanced further study course. History of the major trends in French history from Napoleon to DeGaulle emphasizing French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern industrial society.

HIST 542. Religion in America  3 credit hours
Cross-listed as REL 542. Surveys various religious traditions in American history from Colonial times to the present. Discusses how religions, groups, beliefs and issues have changed over time and how they interact with each other. Includes the different branches of Christianity and Judaism, the study of awakenings and revivals, the stories of prominent religious thinkers and leaders, immigrant religious traditions, the tensions between liberal and traditional religious forms, the prophetic and apocalyptic traditions in American, and the impact of Native American, Asian and African beliefs and practices on the religious landscape.

HIST 553. History of Mexico  3 credit hours
General education advanced further study course. "Poor Mexico: So far from God, so close to the United States." Examines the influences of the Maya, the everyday life of the Aztecs, and the destruction wrought when the Spanish invaded the New World. Major figures and the roles they played in Mexican history such as Santa Anna, Benito Juarez and Pancho Villa emerge in this study. Course concludes with the impact of a 2000-mile border with the United States and a brief look at NAFTA.

HIST 559. Classical Athens  3 credit hours
General education advanced further study course. Focuses on Athens from the sixth to the fourth centuries, from the emergence of the Greek city state to the age of Demosthenes. Examines how Athens founded and maintained the earliest democracy and how individuals such as Socrates, Pericles, Plato and Aristotle fit into their society. Other topics may include warfare, the family, farming, commerce and the law.

HIST 560. The Hellenistic World and Rise of Rome  3 credit hours
General education advanced further study course. Begins with the conquests of Alexander the Great and provides an overview of the new
HIST 562. Roman Republic 3 credit hours
General education advanced further study course. Covers the period of early Roman history from the founding of the city to the first emperor Augustus. Includes coverage of wars and the Roman army, government, society and culture. Emphasizes the end of the republic during the dictatorship of Julius Caesar, the civil wars, and the role of the emperor Augustus.

HIST 563. Roman Empire 3 credit hours
General education advanced further study course. Focuses on social and cultural achievements of the Roman empire starting with the dissolution of the republic and the invention of the empire by Emperor Augustus in the first century B.C. Ends with the sack of Rome in the fifth century A.D. Emphasizes the spread of Roman law, government and culture to areas outside of Italy, including Roman Britain, Judea and Roman Egypt, the rise of Christianity, and the reasons for the decline of Rome.

HIST 566. Medieval History 500-1200 3 credit hours
General education advanced further study course. The history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200.

HIST 567. Medieval History 1200-1500 3 credit hours
General education advanced further study course. History of Europe, 1200 to 1500.

HIST 569. Medieval England 3 credit hours
An examination of the development of Medieval England from the Anglo-Saxon Invasions until the end of the 14th century. The Norman Conquest, the rule of the Angevins, the reign of Edward I, and the daily life of those peoples who became the English receive particular attention.

HIST 575. Italian Renaissance 3 credit hours
General education advanced further study course. Italian history from the 14th through the 16th centuries emphasizing cultural achievements.

HIST 576. The Reformation 3 credit hours
General education advanced further study course. The great religious changes in the 16th century in the political, social and intellectual contexts.

HIST 577. Medieval Women 3 credit hours
Deals with the lives and accomplishments of Christian women in Late Antiquity and the Middle Ages. Course includes diversity content.

HIST 579. Asian Women in Modern History 3 credit hours
Cross-listed as ETHS 579 and WOMS 579. Examines women's historical and contemporary experiences in Asian America and eight major countries in modern Asia. Covers topics on Asian women's activism in relation to nationalism and women's rights. Investigates Asian women's roles and statuses in the family and society and their educational attainment and contributions to the export-oriented industrialization of the Asia-Pacific region. Examines the intra-regional migration of female guest workers among various countries in Asia. Traces the ways in which the changes in immigration laws during the 20th century affect patterns of Asian women's migration to the United States. Introduces writing that integrates Asian women's lives and Asian American experiences into the discourses on ethnicity, national origin, class, gender and sexual orientation in the United States and the Asia-Pacific region. Course includes diversity content.

HIST 581. Europe 1789-1870 3 credit hours
General education advanced further study course. A focused survey of European social, cultural and political history from 1789-1870. Among the topics covered are the Enlightenment, the French Revolution, industrialization, Romanticism, nationalism, liberalism, socialism, the revolutions of 1848, and the role of women in European society.

HIST 582. Europe 1871-1945 3 credit hours
General education advanced further study course. A focused survey of European history between the years 1871-1945. Among the subjects covered are the phenomena of nation building and the imperial project, the rise and growth of European socialism, the emergence of a "mass society," the role of women and minorities, the origins and impact of World War I, inter-war politics and diplomacy, the Nazi Era, and World War II.

HIST 583. Europe 1945-Present 3 credit hours
A survey of European history, 1945-present.

HIST 588. History of Early Russia 3 credit hours
General education advanced further study course. Covers the social, political and cultural history of Kievan and Muscovite Russia.

HIST 589. History of Imperial Russia 3 credit hours
General education advanced further study course. A survey of the political, social and cultural history of Imperial Russia.

HIST 592. History of Soviet Union 3 credit hours
General education advanced further study course. A survey of Soviet history from the Bolshevik Revolution to the present.

HIST 593. Former Soviet Union 3 credit hours
General education advanced further study course. An examination of contemporary life in the former USSR: historical background, Marxist/Leninist ideology, industrial and agricultural economies, roles played by women, national minorities and dissidents in Soviet society, the press, literature and art, health care, and prospects for the country's future.

HIST 698. Historiography 3 credit hours
Required of undergraduate history majors. This capstone course engages students in a systematic analysis of major historians and schools of historical thought. Class assignments and discussions encourage students to examine their own ideas about history as an academic discipline. Prerequisite: 12 upper-division hours in history or instructor's consent.

HIST 701. Introduction to Local and Community History 3 credit hours
Introduces the study of local history and community history. Discusses the various venues through which local and community history takes place including historic preservation, archival administration, museum studies, documentary work, and writing for a variety of audiences. Students learn relevant practices as well as issues that face those who study local topics and/or specific communities. Prerequisite: graduate standing or instructor's consent.

HIST 702. Historic Preservation 3 credit hours
Advanced survey of the multifaceted, multidisciplinary field of historic preservation. Presents a broad and sophisticated view of the many arms of preservation in the U.S., as well as the numerous opportunities available to trained professionals in the field. Prerequisite: HIST 701 or instructor's consent.

HIST 703. Museum Administration 3 credit hours
Addresses the many facets of museum administration from a specialist's point of view. Covers collecting, management, law and ethics, and resource development. Gives a close view of the operations of American museums. Prerequisite: HIST 701 or instructor's consent.
HIST 704. Interpreting History to the Public: Explaining the Past 3 credit hours
Looks at ways history can be communicated to audiences, including scholarly texts, popular written histories, movies, videos, guidebooks, museums, and other similar media. Explores the differences between various forms of historical communication and assesses the ways they reach audiences. Students learn to discern various components of historical texts to use in the design of interpretation materials on their own. Prerequisite: HIST 701 or instructor's consent.

HIST 705. Introduction To Archives 3 credit hours
Introduces the basic knowledge, theory and related skills of archival administration, including the nature of information, records and historical documentation; the role of archives in modern society, and issues and relationships that affect archival functions. Covers the theory and skills necessary to understand and apply basic archival functions. Prerequisite: graduate standing and/or instructor's consent.

HIST 725. Advanced Historical Methods 3 credit hours
Reviews basic historical research methods, the general character of field bibliographies and recent interpretations, and the techniques of professional narrative development. Required of graduate degree students during their first year of enrollment. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership. Prerequisite: departmental consent.

HIST 727. Readings In History 1-3 credit hours
Readings in ancient, medieval, modern, European and American field bibliographies. Repeatable for credit. Prerequisite: departmental consent.

HIST 730. Seminar American History 3 credit hours
Repeatable for credit. Prerequisite: departmental consent.

HIST 733. Seminar European History 3 credit hours
Repeatable for credit. Prerequisite: departmental consent.

HIST 750. Workshop in History 2-3 credit hours
Repeatable for credit but does not satisfy requirements for history majors.

HIST 781. Cooperative Education in History 1-2 credit hours
Graduate history students participate in internship experiences through the cooperative education program. May substitute for HIST 803. A maximum of 4 credit hours of any combination of HIST 803 and HIST 781 may count toward degree requirements with permission from the program area. Graded Cr/NCr. Prerequisite: instructor's consent.

Honors (HNRS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

HNRS 101. Introduction to the University 3 credit hours
Designed especially for first-year students, with the goal of preparing students to succeed in college, including graduating in a timely fashion. Provides students with information about: college expectations; academic major, career and life planning; study skills; teaching and learning styles; respecting diversity of thought and culture; critical thinking; leadership training; campus resources; university policies and procedures; personal finances; health and fitness; and the benefits of engagement in student organizations. Students are introduced to faculty and staff from across the campus, and create an individualized graduation plan through a process of developmental advising.

HNRS 104. Seminar I: Fine Arts 3-4 credit hours
General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of the Cohen Honors College.

HNRS 104B. Art of Theater 3 credit hours
General education introductory course. What is art? Is it a valued part of our world? Does it matter in today's world? This seminar examines what Theatre is as an art form, and explores its value in our lives. It approaches these topics through readings, discussions and attendances at performances. Actors, designers, directors in the Wichita area bring their expertise to class through presentations and talk backs. Besides readings and discussions, the course includes several experiential opportunities outside of the classroom. Creative projects for the class are also a strong component.

HNRS 105. Seminar I: Humanities 3-4 credit hours
General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of the Cohen Honors College.

HNRS 105G. War: Strategic Studies 3 credit hours
General education introductory course. Conflict and warfare are about as "normal" as anything in human affairs. Many of us find this shameful and disgusting and like to think of warfare as aberrant. Many of the same people who feel this way admire and respect soldiers, are stirred by military displays, and spend hours each week playing combat-based video games (or chess). In this season when "outsider" presidential candidates are drawing a lot of interest, it's worth remembering that the only political "outsiders" ever elected President (or nominated by a major party) were generals: Washington, Jackson, Taylor, Grant, Garfield, Eisenhower, and losing nominees Scott and Hancock, and several other Presidents got their start in politics based on military reputations, e.g., Monroe, Pierce, Hayes, and T. Roosevelt. This is not entirely surprising if you remember that executive power in politics is a direct descendant of leadership in war. This seminar is not about whether war is a good thing, a bad thing, or a necessary evil. It is about how it works. At the center of this theme lies the concept of strategy. Effective strategic thinking is one of the highest level forms of applied intelligence. It requires a synoptic grasp of many variables and is inherently “interactive”–great commanders know how to get inside the heads of their enemies. War is perhaps the most demanding field in which strategic thinking is employed, but not the only one. Almost all the great students of strategy approach it historically and so will we.

HNRS 105V. Environmental Philosophy 3 credit hours
General education introductory course.

HNRS 105W. Epidemics in World History 3 credit hours
General education introductory course.

HNRS 106. Seminar I: Social and Behavioral Sciences 3-4 credit hours
General education introductory course. Topics vary. Prerequisite: Beginning honors student or permission of the Cohen Honors College.

HNRS 107. Seminar I: Mathematics and Natural Sciences 1-5 credit hours
1-3 Classroom hours; 2-4 Lab hours. General education introductory course. Topics vary. Prerequisite: beginning honors student or permission of the Cohen Honors College.

HNRS 150. Seminar II: Fine Arts 3-4 credit hours
General education introductory course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 151. Seminar II: Humanities 3-4 credit hours
General education introductory course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.
HNRS 152. Seminar II: Social and Behavioral Sciences  3-4 credit hours
General education introductory course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 152F. Leadership Challenge  3 credit hours
General education introductory course. Course takes the perspective of Astin and Astin (2000) that... “an important leadership development challenge for higher education is to empower students, by helping them develop those special talents and attitudes that will enable them to become effective social change agents.” Considering the pace of change in society, leadership may be our most significant challenge in the 21st century. Course embraces adaptive challenges and create conditions for students to exercise leadership in real time. This is not a traditionally-taught class. Uses experiential methods so that the classroom serves as a learning laboratory for leadership development. In the end, this experience is about developing the capacity to serve as effective social change agents.

HNRS 153. Seminar II: Mathematics and Natural Sciences  3-5 credit hours
1-3 Classroom hours; 2-4 Lab hours. General education introductory course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 153B. The Dynamic Universe  3 credit hours
General education introductory course. Designed to introduce students to the fascinating subject of astronomy. Focuses heavily on current space missions and astronomical events. Covers a variety of topics, including the solar system, the sun, the stars, stellar evolution (birth, life, and death of stars), galaxies and cosmology (the origin and fate of the universe).

HNRS 153T. Big Bang, Black Holes, the Fate of the Universe  3 credit hours
General education introductory course. Nonmathematical introduction to the theory of the Big Bang. Examines the history of the universe from its beginning through the most recent spacecraft missions. Students learn concepts that tie many different subjects together, contributing a valuable piece to their comprehensive education.

HNRS 300. Introduction to the University for Transfer Students  1-2 credit hours
Designed especially for students who have recently transferred to WSU from another institution, with the goal of preparing students to succeed, including graduating in a timely fashion. Provides students with information about: expectations of WSU professors; academic major, career and life planning; study skills; teaching and learning styles; respecting diversity of thought and culture; critical thinking; leadership training; campus resources; university policies and procedures; personal finances; health and fitness; and the benefits of engagement in student organizations. Students are introduced to faculty and staff from across the campus, and create an individualized graduation plan through a process of developmental advising.

HNRS 304. Seminar III: Fine Arts  3-4 credit hours
General education advanced issues and perspectives course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 304E. The Arts in Wichita  3 credit hours
General education advanced issues and perspectives course. Hybrid course (part of the course interaction is online) looks at the role of the arts (music, dance, art and theatre) in the Wichita community. Explores the role of the audience and patronage, the impact of the arts in the local community, arts management and marketing by meeting at various art events or venues in Wichita and meeting with local arts managers and artists in class. Because this is a hybrid course, part of it is delivered online. Students are expected to participate in discussion forums and online activities to earn full credit.

HNRS 304F. Discovering Creativity  3 credit hours
General education advanced issues and perspectives course. This course is based on the concept that all humans are creative beings who are involved in the creative process. We will explore this concept through creative exercises inspired by our core text, Discovering the Creative Impulse by Harold Popp. Students will review creative processes and products with an eye to the uniqueness of human needs, drives, and activities. Diverse perspectives are integral to the creative endeavor not only in art and in science, but across disciplines, cultures, and ages and experiences.

HNRS 305. Seminar III: Humanities  3-4 credit hours
General education advanced issues and perspectives course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 305D. Models and Analogies in the Natural and Social Sciences  3 credit hours
General education advanced issues and perspectives course.

HNRS 305E. Video Games and Philosophy  3 credit hours
General education advanced issues and perspectives course. Uses video games from their earliest days to the present as a launching pad for discussion of a host of mind-bending philosophical issues in ethics, metaphysics, epistemology and logic. The coverage of specific video games and philosophical topics are determined in part by student interest and may include such questions as: What is the value in playing video games? Can you do something “morally wrong” in the context of a video game, or does anything go? Is killing in a video game bad for your moral character in real life? Is time travel really possible? Could an artificial intelligence really exist? Is faster-than-light travel possible? Is teleportation really possible (and desirable)? Video games sometimes involve supernatural beings, magic and other occult ideas — what can be learned about the philosophy of religion from such games? What kinds of beings do (or could) count as “persons” in the strict sense? Where is the line between simulation and reality? How do we know we aren’t characters in a video game right now? What, if anything, do game-theoretical concepts such as The Prisoner’s Dilemma teach about real decision making? Why are video games predominantly played by males? Is it okay that your Kinnect is watching you? Who “owns” extremely popular games — the players or the creators? In addition to the main focus on video games themselves, students discuss some books and movies that touch on related issues: The Last Starfighter, Tron, Ender’s Game, The Matrix, Lara Croft, Star Trek, and more. Grades are based on several shorter plus one longer written assignment, a group project and related in-class presentation, and class participation.

HNRS 305F. Epidemics in World History  3 credit hours
General education advanced issues and perspectives course. Focuses on the history of the impacts and human responses to a specific epidemic outbreak or outbreaks. Begins with an overview of epidemics and human response and focuses in depth on legionella and Legionnaires’ disease. This examination situates current events into the history of the bacteria and traces the public health, scientific and popular responses to the infectious organism. Course is conducted seminar style with student discussion and participation forming a portion of the grade. Students are also graded on both a written project and an oral presentation of their research. If enrollment merits, the final research project may be a collaborative effort. Course objective is to get the students digging into the history of Legionnaires’ disease and applying a critical eye to contemporary events and approaches to the disease.
HNRS 305G. Governing Women’s Bodies in the 20th Century 3 credit hours
*General education advanced issues and perspectives course.* Examines the legal, medical, and media-driven cultural attempts to govern women’s bodies throughout the 20th century in the United States. Historically marginalized, American women often found the battle to secure greater legal rights; access to political, economic, and social power; and ability to make basic choices about their lives centered on a fight to control their bodies. Course covers such topics as property and wage rights, suffrage and legal access, medical authority and consent, as well as the television and movie images of the female ideal that attempt to govern women’s bodies in the 20th century and shape the way contemporary Americans think about women today.

HNRS 305I. Science, Religion & Philosophy 3 credit hours
*General education advanced issues and perspectives course.* Scientific inquiry and religious belief have a complicated, intertwined history. One influential view argues that religion partly inspired the rise of science and certainly the church often supported it. But some of the most dramatic and defining moments in modern history center on science-religion conflict, and many secularists and religious define the modern era as the age of anti-religion secularism. This seminar explores the relation of science and religion through case studies of some of the most dramatic conflicts and debates seemingly pitting them against one another. The primary case studies are the famous trial of Galileo by the Inquisition in the 1630s, and the reception of Darwin’s theory of evolution in the later 19th century. Also examines cosmology and debates about the origins of the universe. In each case, students study the conflicting views in their own terms before considering how disputes between them can best be understood and perhaps resolved. Students do several mini-research projects to develop information on each topic. Students stage debates, mock trials, etc., to focus and sharpen the points of conflict. One outcome is guaranteed: what everyone thinks they “know” about these famous conflicts and debates is, in fact, often false or badly distorted.

HNRS 305J. Minds and Machines 3 credit hours
*General education advanced issues and perspectives course.* People have constructed machines designed to imitate living creatures in some way long before there were electronic computers. When is a machine’s behavior appropriately called “intelligent?” Must it be capable of using a language? Must a machine be capable of learning in order to be regarded as intelligent? Must it be able to communicate with humans? What criteria are appropriate for judging that an animal’s behavior is intelligent; should the same criteria be used for machine intelligence? What lessons about machine intelligence should we take from debates over recent studies of intelligence in animals with nervous systems very different from humans (e.g., corvids, cephalopods)? Students consider these and other, related questions. Course takes a historical and interdisciplinary approach, drawing on works in philosophy, literature, science and history of science.

HNRS 305K. The Rise and Fall of Athens 3 credit hours
*General education advanced issues and perspectives course.* Who were the men and women of Athens, what were they like and how did they see themselves? Students read Homer’s Odyssey and parts of the Iliad (how they saw themselves), then track the Athenians as a developing sea power (the Rise), an empire, and then a city conquered by plague, constant war, politics, and the scarcity of wheat (the Fall). Students also try seeing Athens from other angles: Plutarch’s Lives (of famous Greeks) for example, and Mary Renault’s historical novels. Students investigate the Spartans, a contrasting culture and always a potential enemy of Athens. They read Brian Doerries’s recent The Theater of War. He uses Greek plays (in readers’ theater) to help returning veterans confront their memories. The Greeks, too, fought a very long war; their plays are full of it. Students read some of them, too, and then look at Barry Posen’s Restraint (2015). He proposes for the U.S. military a grand strategy of sea power, the same strategy Perikles designed for Athens. Students finish the course with a brief look at Philip, then Alexander of Macedon, who subdued both Sparta and Athens, then united the Greeks in a years-long conquest of Persia that spread Hellenism as far as India. Great powers rise, then fall. What that entails is what this course is about.

HNRS 305M. Science Fiction and Human Destiny 3 credit hours
*General education advanced issues and perspectives course.* Science fiction is chameleon-like. Although a well-defined niche in publishing, no standard definition captures its variety and scope. Even science can be an afterthought in mainstream works of science fiction. The audience for it tends to be male, but many of the most admired and successful writers in the field are women. Some classic science fiction fits narrow stereotypes (“scientists save the world,” or “mad scientist threatens the world”), while other classics explode those same stereotypes. All of this, coupled with the genre’s popularity, says something about where our imaginations live in the 21st century. Seminar examines a wide range of contemporary science fiction—novels, stories and films—with a view to both the methods and ideas that make science fiction what it is. Is science fiction prophetic, or more a mirror for our contemporary hopes and fears? Is it escapist literature, or a special kind of “realistic” fiction? Assignments include interpretative essays and a semester project: the creation of an invented world that could be setting for science fiction stories.

HNRS 305P. Epics and Identities: The Emergence of European Nationhood 3 credit hours
In this seminar we will see what some early western European long poems can tell us about social justice, cultural patterns and world views. Epics are core expressions of national identities. Heroes, acting or reacting in difficult situations, model social behavior within a matrix of communal values. Tribes, bands, armies, towns and kingdoms demonstrate the need, indeed the hunger for justice guided by cultural goals and taboos. Each poem is finally an expression of nationhood, the common view of self and others acquired by dealing with adversity over time within a particular historical context.

HNRS 306. Seminar III: Social and Behavioral Sciences 3-4 credit hours
*General education advanced issues and perspectives course.* Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 306B. Social Problems and Solutions 3 credit hours
*General education advanced issues and perspectives course.* Students identify a social problem, assess why it is not being solved currently by public or private action, and then propose a solution. The definition of “social problem” is expansive, and can include issues of health, the environment, infrastructure, economics, applied science or technology, and the arts. Course begins with analysis of the contemporary politics of health insurance reform and immigration, but most student work consists of a self-directed social solution project. Examples of possible topics: FAA regulations and airline safety, global warming, support/ lack of support for basic science research, arts education in schools, child and adult illiteracy.

HNRS 306C. The Art of Criminal Investigation 3 credit hours
*General education advanced issues and perspectives course.* Introduces students to the philosophical principles underlying criminal investigation, as opposed to the procedures. Students learn the basics about crime and investigation, but the emphasis is on applying the principles to daily life. Critical thinking is required to examine the difference between evidence and personal belief. Students are
challenged to justify their beliefs when confronted with conflicting evidence. Instead of investigating a crime, students investigate social issues with the detective mentality.

HNRS 306D. Law and Public Policy  3 credit hours
General education advanced issues and perspectives course.
The required introductory course for the Honors Law and Public Policy track. Focuses on how law and politics shapes the lives of citizens. Subjects covered include criminal law, drug courts, race and incarceration, free speech, freedom of religion, and judicial politics. Students complete a collaborative research project with the instructor. While this course may be of interest to students interested in going to law school, it is designed for all Honors students who are interested in how people organize their political and social lives through the law.

HNRS 306E. Hunger in NYC: Service and Leadership Needed  3 credit hours
General education advanced issues and perspectives course. Student Involvement’s Alternative Spring Break program exposes WSU students to complex social and cultural issues through community visits and direct service. This experiential course uses an applied learning method of service-learning to explore food and shelter insecurities in New York City. Students travel to NYC during spring break to serve a variety of community-based organizations with the goal of fighting hunger and homelessness. Class explores social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection.

HNRS 306F. Media Innovation, and Entrepreneurship  3 credit hours
General education advanced issues and perspectives course. It is the early stage of an information revolution. In the course of an 18-year-old’s lifetime, communications has become increasingly social, mobile, visual and global. This course is intended to expand students’ knowledge about how digital communication and entrepreneurship have transformed society, businesses and lives. It is meant to inspire thinking about innovation, and what roles students may play in the future of communication. The course contributes to their media and business literacy. It may even launch them on a new path in their lives and careers. Uses reading, research, class discussion, guest speakers and blogs to broaden their understanding of what it all means to those in communication careers. Students complete a digital entrepreneurship project to conceptualize and present a website, blog, game or app they pitch to potential investors.

HNRS 306G. Alternative Break: Service Leadership  3 credit hours
General education advanced issues and perspectives course. Student Involvement’s Alternative Spring Break program exposes WSU students to complex social and cultural issues through community visits and direct service. This experiential course uses an applied learning method of service-learning to explore a social justice issue through multiple communities both local and in an immersive travel environment. Students travel during spring break to serve in a variety of community based organizations. Course explores social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection. Open to all students by application to Student Involvement.

HNRS 307. Seminar III: Mathematics and Natural Sciences  3-4 credit hours
1-3 Classroom hours; 2-4 Lab hours. General education advanced issues and perspectives course. Topics vary. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 310. Honors Tutorial  1-2 credit hours
Repeatable to a maximum of 3 hours of credit. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 310Q. Honors Tutorial - Engaging Leaders  1 credit hour
Offers students the unique opportunity to explore, discuss and analyze various professional fields directed by executive officials from different companies, corporations and industries throughout the Wichita area. Introduces participants to those leadership and transferable skills that rising leaders should possess and consider when choosing a career path. Provides for visits to various city facilities, exposure to different philosophies and styles of leadership, and gives participants a chance to assemble facts, evaluate options and become more comfortable with the transition from the classroom to the boardroom. Course can be used toward the undergraduate leadership certificate, which corresponds to the following leadership certificate outcomes: identify leadership theories and concepts; differentiate leadership practices across settings, organizations, disciplines and systems; develop leadership skills based on personal strengths and professional interests.

HNRS 310R. Honors Tutorial - Evolving Leaders  1 credit hour
Designed for returning students to WSU who are looking to expand upon their leadership skills and abilities. Program focuses on creating well balanced leaders. Each participant receives a copy of The Well-Balanced Leader by Ron Roberts and is placed in a small group to present a chapter from the book. Each participant also helps plan the Leadership Discovery Summit, a half-day leadership workshop open to any WSU student. Course can be used toward the undergraduate leadership certificate, which corresponds to the following leadership certificate outcomes: identify leadership theories and concepts; differentiate leadership practices across settings, organizations, disciplines and systems; develop leadership skills based on personal strengths and professional interests.

HNRS 310T. Summer Leadership Institute  1 credit hour
A 5-day experience that allows each participant to evolve and expand upon leadership skills and abilities. Whether experienced or a novice leader, each individual is guided to develop and reflect upon where they currently are and where they would like to be as a leader. Participants are divided into leadership squads throughout the institute where they have the opportunity to discuss, analyze, and reflect upon the leadership lessons taught. Participants of SLI are guided to apply principles of leadership, develop self-awareness and teambuilding skills, and engage in critical thinking to address real-world leadership challenges.

HNRS 351. Survey of Leadership  3 credit hours
General education advanced issues and perspectives course. The main leadership theories and a history of leadership thought are presented, leadership perspectives are debated, and examples of leadership in
various contexts are discussed. After completing the seminar students should be able to recognize the main leadership theories, identify different leadership perspectives, recognize applications of leadership, and understand the benefits and challenges of leadership.

HNRS 352. Survey of Law & Public Policy  3 credit hours
*General education advanced issues and perspectives course.*
Interdisciplinary introduction to the role of law and public policy in the public and private sectors. Course provides a basic framework for understanding the differing rationales and methods associated with developing laws and public policies, and explores the impact of the political and social environment on the development, interpretation and application of both public policy and law.

HNRS 385. Advanced Academic Writing  3 credit hours
Course goal is to make honors students excellent academic writers. Going well beyond ENGL 101 and 102, attention is paid to topic selection, thesis construction and refinement, the use of supporting evidence, the evaluation of sources, organizing an argument, appropriate diction, and the conventions of various forms of academic writing (from bibliographies and exam answers to research papers and honors theses). Students develop grammatical competence and hone their abilities to express complex ideas clearly, concisely and precisely. Heavy emphasis on learning by doing, including intense feedback and revision processes. Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 398. Travel Seminar  1-4 credit hours
Interdisciplinary travel seminar which allows a student travelling abroad to gain credit for the study of culture, art, literature, architecture, political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of the dean of the Cohen Honors College, a faculty member in any department, or as part of a travel experience organized through the Cohen Honors College. Prerequisite: permission of the Cohen Honors College.

HNRS 398A. Travel Seminar: Turkey and Greece  1-3 credit hours
Interdisciplinary travel seminar which allows a student travelling abroad to gain credit for the study of culture, art, literature, architecture, political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of the dean of the Cohen Honors College, a faculty member in any department, or as part of a travel experience organized through the Cohen Honors College. Prerequisite: permission of the Cohen Honors College.

HNRS 398B. Travel Seminar: Europe  3 credit hours
Interdisciplinary travel seminar which allows a student travelling abroad to gain credit for the study of culture, art, literature, architecture, political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of the dean of the Cohen Honors College, a faculty member in any department, or as part of a travel experience organized through the Cohen Honors College. Prerequisite: permission of the Cohen Honors College.

HNRS 398C. Alternative Break: Africa  1-3 credit hours
Student Involvement’s Alternative Summer Break program exposes WSU students to complex social and cultural issues through community visits and direct service. Experiential course uses an applied learning method of service-learning to explore communities in developing rural Africa. Students travel to Africa during summer break to serve with community building through youth education and capacity building. Class explores social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection.

HNRS 398E. Alt Break D.C.  3 credit hours
Experiential course uses an applied learning method of service-learning to explore a social justice issue or issues. Students travel during spring break to Washington D.C. to serve in a variety of community-based organizations. Students explore social justice issues related to service through readings, discussion, writing, reorientation service in Wichita and research-based reflection.

HNRS 404. Seminar in Fine Arts  3-4 credit hours
*General education advanced further study course.*
Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 405. Seminar in Humanities  3-4 credit hours
*General education advanced further study course.*
Prerequisite: honors student or permission of the Cohen Honors College.

HNRS 405B. Isms & Ologies: Choose Your Own Adventure  3 credit hours
*General education advanced further study course.* Nuclear physics! The history of burlesque! What 18th century recipe books have to say about cultural standards! Gothic cathedrals! Worldwide creation myths! Rembrandt's experience with autopsies! This course is based on the notion that a loving study of serious literature, which often takes place purely within the boundaries of academic literary criticism, can also properly touch upon the larger world, the "isms" and "ologies" of other fields of interest. Students choose a body of serious literary writing for which they've always felt passion (poetry or prose, canonical or contemporary, the choice is the student’s) and then choose an outside field of interest (medicine, world religions, crime forensics, whatever: again, the choice is the student’s) that links up meaningfully with the literature. In many senses, this is truly a course of the student’s own making, and implies as its constituency exactly that kind of proactive, self-directed person one associates with Honors College study. The end-game moment is be a final, substantial paper based upon the students’ semester of intense and engaged research, class presentations that summarize the papers… hopefully, this results in a series of classes toward semester’s end as various and bountiful and substantial and fun as a WSU classroom can afford to contain.

HNRS 405C. Nature of Fiction: Writing the Real  3 credit hours
*General education advanced further study course.* Since the 1960s, new and different interpretive methods for studying and analyzing literary works have emerged, one after another. Text-based formalism ruled for years, but then the idea of reading a piece of literature as history took hold. Readers as generators of meaning followed, varying by education and experience. Class, race, gender, sexual preference then offered ways of seeing literature so that texts both old and new were given multiple access points. Honors ENGL 330 reviews these critical schools of thought, providing multiple lenses for those who wish to examine and re-examine literature.

HNRS 405D. Race, Racism, Social Justice  3 credit hours
*General education advanced further study course.* Explores the many connections between race, racism and social justice. What is race? Is it a natural-biological category, or something that we as a society construct? What is racism? Course examines the related psychological phenomena of racial prejudice, white privilege, and implicit racial bias, especially as these phenomena impact discussions of social justice. What is social justice? Course addresses this question while paying especially close attention to current social justice movements.
in American urban communities, such as the #BlackLivesMatter movement.

HNRS 406. Seminar in Social and Behavioral Sciences 3-4 credit hours
General education advanced further study course. Topics vary. Prerequisite: honors student or permission from the Cohen Honors College.

HNRS 406A. What a Difference a Nonprofit Makes 3 credit hours
Hands-on opportunity to explore a nonprofit arts, health, human service, education or advocacy organization. Students engage in real world problem-solving from the perspective of a nonprofit organization. An introduction to the nonprofit sector for those interested in starting a nonprofit or working in a nonprofit, the course covers: people and programs that make up a nonprofit; history of the nonprofit sector; history of philanthropy; nonprofit organizations as mediating institutions; how public policy shapes the nonprofit sector. Draws on the experience of an instructor who has worked with nonprofits for over 20 years as well as guest speakers from leading nonprofit organizations. Prepares students considering an internship or cooperative education experience in a nonprofit.

HNRS 407. Seminar in Mathematics and Natural Sciences 3-4 credit hours
General education advanced further study course. Topics vary. Prerequisite: honors student or permission from the Cohen Honors College.

HNRS 410. Independent Study 1-4 credit hours
Repeatable to a maximum of 6 hours of credit. Prerequisite: permission from Honors College.

HNRS 481. Cooperative Education 1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment. Graded Cr/NCr. Prerequisite: consent of the Cohen Honors College.

HNRS 481N. Cooperative Education: Internship 1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: consent of the Cohen Honors College.

HNRS 485. Honors Research Seminar 3-4 credit hours
Students who complete this course have a basic understanding of the scientific process, human subject research and research ethics, exposure to research questions and practices in a variety of disciplines, and experience formulating a research question, strategizing an appropriate methodology, prose style and editing, document design, abstracts, and potentially conducting preliminary research. Emphasis is placed on the reading and evaluation of research literature with the goal of developing the skills for writing a research proposal. Students are educated on how to identify and approach a faculty mentor. Guest lecturers from various academic disciplines including the libraries may be invited to present. Students are strongly encouraged throughout and particularly toward the end of their experience to work with their faculty mentor to continue their research and develop a publication or conference presentation. Because the course enrolls from different disciplines, students also become acquainted with research topics and arguments outside their fields of study. Course is meant to supplement, not replace, the research methods course found in many disciplines.

**Human Performance Studies (HPS)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

HPS 111. Introduction to Physical Education 3 credit hours
Introduction to the history, principles, philosophy and foundations of physical education with concomitant outgrowths for modern society.

HPS 113. Introduction to Exercise Science 3 credit hours
An overview of the basic physiological, neurological and biomechanical processes associated with physical activity and human movement.

HPS 114. Introduction to Athletic Training 3 credit hours
2 Classroom hours; 2 Lab hours. Covers introductory techniques, applications and theories for the beginning athletic training student. Includes basic skills of fitness program design, emergency procedures, immediate injury care, pharmacology interactions, modality application and environmental conditions.

HPS 117. Community First Aid and Community CPR 2 credit hours
Community first aid and community cardiopulmonary resuscitation with certification by the American Red Cross.

HPS 121. Professional Practicum 2 credit hours
Covers clinical skills and proficiencies relating to emergency/immediate care, health history, modality application and environmental conditions as well as various methods of athletic taping, bandaging, protective padding and bracing of anatomical regions. Prerequisites: admission to the ATP and instructor's consent.

HPS 130. Taping and Bandaging in Athletic Training 1 credit hour
Covers techniques used for the care and prevention of athletic injuries. Includes various methods of athletic taping, bandaging, protective padding and bracing of anatomical regions.

HPS 180. Fitness Instructor Training 2 credit hours
Designed to produce group exercise instructors who can teach floor aerobics, cardio-kickboxing, step aerobics, cycling, muscle pump, water aerobics and more. Does not include Yoga or Pilates. A nationally-recognized certification test is administered at the conclusion of the course. Prerequisites: must have previous experience participating in group exercise classes. Adult CPR certification is required before taking the certification tests.

HPS 202. Individual Sports 2 credit hours
Introduces basic skills and strategies of individual sports/activities. Prerequisite: K-12 physical education major.

HPS 203. Adventure Sports 2 credit hours
Introduces activities focusing on life adventures. Prerequisite: K-12 physical education major.

HPS 204. Movement Concepts 2 credit hours
Introduces fundamental motor patterns and movement education. Prerequisite: K-12 physical education major.

HPS 205. Team Sports 2 credit hours
Introduces basic skills and strategies of team sports. Prerequisite: K-12 physical education major.

HPS 220. Athletic Training Practicum 2 credit hours
Covers clinical skills and proficiencies relating to emergency care, basic treatment of injury, risk management, preventative procedures, equipment intensive and specific medical conditions. Prerequisites: admission to the athletic training education program and instructor's consent.

HPS 221. Athletic Training Practicum II 2 credit hours
Covers clinical skills and proficiencies relating to assessment and evaluation of the upper extremity, cervical spine, head and face. Prerequisites: HPS 220 and instructor's consent.
HPS 229. Applied Human Anatomy  
A study of the structure and function of the cardiovascular, skeletal and muscular systems of the human body with application to physical activity.

HPS 300. Rhythmic Activities in PreK-12 Physical Education  
2 credit hours
Teaches the value, methodology and curricular content of rhythmic activities appropriate for PreK-12 physical education students. Prerequisite: admission to teacher education program.

HPS 302. Administration in Exercise Science  
3 credit hours
Examines the various issues, policies and procedures involved with administration in exercise science. Emphasis is on facility organization and design, legal liability, personnel management, budgeting, equipment purchasing, and record keeping and promotions. Special topics are related to fitness and wellness center administration.

HPS 306. Water Safety Instructor  
2 credit hours
1 Classroom hour; 2 Lab hours. Meets American Red Cross standards for certification in Emergency Water Safety and Water Safety Instructor Training. Students must show proficiency at the American Red Cross Swimmer skill level within three weeks after enrolling. Prerequisite: HPS 107A or departmental consent.

HPS 310. Organization and Administration of Physical Education Program  
3 credit hours
Addresses the leadership and management skills and duties required of the physical educator in the public school system. Designed to provide students with the knowledge, skills and tools they will need to organize and administrate physical education, intramural and athletic programs, and to oversee the management of the physical plant and facilities. Ethics, human resources, budgeting, legal and safety issues, and community collaboration and resources are also studied. Prerequisites: HPS 201A, B, C, D, 460; admission to teacher education, completion of preprofessional block.

HPS 311. ISAM: Physical Education in Secondary Grades 6-12  
1-3 credit hours
Provides the skills and knowledge for teacher candidates to successfully teach secondary physical education grades 6-12. Instruction for teaching techniques, teaching progression, skill analysis and development are provided. Students learn effective, authentic assessment of student learning in physical education. There is a study of the adolescent and management techniques for both middle school and high school students. Learning styles are studied and a variety of learning strategies are studied and implemented. A grade of B- or higher must be attained to be recommended for student teaching. Prerequisite: admission to teacher education program. Corequisite: HPS 312.

HPS 317. CPR/AED/First Aid for the Professional Rescuer  
2 credit hours
Students learn American Red Cross first aid and CPR/AED skills as used by first responders-those who have a professional duty to act in an emergency and to provide care.

HPS 320. Athletic Training Practicum III  
2 credit hours
Covers clinical skills and proficiencies relating to assessment and evaluation of the lower extremity, abdomen/thorax, thoracic, lumbar and sacral spine. Prerequisites: HPS 221 and instructor's consent.

HPS 321. Athletic Training Practicum IV  
2 credit hours
Covers clinical skills and proficiencies relating to therapeutic modalities and various treatment protocols involving electrotherapy, ultrasound, traction, joint mobilizations and massage to enhance the healing process. Prerequisite: HPS 320 and instructor's consent.

HPS 324. ISAM: Physical Education in Elementary Grades PreK–5  
3 credit hours
Provides the skills and knowledge for teacher candidates to successfully teach elementary physical education grades PreK-5. Instruction for teaching techniques, teaching progression, skills analysis and development are provided. Students learn effective, authentic assessment of student learning in physical education. There is a study of primary and intermediate grades. Management techniques and age-appropriate activities are practiced. Learning styles are studied and a variety of learning strategies are studied and implemented. A grade of B- or higher must be attained to be recommended for student teaching. Prerequisite: admission to teacher education program. Corequisite: HPS 325.

HPS 325. ISAM: Preteaching Internship: Physical Education-Elementary  
1 credit hour
Through systematic observation in an elementary school, students observe and examine the nature of teaching and the role of teachers in elementary physical education classes. A grade of B- or higher must be attained to be recommended for teaching internship. Prerequisite: admission to teacher education program. Corequisite: HPS 324.

HPS 328. Kinesiology - Biomechanics  
3 credit hours
The understanding of the kinesthetics and mechanics of human motion with respect to performance of sport activities. Prerequisite: HPS 229 or BIOL 223 or HS 290.

HPS 329. Health and Wellness Concepts for PreK-12 Teacher Education  
2 credit hours
Designed for the physical education PreK-12 teacher candidate to gain the skills and knowledge to integrate health and wellness with physical activity. The health and wellness concepts are designed to promote living a positive, healthy lifestyle for a lifetime. Provides a foundation of information for students to learn to teach health and wellness in HPS 400. Prerequisite: admission to teacher education program.

HPS 331. Care and Prevention of Athletic Injuries  
3 credit hours
2 Classroom hours; 2 Lab hours. The study of acute injury care, prevention and recognition methods for the coach, athletic trainer and physical educator to aid in the management of athletic related injuries. Prerequisite: HPS 229 or BIOL 223 or HS 290.

HPS 334. Assessment and Technology for PreK-12 Physical Education  
3 credit hours
Provides teacher candidates the skills and knowledge needed to learn effective, authentic assessment of student learning in physical education in addition to providing the skills and knowledge to effectively implement technology into PreK-12 health and physical education classes. A framework is provided that offers a process for designing curriculum, instruction and assessment so they are conceived, developed and implemented in a clear, thoughtful manner.
Assessment is aligned with district, state and national content standards to demonstrate the value of individual student learning and to support a congruent process of both assessment of student learning and of program effectiveness. Technology skills associated with HPER disciplines are developed. Prerequisites: admission to teacher education program and completion of Block 1 of teacher education program.

**HPS 350. Upper Extremity Assessment  4 credit hours**
3 Classroom hours; 2 Lab hours. Covers clinical assessment related to injury/illness sustained by the competitive athlete specifically involving the upper extremity. Includes skills of health history, visual inspection, physical palpation and functional stress testing. Prerequisites: HPS 229 or equivalent, HPS 331.

**HPS 351. Lower Extremity Assessment  4 credit hours**
3 Classroom hours; 2 Lab hours. Covers clinical assessment related to injury/illness sustained by the competitive athlete specifically involving the lower extremity. Includes skills of health history, visual inspection, physical palpation and functional stress testing. Prerequisites: HPS 229 or equivalent, HPS 331.

**HPS 352. General Medical Conditions in Athletics  3 credit hours**
The study of diseases, disorders, illnesses and other general medical conditions affecting the health of the athlete. The student learns to recognize the signs, symptoms and predisposing conditions associated with the skin; eyes, ears, nose and throat; respiratory and cardiovascular system; endocrine system; gastrointestinal and genitourinary tract; gynecological disorders; viral syndromes; and neurological disorders. Prerequisite: HPS 229.

**HPS 354. Exercise Science  2 credit hours**
Provides practical applications of theoretical models of change for the health field. Discusses health problems, strategies for effecting change and outcome assessment. Develops selected instructional materials. A grade of B- or higher must be attained for student teaching. Prerequisite: admission to teacher education program. Corequisite: HPS 401.

**HPS 355. Physical Education for Persons Impaired, Disabled or Handicapped  3 credit hours**
Prerequisite: HPS 229 or equivalent, HPS 331.

**HPS 356. Adapted Physical Education  3 credit hours**
Assists students in developing the necessary skills for the implementation of enjoyable physical activity into the lives of persons impaired, disabled or handicapped. In addition to classroom work, students participate in observations and physical activity with persons impaired, disabled or handicapped. Prerequisites: HPS 229 or equivalent, admission to teacher education and completion of preprofessional block.

**HPS 400. ISAM: Heath Education PreK-12  2 credit hours**
Provides practical applications of theoretical models of change for the health field. Discusses health problems, strategies for effecting change and outcome assessment. Develops selected instructional materials. A grade of B- or higher must be attained for student teaching. Prerequisite: admission to teacher education program. Corequisite: HPS 401.

**HPS 401. ISAM: Preteaching Internship: Health Education PreK-12  1 credit hour**
Through systematic observation in PreK-12 schools, students observe and examine the nature of teaching health education. A grade of B- or higher must be attained for teaching internship. Prerequisite: admission to teacher education program. Corequisite: HPS 400.

**HPS 402. Health Education for the Physical Educator  2 credit hours**
Provides practical applications of theoretical models of health education for the physical education classroom. Discusses health problems, strategies for effecting change and outcome assessment. Develops selected instructional materials. The use of multiple intelligences, integration techniques, classroom management, health education standards, curriculum and technology support the goal of this course. Course includes diversity content. Prerequisite: HPS 329.

**HPS 420. Athletic Training Practicum V  2 credit hours**
Covers clinical skills and proficiencies relating to therapeutic exercise and various rehabilitation protocols involving flexibility, muscular strength, physical conditioning and functional progressions. Prerequisites: HPS 321 and instructor's consent.

**HPS 421. Athletic Training Practicum VI  2 credit hours**
Covers clinical skills and proficiencies relating to organizational, administrative and management skills that formulate the administrative aspects of athletic training. Prerequisites: HPS 420 and instructor's consent.

**HPS 425. Methods in Physical Education and Health  2 credit hours**
Methods of teaching physical education, health and wellness. Acquaints elementary classroom majors with organizational skills and instructional materials. Not open to students in physical education. Prerequisite: admission to teacher education.

**HPS 440. Concepts in the Prescription of Exercise  3 credit hours**
An introduction of techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease, and provision for practical experience in a supervised setting outside the class. Prerequisite: HPS 229 or BIOL 223 or HS 290.

**HPS 442. Administration of Athletic Training  3 credit hours**
The principles of administration components within the athletic training profession. The student plans, coordinates and supervises areas of health care services, financial expenditures, personnel management, public relations and athletic training facility development. Prerequisites: HPS 331, instructor's consent.

**HPS 450. Therapeutic Modalities  3 credit hours**
Provides practice of therapeutic modalities consisting of cryotherapy, electrotherapy, hydrotherapy and thermotherapy in addition to principles of manual therapy, intermittent compression and massage. Prerequisites: HPS 229 or equivalent, HPS 331.

**HPS 451. Therapeutic Exercise  3 credit hours**
Provides practice of therapeutic exercise in addition to principles of manual therapy, intermittent compression and massage. Prerequisites: HPS 229 or equivalent, HPS 331.

**HPS 470. Fitness Practicum  2-3 credit hours**
Application of theory to practice by assisting in various activities associated with the field of exercise science (e.g., fitness instruction, weight management, weight training, athletic training, etc.) a minimum of 15 hours per week. Prerequisites: HPS 117, 440; 2.500 GPA or departmental consent.

**HPS 471. Teaching Internship - Physical Education - Secondary  6 credit hours**
Application for teaching internship must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for teaching internship begins with the opening of the public schools and the student is expected to follow the public school calendar for a semester. A grade of B- or higher must be attained to be recommended for licensure. Prerequisites: completion of all courses in the major field and Core II of the teacher education program. Corequisites: HPS 472, 473.
HPS 472. Teaching Internship - Physical Education - Elementary 6 credit hours
Application for teaching internship must be made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for teaching internship begins with the opening of the public schools, and the student is expected to follow the public school calendar for a semester. A grade of B- or higher must be attained to be recommended for licensure. Prerequisites: completion of all classes in the major field and Core II of the teacher education program. Corequisites: HPS 471, 473.

HPS 473. Teaching Internship Seminar - Physical Education 1 credit hour
Weekly seminar evaluates strategies for managing classrooms and assesses instructional strategies. Students also discuss the employment process and the requirements for teacher certification. A grade of B- or higher must be attained to be recommended for licensure. Corequisites: HPS 471, 472.

HPS 481. Cooperative Education 1-8 credit hours
Allows students to participate in the cooperative education program. Graded Cr/NCr. Prerequisites: 2.500 GPA and admission to College of Education.

HPS 490. Physiology of Exercise 3 credit hours
2 Classroom hours; 2 Lab hours. Provides a working knowledge of human physiology as it relates to exercise. Prerequisite: HPS 229 or BIOL 223 or HS 290.

HPS 495. Internship in Exercise Science 8 credit hours
Culminating activity for students completing the BA in exercise science. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisites: senior standing, departmental consent, HPS 470, 2.500 minimum GPA overall and for major, admission to College of Education.

HPS 510. Coaching Principles 3 credit hours
Provides the skills and knowledge necessary for individuals to successfully coach and officiate both elementary and secondary school interscholastic and intramural athletics. Instruction for coaching and officiating techniques, coaching progression, skill analysis and skill development is provided. Management techniques for interscholastic and intramural athletics are included. A variety of coaching strategies as well as discipline and motivation techniques are discussed. Prerequisite: completion of Core I of teacher education program if undergraduate standing, graduate standing at WSU, or instructor's consent.

HPS 541. Strength Training and Conditioning 3 credit hours
Helps prepare students for the National Strength and Conditioning Association (NSCA) Certification Commission's Certified Strength and Conditioning Specialist (CSCS) examination and/or the NSCA-Certified Personal Trainer certification examination. Anatomy, biochemistry, biomechanics, endocrinology, nutrition, exercise physiology, psychology and the other sciences that relate to the principles of designing safe and effective training programs are covered. Prerequisite: junior classification or graduate student status.

HPS 590. Independent Study 1-3 credit hours
Prerequisite: departmental consent.

HPS 715. Body Composition and Weight Management 3 credit hours
A comprehensive coverage of the theoretical and scientific aspects of body composition assessment and current strategies for effective weight management. The limitations and usefulness of reference and field methods for assessing body composition in research, clinical and health/fitness settings are addressed. The overall intent of this course is not only to provide classroom-based theory regarding body composition assessment, but also hands-on experience and training in applying the different assessment techniques.

HPS 732. Pathophysiology of Cardiovascular Disease 3 credit hours
Introduces the pathophysiology of multiple cardiovascular conditions and the developing industry of cardiac rehabilitation. Introduces assessment techniques in electrocardiography (ECG) to assist in the diagnosis of cardiovascular disease. Includes an introduction to ECG leads, rate and rhythm, ECG complexes and intervals, conduction disturbances, arrhythmia, ECG identification of myocardial infarction location and drug effects on an ECG. Prerequisite: HPS 490.

HPS 740. Endocrinology and Metabolism of Exercise 3 credit hours
Provides students an in-depth examination of the energy metabolism during exercise and the role of the endocrine system in regulating acute and chronic metabolic responses to exercise. Special endocrine issues related to exercise physiology are discussed.

HPS 750P. ACE Group Fitness Instructor Course 1 credit hour
Designed to give students the knowledge and understanding necessary to prepare for the ACE group fitness instructor exam. In addition, students become more effective education fitness instructors. Students can take the exam for an additional $249.

HPS 750Q. ACE Personal Training Course 1 credit hour
Gives students the knowledge and understanding necessary to prepare for the ACE personal training certification exam. Students learn a comprehensive system for designing individualized programs based on the unique health and fitness goals of clients. Students can take the exam for an additional $249.

HPS 762. Statistical Concepts in Human Performance Studies 3 credit hours
Covers descriptive statistics, elementary probability, distributional properties, one- and two-population mean and variance comparisons, ANOVA, linear regression and correlations. In addition, more advanced principles in parametric and nonparametric statistics are emphasized. Prerequisite: junior classification or graduate student status.

HPS 780. Physical Dimensions of Aging 3 credit hours
Cross-listed as AGE 780. Covers the complex physiological changes that accompany advancing age and how exercise affects the aging process. Includes an appreciation for how functional consequences affect mental and social dimensions of life. Emphasizes factors associated with the preparation, implementation and evaluation of research projects involving elderly populations.

HPS 781. Cooperative Education Field Study 1-3 credit hours
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. May be repeated for credit. A maximum of 3 hours (for nonthesis option) or 6 hours (for thesis option) may count toward the graduate degree. Graded Cr/NCr.

HPS 790. Applied Exercise Physiology 3 credit hours
Focuses on the applied aspect of exercise physiology. Includes the areas of environmental influences on performance; optimizing performance through training, nutrition and ergogenic aids; training and performance of the adolescent athlete and the differences in performance and training between genders. Prerequisite: HPS 490 or 830.
HPS 795. Physiology of Athletic Performance  3 credit hours  
Explores the physiological responses involved with various athletic performances, including sports requiring endurance, speed and power. Includes such areas of physiological study as metabolic energy systems, cardiovascular and skeletal muscle adaptation, muscle fiber type differentiation and responses to extreme environmental conditions. DisCOVERs parameters for performance and establishes guidelines for training at high levels of performance.

HPS 797. Exercise in Health and Disease  3 credit hours  
Introduction to the physiology of disease and the effects of short- and long-term exercise on specific conditions. Understanding the guidelines for exercise testing and prescription in high risk populations. Prerequisite: HPS 490.

Human Resource Management (HRM)  
Department of Management  
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

HRM 390. Special Group Studies in Business  1-3 credit hours  
Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

HRM 466. Fundamentals of Human Resource Management  3 credit hours  
An analysis of the functions of human resource management, including human resource planning, recruiting, selection, appraisal of performance, training, compensation systems, employee/labor relations, and workplace health, safety and security. Ethical issues in these functions are included. Covers relevant economic, regulatory and global influences on human resource management. Prerequisite: junior standing. Business students should have advanced standing.

HRM 481. Cooperative Education  1-3 credit hours  
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing, advanced standing, 2.250 GPA.

HRM 481N. Internship  1-3 credit hours  
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

HRM 491. Independent Study/Project  1-3 credit hours  
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

HRM 665. Employment Law  3 credit hours  
Legal issues involved in hiring and employment, including lawful hiring practices, discrimination and harassment law, performance reviews, termination, labor laws, labor relations and other legal issues. Prerequisite: junior standing.

HRM 666. Human Resource Staffing  3 credit hours  
Analysis of all phases of the selection process as implemented in private and public sector organizations. Includes an analysis of the impact of federal and state anti-discrimination legislation on selection practices as well as human resource planning, recruiting, job analysis, and selection techniques including testing and interviewing. Validation of selection techniques is covered. Prerequisites: HRM 466, junior standing. Business students should have advanced standing.

HRM 668. Compensation  3 credit hours  
Approaches to compensation processes in organizations. Discusses job evaluation techniques, wage level and wage structure determination, individual performance analysis, individual wage rate decisions, incentive plans and benefits. Considers the legal constraints on compensation practices. Prerequisites: HRM 466, junior standing. Business students should have advanced standing.

HRM 669. Training and Development  3 credit hours  
Analyzes the training and development function as applied in private and public sector organizations. Considers the role of training and development in today's business environment, needs assessment, learning objectives, learning theory, instructional methods and techniques, and evaluation of training effectiveness. Prerequisites: HRM 466, junior standing. Business students should have advanced standing.

HRM 690. Seminar in Selected Topics  1-5 credit hours  
Repeatable with departmental consent. Prerequisites: HRM 466 or instructor's consent, junior standing, advanced standing.

HRM 750. Workshop in Human Resources  1-4 credit hours  
Prerequisite: junior standing.

Industrial & Manufacturing Engineering (IME)  
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

IME 150. Workshop in Industrial and Manufacturing Engineering  1-3 credit hours  
Offered from time to time on various topics in industrial or manufacturing engineering.

IME 222. Engineering Graphics  2 credit hours  
Provides an opportunity for the undergraduate student to learn the basics of engineering graphics as a tool for communicating design ideas. Covers basics of descriptive geometry, spatial relationships involving orthographic projections, auxiliary views, and pictorial projections. Aspects of design implementation such as dimensioning, tolerancing, sectional views, and working drawings are also included. Prerequisite: MATH 123. Corequisite: IME 222L or equivalent.

IME 222L. Graphics Lab  1 credit hour  
3 Lab hours. Provides an opportunity for students to reinforce the basics of engineering graphics using a suitable CAD software. Includes the practice of using a CAD software to understand and produce basic spatial relationships involving orthographic projections, auxiliary views, sectional views, pictorial projections, dimensioning, tolerancing, working drawings, 3D assembly and implementing these on a suitable CAD software. Prerequisite: MATH 123. Corequisite: IME 222 or equivalent.

IME 250. Topics in Engineering Graphics  2 credit hours  
The application of engineering graphics to the study of special problems and to methods of conveying information. Prerequisite: IME 222.
IME 254. Engineering Probability and Statistics I 3 credit hours
Studies the concepts of probability theory, random variables, distributions, moments, sample statistics and hypothesis testing.
Prerequisite: MATH 243 or 252.

IME 255. Engineering Economy 3 credit hours
Economic comparisons of engineering alternatives considering the time value of money, taxes and depreciation; accounting and its relationship to economic analysis; replacement decisions. Corequisite: MATH 242 or 251.

IME 280. Production Systems 3 credit hours
Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operation planning and scheduling. Corequisite: MATH 242 or 251.

IME 281P. Cooperative Education 1 credit hour
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. May be repeated. Graded Cr/NCr. Prerequisites: successful completion of 20 hours toward an engineering degree and approval by appropriate faculty sponsor.

IME 361. Industrial Controls and Instrumentation 4 credit hours
Introduces the principles of measurement and data acquisition, transmission and application in industrial and commercial systems. The theory and application of electronic programmable devices such as programmable logic controllers, temperature controllers, counters, etc., Ladder logic and input/output devices are emphasized. Laboratory exercises include loop wiring, calibration, controller configuration and troubleshooting. Prerequisite: ENGT 320 or EE 282.

IME 360. Industrial Ergonomics 3 credit hours
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCR unless student has received permission before enrolling for course to be used as an elective. May be repeated. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

IME 481N. Internship 1 credit hour
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

IME 481P. Cooperative Education 1 credit hour
Introduces the student to engineering practice by working in industry in an engineering-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. May be repeated. Graded Cr/NCR. Prerequisites: successful completion of 20 hours toward an engineering degree and approval by appropriate faculty sponsor.

IME 490. Independent Study 1-3 credit hours
Arranged individual independent study in specialized areas of industrial engineering under the supervision of a faculty member. May be repeated for credit. Prerequisite: instructor's consent.

IME 524. Engineering Probability and Statistics II 3 credit hours
A study of confidence interval, regression analysis, analysis of variance, correlation analysis and design of experiments emphasizing applications to engineering. Prerequisite: IME 254.

IME 549. Industrial Ergonomics 3 credit hours
A systematic approach to the optimization of the human-task-environment system. Includes work space design, manual materials handling, work related musculoskeletal disorders and environmental factors. Emphasizes applications in industry. Prerequisite: IME 254 or departmental consent.

IME 550. Operations Research 3 credit hours

IME 553. Production Systems 3 credit hours
Quantitative techniques used in the analysis and control of production systems. Includes forecasting, inventory models, operation planning and scheduling. Prerequisite: IME 254. Corequisite: IME 255.
IME 554. Statistical Quality Control  3 credit hours  
A study of the measurement and control of product quality using statistical methods. Includes acceptance sampling, statistical process control and total quality management. Corequisite: IME 524.

IME 556. Information Systems  3 credit hours  
Provides a basic understanding of information systems in a modern enterprise, including database design, information technology and ethics using hands-on activities and directed classroom discussion. Prerequisite: CS 211 or MIS 310.

IME 557. Safety Engineering  3 credit hours  

IME 558. Manufacturing Methods and Materials II  4 credit hours  
3 Classroom hours; 2 Lab hours. Covers theoretical and practical aspects of manufacturing processes, including material properties and behavior as influenced by the manufacturing process. In-depth study of such manufacturing processes as casting, heat treatment, bulk forming, sheet metal forming, metal cutting, nontraditional machining and process monitoring through measurement of manufacturing process variables. Also includes laboratory experience and plant tours. Prerequisites: IME 258, ME 250.

IME 563. Facilities Planning and Design  3 credit hours  
Quantitative and qualitative approaches to problems in facilities planning and design, emphasizing activity relationships, space requirements, materials handling and storage, and plant layout. Quantitative and qualitative approaches to selection of material handling devices and design of storage systems, and introduction to concepts of supply chain. Prerequisites: IME 452, 550, 553.

IME 565. Systems Simulation  3 credit hours  
The design of simulation models and techniques for use in designing and evaluating discrete systems, including manufacturing systems too complex to be solved analytically. Emphasizes general purpose computer simulation languages. Prerequisite: computer programming competency. Corequisites: IME 528, ME 250.

IME 590. Industrial Engineering Design I  3 credit hours  
An industry-based team design project using industrial engineering and manufacturing engineering principles; performed under faculty supervision. May not be counted toward graduate credit. Prerequisites: IME 553; must be within two semesters of graduation or departmental consent.

IME 658. Forming Processes  3 credit hours  
Introduction to the fundamentals of deformation and techniques for analysis of forming processes. Application to various bulk forming and sheet metal forming processes. Introduction to applied nonlinear finite element analysis and its application for analysis and design of forming processes. Prerequisite: AE 333.

IME 664. Engineering Management  3 credit hours  
Cross-listed as ENGT 664. Introduction to the design and control of technologically-based projects. Considers both the theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development and personal skill assessment. Prerequisites: IME 254, 255.

IME 676. Aircraft Manufacturing and Assembly  3 credit hours  
Covers key aspects of assembly design for aircraft structures. First module covers design of jigs and fixtures to locate parts and machine features to tolerance, and the effect of part and tool stiffness on the tolerances. Second module covers gage design and gage studies, and geometric dimensioning and tolerancing. Third module covers assembly planning and best practices for aircraft assembly. Laboratory experiments and case studies are used to understand issues related to aircraft assembly. Prerequisite: IME 258.

IME 690. Industrial Engineering Design II  3 credit hours  
Continuation of the design project initiated in IME 590 or the performance of a second industrial engineering design project; an industry-based team design project using industrial and manufacturing engineering principles; performed under faculty supervision. May not be counted toward graduate credit. Prerequisites: IME 590 and departmental consent.

IME 724. Statistical Methods for Engineers  3 credit hours  
For graduate students majoring in engineering. Students study and model real-life engineering problems and draw reliable conclusions through applications of probability theory and statistical techniques. Not available for undergraduate credit. Prerequisite: MATH 243.

IME 731. Foundations of Optimization  3 credit hours  
An extensive treatment of the theories and concepts of linear, nonlinear, constrained and unconstrained optimization techniques. Prerequisite: IME 550.

IME 740. Analysis of Decision Processes  3 credit hours  
Decision analysis as it applies to capital equipment selection and replacement, process design and policy development. Explicit consideration of risk, uncertainty and multiple attributes is developed and applied using modern computer-aided analysis techniques. Prerequisites: IME 254, 255.

IME 749. Ergonomic Assessment Methods  3 credit hours  
Covers current and commonly used risk and exposure assessment methods used for musculoskeletal disorders in the workplace. Students develop an understanding and working knowledge of how to evaluate and control the risk of work-related musculoskeletal disorders in the design of workplaces. Critical assessments and discussions of risk and exposure assessment techniques are performed relative to the strengths and weaknesses of each technique as well as the evidence for risk control and validation of the various methods. Prerequisite: IME 549 or instructor's consent.

IME 753. Advanced Linear Programming  3 credit hours  
Linear and integer programming formulations, simplex method, geometry of the simplex method, sensitivity and duality, interior point methods. Prerequisite: IME 550 or instructor's consent.

IME 754. Reliability and Maintainability Engineering  3 credit hours  
Studies problems of quantifying, assessing and verifying reliability. Presents various factors that determine the capabilities of components emphasizing practical applications. Examples and problems cover a broad range of engineering fields. Prerequisite: IME 524 or 724.

IME 755. Design of Experiments  3 credit hours  
Application of analysis of variance and experimental design for engineering studies. Includes general design methodology, single-factor designs, randomized blocks, factorial designs, fractional replication and confounding. Prerequisite: IME 524 or 724.

IME 758. Analysis of Manufacturing Processes  3 credit hours  
Introduces students to plasticity and builds upon their knowledge of mechanics and heat transfer in order to analyze various manufacturing processes. Numerical techniques (mainly finite element analysis) as well as theoretical methods are introduced and applied to analysis of processes such as open and closed die forging, superplastic forming, machining, grinding, laser welding, etc. The effect of friction, material properties and process parameters on the mechanics of the processes and process outputs is the main focus of study. Prerequisite: AE 333.
IME 759. Ergonomic Interventions 3 credit hours
Provides an understanding and working knowledge of how to evaluate and control the risk of musculoskeletal disorders in the design of workplaces and processes. Scientific aspects of intervention design and effectiveness assessment are discussed, including an assessment of the strengths and weaknesses of the intervention research literature. Prerequisite: IME 549 or instructor's consent.

IME 760. Ergonomics Topics 3 credit hours
New or special courses on topics in ergonomics and human factors engineering. May be repeated for different topics. Prerequisite: departmental consent.

IME 764. Systems Engineering and Analysis 3 credit hours
Presentation of system design process from the identification of a need through conceptual design, preliminary design, detail design and development, and system test and evaluation. Studies operational feasibility, reliability, maintainability, supportability and economic feasibility. Prerequisites: IME 254, 255.

IME 767. Lean Manufacturing 3 credit hours
Introduces lean concepts as applied to the manufacturing environment. Deals with the concepts of value, value stream, flow, pull and perfection. Includes waste identification, value stream mapping, visual controls and lean metrics. Prerequisite: IME 553.

IME 768. Metal Machining: Theory and Applications 3 credit hours
Provides basic understanding of the various conventional metal machining processes and the nature of various phenomena that occur in it. Includes fundamental treatments of the mechanics of chip formation under orthogonal and oblique conditions, temperatures in machining, tool materials, tool wear, surface roughness, numerical and mechanistic modeling methods, and discusses current research trends and possible future developments. Prerequisite: AE 333 or ME 250.

IME 775. Computer Integrated Manufacturing 3 credit hours
A study of the concepts, components and technologies of CIM systems; enterprise modeling for CIM, local area networks, CAD/CAM interfaces, information flow for CIM, shop floor control and justification of CIM systems. Prerequisites: knowledge of a programming language, IME 558.

IME 777. IME Colloquium 0 credit hours
Presentations and discussions of industrial engineering problems, research methods, and case analyses for graduate students. Repeatable for credit. Graded S/U.

IME 778. Machining of Composites 3 credit hours
Introduction to a wide range of machining processes used in the secondary manufacturing of composites, focusing on scientific and engineering developments affecting the present and future of composites manufacturing. Major traditional and nontraditional machining processes are discussed. The effect of process parameters, material parameters and system parameters on the material removal rate and the quality of the machined part are also discussed. Emphasis given to the application of nontraditional machining processes in the manufacture of fiber-reinforced polymers used in the aerospace and aviation industries. Students learn the advantages and disadvantages of each machining process and how to select the most appropriate process for different materials and geometries. Prerequisite: AE 333 or instructor's approval.

IME 780. Topics in Industrial Engineering 3 credit hours
New or special courses are presented under this listing. Repeatable for credit when subject matter warrants.

IME 781. Cooperative Education 1-8 credit hours
A work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in IME. Repeatable for credit. May not be used to satisfy degree requirements. Graded Cr/NCr. Prerequisites: departmental consent, graduate GPA of 3.000 or above.

IME 781P. Cooperative Education 1 credit hour
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. May be repeated. For graduate students.

IME 783. Supply Chain Management 3 credit hours
Quantitative and qualitative techniques used in the design and management of the supply chain. Includes distribution management, multi-plant coordination, optimal design of the logistics network, adequate safety stock levels and the risk pooling concept, and integrating decision support systems (DDS) in the management of the supply chain. Prerequisite: IME 553.

Innovative Design (ID)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ID 400. Innovation in Practice 1-6 credit hours
Independent study course for students interested in complementing their degree with creative thinking, problem solving and design. Undergraduate students choosing to participate in entrepreneurial activities can enroll in this course to gain credit for this experience. Built around experiential enrichment related to the broad topic of innovation. Topics such as intellectual property, branding, pitching, wire-framing, prototyping and funding are discussed in a group setting and may include guest speakers and/or visits to local companies. Repeatable for credit. Graded Cr/NCr.

ID 500. Design Thinking & Innovation 3 credit hours
Overview of how to become a creative catalyst with a systemic approach to innovation. Intended for students with diverse interests and nontechnical backgrounds.

ID 500H. Design Thinking & Innovation 3 credit hours
Overview of how to become a creative catalyst with a systemic approach to innovation. Intended for students with diverse interests and nontechnical backgrounds. Honors section.

ID 752. Product, Service, and Process Prototyping 3 credit hours
Provides an overview of prototyping concepts with the specific intent of help innovation design degree students identify various methods of successfully demonstrating the potential of their ideas. Intended for students with diverse interests and nontechnical backgrounds.

Interdisciplinary Creativity (IIC)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

IIC 301. Leadership is Essential Seminar 3 credit hours
General education advanced issues and perspectives course. Introduces students to leadership theories, history of leadership and concepts as practiced across different settings and disciplines with an emphasis on
personal strengths and professional interests in a teamwork structure through a cultural strengths framework. After completing the seminar students should be able to recognize the main leadership theories, identify different leadership perspectives, recognize applications of leadership, and understand the benefits and challenges of leadership.

**International Business (IB)**
*Department of Management*

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**IB 333. International Business 3 credit hours**
*General education advanced issues and perspectives course. A comprehensive overview of the multifaceted issues in international business and globalization that impact all functional areas of business.* Examines contemporary issues, perspectives and influences on American business, economy, government, labor, society, technology, public policy and competitiveness. Reviews international trade theories, foreign exchange, monetary systems, balance of payments, trade policies, trade agreements, global trading systems and foreign investment, including cultural diversity, human rights, ethics and social responsibility issues. Examines implications for small and large businesses, including case studies from Wichita firms engaged in international business. *Course includes diversity content. Prerequisite: junior standing recommended.*

**IB 400. Principles of Global Supply Chain Management and Logistics 3 credit hours**
Cross-listed as DS 400. Designed to provide an overview of supply chains and logistics focusing on issues related to supply, operations, logistics and integration in a global context. Current and relevant topics to discuss include purchasing management, supplier relationships, ethical and sustainable sourcing, resource planning, process management, global logistics and location decisions, process integration, and performance measures. Area multi-national companies (Koch, Cargill, Spirit, Cessna and other aviation companies, etc.) are featured as live cases/guest lectures. *Prerequisites: junior standing, advanced standing.*

**IB 450. Negotiating Across Cultures 3 credit hours**
Cross-listed as MGMT 450. Regardless of one's chosen career, industry, title, status or role in an organization, one continually negotiates. If one manages or is managed, leads or is led, sells or is sold, buys or is bought, hires or is hired, fires or is fired, empowers or is empowered, one negotiates. Any time one requests or is requested to do something, one negotiates. The quality and effectiveness of one's career and life will be strongly influenced by one's ability to effectively negotiate. The better one understands the person(s) with whom one negotiates, the more effective negotiator one will be. Understanding the other person(s) includes understanding his/her/their culture, expectations, objectives, motivations, decision-making processes, and rationale for behavior. This course focuses on bargaining and negotiating in a wide variety of settings, from simple buyer/seller negotiations to multiple-issue/multiple-party negotiations. The course touches on principal differences among cultures and how those differences may affect negotiations and outcomes. *Prerequisites: IB 333, junior standing, advanced standing.*

**IB 481. Cooperative Education 1-3 credit hours**
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. *Prerequisites: junior standing, advanced standing, 2.250 GPA.*

**IB 481N. Internship 1-3 credit hours**
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. *Prerequisite: departmental consent.*

**IB 491. Independent Study/Project 1-3 credit hours**
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. *Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.*

**IB 561. International Economics and Business 3 credit hours**
Cross-listed as ECON 672. A survey of the economic foundations of international trade and investment. Studies international trade, theory and policy (the international economy), then explores the operations of the multinational firm within that environment. *Course includes diversity content. Prerequisites: IB 450. Cross-listed as BLAW 602. Analysis of legal and regulatory issues affecting import-export transactions, licensing and technology transfer, and international sales of services. Prerequisite: IB 333, advanced standing.*

**IB 600. International Management 3 credit hours**
Overview of international business including strategy and organizational behavior. Equips students to manage effectively in an increasingly diverse global marketplace. Covers international strategy formulation, cross-border alliances, control and coordination systems in multinational organizations, social responsibility and ethics, culture and communication in global management, international negotiations, and management of global human resources. *Course includes diversity content. Prerequisites: ECON 201, 202, junior standing, advanced standing.*

**IB 601. International Marketing 3 credit hours**
Cross-listed as MKT 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and marketing systems on the design of marketing programs. *Course includes diversity content. Prerequisites: MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.*

**IB 602. Legal Environment of International Business 3 credit hours**
IB 602. Legal Environment of International Business (3). Cross-listed as BLAW 602. Analysis of legal and regulatory issues affecting import-export transactions, licensing and technology transfer, and international sales of services. *Prerequisite: IB 333, junior standing, advanced standing.*

**IB 625. International Financial Management 3 credit hours**
Cross-listed as ECON 674 and FIN 625. Studies the international financial and monetary system, emphasizing currency markets. Also examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance. *Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.*

**IB 690. Special Topics in International Business 3 credit hours**
Covers emerging topics within the field of international business. *Prerequisites: completion of or concurrent enrollment in all required IB courses, junior standing, advanced standing.*
**Italian (ITAL)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

ITAL 111. Elementary Italian I  5 credit hours
Emphasizes the four fundamental skills in language learning: listening, speaking, reading and writing. Requires daily classroom and language laboratory work.

ITAL 112. Elementary Italian II  5 credit hours
A continuation of ITAL 111 further emphasizing the four fundamental skills in language learning and a complete presentation of elementary Italian grammar. Requires daily classroom and language laboratory work. Prerequisite: ITAL 111 or equivalent.

ITAL 223. Intermediate Italian  3 credit hours
Grammar review, composition, conversation and cultural readings. Prerequisite: ITAL 112 or instructor’s consent.

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**Japanese (JAPN)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

JAPN 101. Travel Japanese  3 credit hours
Designed to teach basic conversational skills in a variety of situations that are commonly faced by travelers. Includes information about culture, expectations, and taboos that helps travelers better navigate in a country with different societal norms. Course includes diversity content. Repeatable for credit.

JAPN 111. Elementary Japanese I  5 credit hours
Introduces fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Also includes cultural material.

JAPN 112. Elementary Japanese II  5 credit hours
A continuation of JAPN 111, completing the basic course in Japanese. Prerequisite: JAPN 111 or equivalent.

JAPN 223. Intermediate Japanese I  3 credit hours
Includes fundamentals of pronunciation, vocabulary building, practice in understanding and speaking phrases, reading, and writing. Draws examples from Japanese culture, politics and society. Prerequisite: JAPN 112 or equivalent.

JAPN 224. Intermediate Studies in Japanese Language  1-3 credit hours
The course may deal with one of the following topics in Japanese language as announced by the instructor: (a) continuing intermediate Japanese grammar; (b) Japanese business terminology; (c) intermediate Japanese readings; (d) other topics as approved by the department. Repeatable for credit provided the topic is different. Prerequisite: JAPN 223, 225, or instructor’s consent.

JAPN 224A. Intermediate Japanese Grammar  1 credit hour
Topics in Japanese language as announced by the instructor. Repeatable for credit provided the topic is different.

JAPN 225. Japanese Conversation  2 credit hours
Develops oral fluency. Pre- or corequisite: JAPN 112.

JAPN 300. Special Studies  1-3 credit hours
Topic announced by instructor. Repeatable for credit. Prerequisite: instructor’s consent.

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**LAS Interdisciplinary (LASI)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**LASI 100. Pass Program  2 credit hours**
PASS, Personal and Academic Success Seminar, studies the university as a resource for personal development and the development of an individual master plan for study and self-development in the university. Created specifically for the first-time WSU student-athlete, the course assists students in developing and refining personal and academic success skills. Also provides opportunities for one-on-one interaction with other students as well as WSU faculty and staff. Course is required for NCAA student-athletes new to campus.

**LASI 101. Introduction to the University  1-3 credit hours**
Designed especially for first-year students. A gateway to WSU faculty, staff and resources and a toolkit for academic success at WSU. Students learn skills in critical thinking, university-level reading, studying, test taking, and library research. They gain insight into issues of teaching and learning styles, diversity of thought and culture, personal finances, health, and the benefits of engagement in student organizations. Students learn to use online and printed resources as tools to find important information about academic policies and procedures, and WSU campus resources such as advising, counseling services, and career exploration. Students learn to use the WSU computer system for tasks such as enrollment, dropping and adding courses, and checking financial aid status. Students also learn to value and to participate in a collaborative advising process where students and advisers share responsibilities, and they begin to establish long- and short-term academic goals, leading to a realistic individual plan for graduation. Students who actively participate in this course have a proven record of academic success and an improved graduation rate. Offered in a variety of formats, including online. Students earn a letter grade in this course.

**LASI 102. Career Exploration  2 credit hours**
Involves students in the career/life, educational planning and decision-making process based on career development theories. Uses various assessments and exercises to explore values, interests and skills as they relate to career choice. Students research occupations and gain knowledge of labor market trends. Course content assists in exploration of college major and career path choice or change. Addresses current workplace issues. Graded Cr/NCr.

**LASI 170. Introduction to Library Research  1 credit hour**
Students learn to locate and retrieve information in both print and electronic formats, including the Internet, and learn to distinguish between scholarly research and nonscholarly publications. Students learn how to develop and carry out research strategies on any topic.

**LASI 190. Inquiry in Liberal Arts and Sciences  3 credit hours**
Introduces the liberal arts and sciences as the foundation of the university education. Team taught by faculty from the humanities, social sciences and natural sciences. Topics of general interest from various disciplinary perspectives and ways of knowing. Students gain insights which may guide them towards majors, areas of concentration and their own pursuit of understanding.

**LASI 201. Introduction to Great Plains Studies  3 credit hours**
For students pursuing the certificate in Great Plains Studies. Acquaints students with the Great Plains region-its physical characteristics and historical and contemporary issues which concern scholars and residents of the region. Students read and discuss texts focusing on the Great Plains from various disciplinary perspectives. Prerequisite:
LASI 281. Cooperative Education  1-4 credit hours
Provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors. May be repeated. Graded Cr/NCr.

LASI 281A. Cooperative Education  1-4 credit hours
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. May be repeated.

LASI 300. Global Issues  3 credit hours
*General education advanced issues and perspectives course.* Taught by faculty from many colleges and disciplines. Emphasizes challenges in the global village. May include peace and war, energy, social equality, the arts and technology, poetry and power, cultural differences, genetics, economic strategies, the environment, and health and education. May be applied to any of the disciplines of the humanities, social sciences and natural sciences. *Course includes diversity content.*

LASI 350. Workshop  1-3 credit hours
Meets identified needs of specific audiences.

LASI 390. LAS: Issues & Perspectives  3 credit hours
Offers an opportunity to consider personal, intellectual, and social issues and perspectives engaging in interdisciplinary strategies employed by a team of collaborating faculty from the humanities, social sciences, and natural sciences. Prerequisites: completion of basic skills courses and at least three introductory courses from fine arts, humanities, social and behavioral sciences, and natural sciences included in the general education program. This issues and perspectives course can be applied to any of the disciplines of the humanities, social sciences, and natural sciences.

LASI 398. Travel Seminar  1-4 credit hours
An interdisciplinary travel seminar which allows a student traveling abroad to gain credit for the study of culture, art, literature, architecture; and political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of a faculty member in any department in Fairmount College.

LASI 398A. Travel Seminar - Russia  1-4 credit hours
An interdisciplinary travel seminar which allows a student traveling abroad to gain credit for the study of culture, art, literature, architecture; and political, social, scientific and economic conditions while visiting historic places of interest. Students may enroll under the direction of a faculty member in any department in Fairmount College.

LASI 479. International Student Exchange  3-18 credit hours
The International Student Exchange Program encourages undergraduate students to attend a university outside the U.S. while retaining full-time student status and paying regular tuition at WSU. A student who wishes to enter this program must apply. Application forms may be obtained from the WSU Office of International Education; next, the student meets with his or her assigned program adviser to request academic and course equivalent approval to attend the proposed university. Upon approval from the student’s WSU program, application may be completed. The enrollment designation above documents the status and the tuition payment of the student enrolled in ISEP for the duration of the residence at the collaborating university. At the end of the exchange semester, all coursework from the international university will be transferred to WSU. At that time, the transfer course(s) will replace the LASI hours of enrollment with only the International Student Exchange Program designation remaining on the transcript. Repeatable for two enrollment periods or a maximum of 30 credit hours.

LASI 480. National Student Exchange  1-18 credit hours
The National Student Exchange program encourages students to attend another university for a semester while retaining full-time student status and paying regular tuition at WSU. All coursework from the selected university is transferred to Wichita State at the end of the exchange semester. At that time, the transfer courses replace the WSU hours, with only the National Student Exchange designation remaining on the transcript. This enrollment designation documents the full-time status and the tuition payment of the student enrolled in the NSE program for the duration of the residence at the collaborating university. Repeatable for credit one time.

LASI 481. Cooperative Education  1-4 credit hours
Provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. May be repeated.

LASI 481A. Cooperative Education  1-4 credit hours
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. May be repeated. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

LASI 481I. Noncredit Internship  0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

LASI 481N. Internship  1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

LASI 501. Great Plains Experience  1-3 credit hours
Offered during fall and spring semesters as a 1-hour field experience and in the summer session as a 3-hour field experience. For students in the Great Plains Studies certificate program. Visit museums, anthropological and archeological sites, nature preserves, and other places of significance in Great Plains Studies. Prerequisite: LASI 201 or 800 or instructor's consent.

LASI 510. Great Plains Seminar  3 credit hours
For students completing the Great Plains Studies certificate program. Focuses on contemporary issues and critical contexts for research. Students develop research projects appropriate to their classification as undergraduates or graduates and which reflect their particular interests in Great Plains Studies. Supplemental resources provided by faculty through lectures, consultation, course materials and mentoring. Prerequisites: 12 hours of Great Plains Studies coursework,
including LASI 201 and 501; undergraduates must have senior status or instructor’s consent.

LASI 680. International Student Exchange Program - Graduate 9 credit hours
The international student exchange program encourages graduate students to attend a university outside the USA while retaining full-time student status and paying regular tuition at WSU. A student who wishes to enter this program must apply. Application forms may be obtained from the WSU Office of International Education; next, the student meets with his or her assigned program adviser to request academic and course equivalent approval to attend the proposed university. Upon approval from the student's WSU program, application may be completed. The enrollment designation documents the status and the tuition payment of the student enrolled in ISEP for the duration of the residence at the collaborating university. At the end of the exchange semester, all coursework from the selected university is transferred to WSU. At that time, the transfer course(s) replace the LASI hours of enrollment with only the International Student Exchange Program designation remaining on the transcript.

LASI 750. Workshop in LASI 1-3 credit hours
Meets identified needs of specific audiences.

Latin (LATN)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

LATN 111. Elementary Latin I 5 credit hours
Presents the basic grammar of Latin and emphasizes early reading.

LATN 112. Elementary Latin II 5 credit hours
Continues the presentation of the basic grammar of LATN 111 and emphasizes early reading. Prerequisites: one unit of high school Latin, LATN 111, or departmental consent.

LATN 223. Intermediate Latin 3 credit hours
General education introductory course. General review of grammar with selected readings of prose and poetry. Prerequisite: LATN 112, two years of high school Latin, or departmental consent.

LATN 224. Intermediate Latin 3 credit hours
General education advanced further study course. Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite: LATN 223 or departmental consent.

LATN 225. Introductory Composition and Reading 2 credit hours
Helps students begin to compose original Latin sentences and short paragraphs on their own, as a means to better understanding Latin grammar, particularly lexicon and syntax. All compositions by students are based on questions in Latin about original Latin readings covered in class. May be taken concurrently with Latin 223, or, preferably, with Latin 224. Pre- or Corequisite: LATN 223.

LATN 325. Classical Mythology 3 credit hours
Cross-listed as GREK 325 and HIST 352. Studies the most important myths of the Greeks and Romans. Includes the stories of creation, the gods and goddesses, the major heroes and important sagas such as Achilles, Odysseus and the Trojan War. Sources are mainly literary, e.g., Homer, Hesiod, Virgil and Ovid, but the course also includes Greek art. All readings in English; requires no previous knowledge of Latin or Greek.

LATN 398. Travel Seminar in Latin 1-4 credit hours
An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science and economics, while visiting historic places of interest. Prerequisite: departmental consent.

LATN 525. Medieval Latin 3 credit hours
Introduction to medieval Latin language and culture. Samples the range of Latin literature from the fifth to the 12th centuries through readings of religious and secular (including philosophical, political, historical and linguistic) texts in prose as well as the Latin poetry and drama of various medieval writers. Prerequisite: LATN 224 or departmental consent.

LATN 526. Advanced Grammar and Composition 3 credit hours

LATN 541. Roman Lyric Poetry 3 credit hours
The lyric poems of Catullus and Horace emphasizing imagery, symbolism, structure, diction and meter.

LATN 542. Virgil’s Aeneid 3 credit hours
Selected books of the Aeneid in the original and the rest in translation. Studies imagery, symbolism, structure, meter and diction. Considers the place of the Aeneid in Augustan Rome and in the epic tradition.

LATN 546. Advanced Latin 1-3 credit hours
Directed reading of Latin. Reading may be combined with Latin prose composition at the option of the students. Repeatable for credit when content varies.

LATN 651. Roman Historians 3 credit hours
A study of the development of Roman historiography. Readings from Sallust, Caesar, Livy and Tacitus.

LATN 652. Cicero 3 credit hours
The orations, letters and essays of Cicero. Concentrates on Cicero as the master of Latin prose and as one of the most important political figures of the fall of the Roman Republic.

LATN 653. Lucretius and Epicureanism 3 credit hours
Reading of Lucretius’ De Rerum Natura and study of Epicureanism, the atomic theory, and Democritean materialism. Gives consideration to the place of Lucretius in Latin poetry.

Linguistics (LING)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

LING 151. Nature of Language 3 credit hours
General education introductory course. An overview of the important facts about what language is and how it works and of the ways in which researchers in linguistics and in other disciplines, such as psychology, philosophy and anthropology, explain and make use of language. Prerequisite: ENGL 101.

LING 152. Language of Food 3 credit hours
General education introductory course. Cross-listed as ENGL 152. Examines how the way we talk about food offers a window into history, psychology, culture and economics. Students are asked to think critically about language and taste as well as to explore the hidden meanings and influence of the language that surrounds us. Analyzes the language of food through menus, recipes, Yelp reviews, TV food shows, as well as the history and etymology of food words. Examples are drawn from American, African, Asian food and culture and beyond. Course includes diversity content.

LING 304. Developmental Psycholinguistics 3 credit hours
Development of language traced from birth to early school-age. Evaluation of various acquisition theories in light of current psychological and linguistic thought. Emphasizes the development of linguistic categories: phonology, morphology, syntax, semantics and
pragmatics. Lab required for reflective observation and analysis of various linguistic categories of typically developing children.

LING 306. Phonetics: Theory and Application 3 credit hours
Identification, production and categorization of phonemes. Practice in phonemic and phonetic transcriptions of words using the International Phonetic Alphabet (IPA). Introduction to typical phonological acquisition and variations in speech production related to connected speech, cultural/linguistic diversity, and children’s speech sound disorders. Lab required for reflective observation and analysis of developmental phonetics and variance due to disorders and linguistic differences.

LING 315. Introduction to English Linguistics 3 credit hours
General education advanced further study course. Cross-listed as ENGL 315. Introduces linguistic principles, including phonological and grammatical concepts.

LING 316. English Sentence Structure 3 credit hours
Cross-listed as ENGL 316. The basic rules of English syntax, specifically designed for prospective teachers of English but open to all students interested in English sentence structure.

LING 317. History of the English Language 3 credit hours
Cross-listed as ENGL 317. Linguistic and cultural investigation of the development of English. Prerequisite: LING 315 or departmental consent.

LING 318. Dialectology 3 credit hours
Cross-listed as ENGL 318. An introduction to the study of regional and social dialects of English. The relationship between language and factors such as socioeconomic class, social networks, sex, nationalism and geography. Course includes diversity content.

LING 351. Linguistics and Foreign Languages 3 credit hours
Cross-listed as ANTH 351 and MCLL 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g. phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and identity). Prerequisite: LING 151 or any third-semester foreign language course.

LING 505A. Advanced French Phonetics and Diction 2 credit hours
Cross-listed as FREN 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future French teachers. Prerequisite: any 200-level course or departmental consent.

LING 505B. Russian Phonology 2 credit hours
Cross-listed as RUSS 505.

LING 505C. Spanish Phonetics 3 credit hours
Cross-listed as SPAN 505. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future Spanish teachers. Prerequisite: any 200-level SPAN course or departmental consent.

LING 590. Special Studies in Linguistics 1-3 credit hours
Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. Repeatable for credit when content varies.

LING 595. Directed Readings 1-3 credit hours
Credit assigned to Group A, B or C depending on content. Repeatable for credit.

LING 635. Introduction to Romance Linguistics 3 credit hours
Cross-listed as FREN 635 and SPAN 635. Provides a contrastive examination of the phonology, morphology and syntax of the major contemporary Romance languages (French, Spanish, Italian, Portuguese, Catalan and Romanian). Introduces students to the sound and writing system and basic grammar of Latin, and contrasts the phonological and grammatical systems of the contemporary Romance languages (French and Spanish in particular) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian or Portuguese). Prerequisite: departmental or instructor's consent.

LING 651. Language & Culture 3 credit hours
Cross-listed as ANTH 651 and MCLL 651. Prerequisite: 3 hours of linguistics or MCLL 351 or 6 hours of anthropology.

LING 667. English Syntax 3 credit hours
Cross-listed as ENGL 667. Studies the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: LING 315 or equivalent or departmental consent.

LING 668. Field Methods of Linguistics 3 credit hours
Cross-listed as ENGL 668. Students learn how to collect and analyze data from a language unknown to them by interacting with a native speaker – course language consultant. Students gain some familiarity with the phonetics, phonology, morphology and syntax of the language, while developing techniques for studying an unfamiliar language more generally and for managing the data collected. Course includes diversity content. Repeatable three times for a total of 9 credit hours. Prerequisite: ENGL/LING 315.

LING 672. Dialectology 3 credit hours
Cross-listed as ENGL 672. Introduces the study of language variety, emphasizing regional and social dialect in America and methods of studying it. May be repeated for credit when content varies. Prerequisite: LING 315 or departmental consent.

LING 720. Seminar in Old English 3 credit hours
Cross-listed as ENGL 720. Advanced course in Old English language and literature. Studies the Old English language in enough detail to enable the reading of some prose and poetry, including parts of Beowulf and the elegiac poems in the original. Some literature, including all of Beowulf, is read in translation. Particular attention is given to close reading and interpretation of the text, and to important literary and cultural features of the period and its Norse heritage. Repeatable once for credit with a change of content and departmental consent.

LING 740. Graduate Studies in Linguistics 3 credit hours
Selected topics in theories of language and methods of linguistic study. Repeatable for credit with departmental consent.

Management (MGMT)
Department of Management

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MGMT 360. Principles of Management 3 credit hours
An overview of concepts, theories and practices that apply to the management of work organizations. Includes organizational goals, corporate strategy, structure, decision making, leadership, motivation, communication, group dynamics, organizational change and the international dimension of business. Prerequisite: junior standing.
MGMT 390. Special Group Studies in Management  1-3 credit hours
Repeatable with departmental consent. Prerequisite: advanced standing.

MGMT 430. Business, Government and Society  3 credit hours
An examination of the environments in which business operates: economic, political, social-cultural, technological, international, ecological and legal. Includes business-government relations, social responsibility, business ethics, government regulation, legal framework and international business. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 450. Negotiating Across Cultures  3 credit hours
Cross-listed as IB 450. Regardless of one's chosen career, industry, title, status or role in an organization, one continually negotiates. If one manages or is managed, leads or is led, sells or is sold, buys or is bought, hires or is hired, fires or is fired, empowers or is empowered, one negotiates. Any time one requests or is requested to do something, one negotiates. The quality and effectiveness of one's career and life will be strongly influenced by one's ability to effectively negotiate. The better one understands the person(s) with whom one negotiates, the more effective negotiator one will be. Understanding the other person(s) includes understanding his/her/their culture, expectations, objectives, motivations, decision-making processes, and rationale for behavior. Focuses on bargaining and negotiating in a wide variety of settings, from simple buyer/seller negotiations to multiple-issue/multiple-party negotiations. The course touches on principal differences among cultures and how those differences may affect negotiations and outcomes. Prerequisites: IB 333, junior standing, advanced standing.

MGMT 460. Designing Effective Organizations  3 credit hours
Studies how work and workers can be structured to best accomplish the goals of an organization. Explores the interplay of design, technology, strategy, environment, and discusses frameworks that promote growth, market responsiveness, innovation and global competitiveness. Emphasizes skills necessary for managing change for maximum effectiveness of individuals, work groups and the organization as a whole. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 462. Leading and Motivating  3 credit hours
Studies theories of human motivation and adaptation of these theories to programs in organizations. Probes concepts of authority and delegation and analyzes leadership styles. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 463. Building Effective Work Teams  3 credit hours
Significant changes in the business environment have motivated widespread support for the use of teams to accomplish work-related tasks. Course promotes an understanding of the organizational context of team culture through an analysis of how teams form, and group processes that enhance goal accomplishment. Emphasizes skills necessary to manage the organization's culture, improve group performance and increase collaboration among team members. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 464. Communicating Effectively in Organizations  3 credit hours
Examination of the design of organizational communication systems. Includes an introduction to communication models and the analysis of the interpersonal communication process. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 481. Cooperative Education  1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing, advanced standing, and 2.250 GPA.

MGMT 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

MGMT 491. Independent Study/Project  1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

MGMT 465. Managing in Diverse Organizations  3 credit hours
Modern organizations face the challenge of managing employees with diverse backgrounds and talents to provide products and services to diverse customers. Course examines workforce diversity from the perspective of maximizing its benefits to group and organizational effectiveness, including developing skills to facilitate the constructive resolution of conflict, encouraging cooperation and teamwork, and enhancing identification with the work unit. Course includes diversity content. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 480. Making Effective Decisions  3 credit hours
Studies the theories of decision making with attention to the factors of rational decision making and application of quantitative methods, cognitive and motivational influences, intuition, political influences, ethics, and the process of negotiation and decision making in groups along with decision implementation and learning from past decisions. Prerequisites: MGMT 360, junior standing, advanced standing.

MGMT 581. Strategic Management  3 credit hours
An analysis of business problems from a strategic management perspective. A capstone course which integrates the functional areas of business, including management, marketing, finance, accounting and production. Discusses both domestic and international policy issues, large and small firms, and various sources of competitive advantage. Prerequisites: DS 350, FIN 340, MKT 300, MGMT 360, senior standing, advanced standing.

MGMT 690. Seminar in Selected Topics  1-5 credit hours
Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

MGMT 750. Workshop in Management  1-4 credit hours
Prerequisite: junior standing.

Management Information Systems (MIS)

Department of Finance, Real Estate & Decision Sciences

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MIS 190. Selected Topics in MIS  1-3 credit hours
Repeatable for credit with departmental consent.
MIS 310. Fundamentals of Business Application Development  3 credit hours
Uses a contemporary business programming language to teach business application development concepts in a visual programming environment. Designed for learning how to solve business problems by using event-driven programming. Prerequisites: junior standing, advanced standing.

MIS 325. Data Communications and Computer Networks  3 credit hours
Takes a problem-solving approach to introducing data communications and computer networking concepts. Technical and managerial issues in supporting electronic commerce, business-to-business electronic data interchange, virtual teams, extranets, local area networks (LAN), remote access and internetworking LANs over a wide area network (WAN) provide the backdrop for introducing data communication concepts (OSI), standards, protocols and technologies. Prerequisites: BADM 160, junior standing, advanced standing.

MIS 390. Special Topics in MIS  1-3 credit hours
Repeatable for credit with departmental consent. Prerequisites: junior standing, advanced standing.

MIS 395. Management Information Systems  3 credit hours
Studies the structure and the strategic role of computer-based information systems. Includes information resource management perspective emphasizing issues of information architecture, data integration and administration, and risk management in information systems development efforts. Prerequisites: BADM 160, junior standing, advanced standing.

MIS 481. Cooperative Education  1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.500 GPA in MIS, junior standing, advanced standing.

MIS 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

MIS 491. Independent Study/Project  1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

MIS 600. Database Management Systems  3 credit hours
Introduces various methodologies for conceptual data modeling including entity-relationship data modeling and object-oriented database design. Covers relational database management systems, the SQL standard and data administration issues. Students obtain hands-on development with SQL servers in a client/server environment in a required database programming project. Covers electronic commerce transaction processing, data warehousing, data mining and distributed database management. Prerequisites: BADM 160 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 605. Systems Analysis and Design  3 credit hours
Introduces various methodologies for systems analysis, design and implementation. Examines application development in the context of the overall MIS master planning effort; examines techniques related to business process engineering. Uses a real-life project as the vehicle to put into practice tools and techniques related to interviewing, cost/benefit analysis, computer-aided software engineering, software project management and system documentation. Prerequisites: junior standing, advanced standing.

MIS 610. Dynamic Web Programming  3 credit hours
Uses ASP.NET as the programming tool to teach Web application development. Includes HTML forms, server objects, and SQL-based data sources for developing interactive and dynamic Web applications within a server-based scripting environment. Covers advanced topics such as ADO and implementing security in Web environments. Prerequisites: MIS 310, 600 each with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 611. Topics in Computer Networking  3 credit hours
Selected data communications and networking topics are examined in greater detail and depth. Students study the design, configuration, implementation, maintenance, management, troubleshooting and evaluation of selected networking technologies and software. Time is devoted to both concepts and hands-on exercises. Prerequisites: MIS 325 with a C+ (2.300) or higher, junior standing, advanced standing.

MIS 615. Advanced Business Application Development  3 credit hours
Presents advanced concepts and techniques for business problem solving by developing software applications using a contemporary business programming language. Special emphasis is placed on object-oriented programming approach. Topics include developing classes, using a multi-tiered approach toward application development, establishing database connection, working with data tables, and database processing. Prerequisites: MIS 310 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 690. Seminar in Selected Topics  1-3 credit hours
Repeatable for credit with departmental consent. Prerequisites: senior standing, departmental consent, advanced standing.

MIS 696. Management of the IS Function  3 credit hours
Addresses the issues of managing the information systems (IS) function. Includes the role of IS as a corporate entity, developing a strategic plan for IT investments, organizing the IS department, IS personnel management, IS project management, the role of IS as a user-support entity, auditing the IS function and emerging issues in managing the IS department. Prerequisites: MIS 605 (or concurrent enrollment), junior standing, advanced standing.

MIS 750. Business Intelligence and Analytics  3 credit hours
Introduces design and implementation of business intelligence systems for tactical, managerial and strategic level decision making. Addresses how organizational data and analytics support business performance management. Prepares managers for developing and implementing digital performance dashboards to monitor business processes and make informed decisions. Replaces MIS 650 effective fall 2013.

Marketing (MKT)
Department of Marketing
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MKT 190. Selected Topics 1-3 credit hours
Repeatable with departmental consent.

MKT 300. Marketing 3 credit hours
A description and analysis of the concepts and tools used by managers in planning and evaluating marketing decisions. Specific topics include product development, pricing, distribution, promotion, information processing, international marketing and marketing in contemporary society. Prerequisites: ENGL 102, COMM 111, MATH 111.

MKT 390. Special Group Studies in Marketing 1-3 credit hours
Repeatable with instructor's consent. Prerequisites: junior standing, advanced standing.

MKT 403. Marketing Research 3 credit hours
Cross-listed as ENTR 403. A study of the design and implementation of research procedures that support systematic and objective decision making for marketing planning and strategy development. Prerequisites: ECON 231, 232, MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 404. Retail Management 3 credit hours
An examination of the essential principles and practices of retail business management, including site selection, store design and department layout, merchandise management, sales promotion, and customer services. Also considers the broad issues of modern marketing and financial strategies as they affect retail distribution. Clarifies new influences at work in the retailing environment. Prerequisites: MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 405. Consumer Behavior 3 credit hours
Studies a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including consumer decision processes, reference groups, and sociological, psychological and economic aspects of consumer behavior. Prerequisites: MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 407. Marketing for Service and Nonprofit Organizations 3 credit hours
A study of the unique marketing challenges faced by service and nonprofit organizations. Evaluates marketing concepts and appropriate marketing programs from the perspective of service organizations. Prerequisites: MKT 300 with a minimum grade of C+ (2.300), junior standing, advanced standing.

MKT 481. Cooperative Education 1-3 credit hours
An academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for credit. Graded Cr/NCr. Prerequisites: junior standing, advanced standing, 2.250 GPA.

MKT 481N. Internship 1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

MKT 491. Independent Study/Project 1-3 credit hours
Courses may be of two general types. The first consists of doing research, readings or other scholarly investigation in a subject area that is coordinated by a faculty member. The topic and scope would be mutually agreeable to the student and the faculty member. The second consists of doing a specific project for an organization, which might require the student to do research. The student may be embedded in an organization (either with or without pay) and under the direction of an organizational representative and a faculty member in order to accomplish a specific project. In either case, the course cannot be used to substitute for a regular departmental course. Repeatable for credit. Graded Cr/NCr. Prerequisites: 2.750 GPA in the academic area, junior standing, advanced standing, departmental consent.

MKT 601. International Marketing 3 credit hours
Cross-listed as IB 601. Problems and procedures of marketing in foreign countries. Includes the effects of foreign cultures and marketing systems on the design of marketing programs. Course includes diversity content. Prerequisites: MKT 300 with a minimum grade of C+ (2.300) or better, and MKT 405.

MKT 607. Promotion Management 3 credit hours
An analysis of all issues involved with the promotion of an organization and its products or services. Students develop coordinated marketing strategies in the areas of advertising, personal sales, public relations and special promotional activities such as direct marketing, interactive media and sales promotions. Prerequisites: MKT 300 with a minimum grade of C+ (2.300), MKT 405.

MKT 608. Selling and Sales Force Management 3 credit hours
Cross-listed as ENTR 608. An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: MKT 300 with a grade of C+ (2.300) or better, MKT 405.

MKT 609. Marketing Programs 3 credit hours
Studies all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisites: MKT 300 with a grade of C+ (2.300) or better, 6 additional hours of marketing, junior standing, advanced standing.

MKT 690. Seminar in Selected Topics 1-5 credit hours
Repeatable with instructor's consent. Prerequisites: junior standing, advanced standing.

MKT 706. Seminar in New Product and Technology Development 3 credit hours
Cross-listed as ENTR 706. Provides a form to the function of idea commercialization. Examines the product development practices of successful, innovative companies and focuses on how customer needs can be translated into product concept testing, product launch strategies, postlaunch product evaluation, and managing innovative teams. Students apply learning through developing and testing a product idea that solves a customer problem.

MKT 750. Workshop in Marketing 1-4 credit hours
Prerequisite: junior standing.

Mathematics (MATH)

Courses numbered 000–099 do not count toward any degree program.

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MATH 007. Arithmetic 3 credit hours
A review and study of the basic arithmetic operations for the mature student whose previous training in arithmetic is inadequate for completion of college mathematics courses. Graded Cr/NCr.

MATH 011. Beginning Algebra 5 credit hours
Content consists of algebra topics usually covered in the first year of a standard high school algebra course. Graded Cr/NCr. Not applicable to degree.
MATH 012. Intermediate Algebra  3-5 credit hours
Content consists of topics usually covered in the second year of a standard high school algebra course. Graded Cr/NCr. Prerequisite: MATH 011 or one year of high school algebra, and qualifying score in recent department placement exam. Not applicable to degree.

MATH 013. College Algebra Supplement  2 credit hours
A supplement to MATH 111 to be taken concurrently with designated sections of MATH 111 to allow students 5 contact hours for mastering college algebra. Graded Cr/NCr. Corequisite: MATH 111.

MATH 111. College Algebra  3 credit hours
General education foundation course. A survey of functions, theory of equations and inequalities, complex numbers, and exponential and logarithmic functions. High school geometry is a highly recommended preparatory course. Prerequisites: MATH 012 or two years of high school algebra and qualifying score in recent department placement exam. Credit is allowed in only one of the two courses MATH 111 and 112.

MATH 112. Precalculus Mathematics  5 credit hours
General education foundation course. Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics prerequisite to a beginning study of calculus. Course is not available for credit to students who have received a C or better in MATH 242 or its equivalent. Prerequisites: MATH 012 or two years of high school algebra, one unit of high school geometry, and qualifying score in recent departmental placement exam. Credit is allowed in only one of the two courses MATH 111 and 112.

MATH 121. Geometry for College Students  3 credit hours
A study of lines, angle relationships, parallel lines, triangles, quadrilaterals, similar triangles, circles, areas of polygons and circles, and some material on surface and solids, Prerequisite: MATH 111 or equivalent with a grade of C or better.

MATH 123. College Trigonometry  3 credit hours
General education foundation course. Studies the trigonometric functions and their applications. Credit in both MATH 123 and 112 is not allowed. Prerequisite: MATH 111 with C or better or equivalent high school preparation and one unit of high school geometry.

MATH 131. Contemporary Mathematics  3 credit hours
General education foundation course for students majoring in nontechnical areas. A collection of applications of mathematics illustrating how contemporary mathematical thinking is used in the decision-making process. Covers topics selected from such areas as the mathematics of social choice, management science, statistics, coding information, and the geometry of growth, shape and symmetry. Prerequisite: MATH 012 or two years of high school algebra and a qualifying score on a recent departmental placement examination.

MATH 144. Business Calculus  3 credit hours
General education introductory course. A brief but careful introduction to calculus for students of business and economics. Credit in both MATH 144 and 242 is not allowed. Prerequisite: MATH 111 or 112 with a C or better, or equivalent high school preparation.

MATH 150. Workshop in Mathematics  1 credit hour
Topics of interest to particular students and not elsewhere available in the curriculum. May be repeated for a total of 6 hours credit with departmental consent. Prerequisite: departmental consent.

MATH 211. Elementary Linear Algebra  1-3 credit hours
Covers topics in linear algebra together with elementary applications. Prerequisite: One and one-half units of high school algebra or MATH 011.

MATH 242. Calculus I  5 credit hours
General education introductory course. Analytic geometry and the calculus in an interrelated form. Credit in both MATH 242 and 144 is not allowed. Prerequisites: MATH 112 with a C or better, or two units of high school algebra, one unit of high school geometry and one-half unit of high school trigonometry, or MATH 123 and 111 with a C or better in each.

MATH 242H. Calculus I - Honors  5 credit hours
General education introductory course. Analytic geometry and the calculus in an interrelated form. Credit in both MATH 242 and 144 is not allowed. Honors section. Prerequisites: MATH 112 with a C or better or two units of high school algebra, and one unit of high school geometry and one-half unit of high school trigonometry, or MATH 123 and 111 with a C or better in each.

MATH 243. Calculus II  1-5 credit hours
General education advanced further study course. A continuation of MATH 242. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: MATH 242 with a C or better.

MATH 243H. Calculus II - Honors  5 credit hours
General education advanced further study course. A continuation of MATH 242. Includes a study of integration and applications and an introduction to infinite series. Honors section. Prerequisite: MATH 242 with a C or better.

MATH 251. Technical Calculus I  3 credit hours
Standard topics in analytic geometry and calculus, including differentiation and integration, with applications to engineering technology. This course is intended for students in the engineering technology program. Not open to students with credit in MATH 144 or 242. Prerequisite: MATH 112 with a C or better, or MATH 111 and 123 with C or better in each, or equivalent preparation.

MATH 252. Technical Calculus II  3 credit hours
Standard topics in analytic geometry and calculus, including topics in multidimensional calculus and differential equations with applications to engineering technology. This course is intended for students in the engineering technology program. Prerequisite: MATH 251 with a C or better, or MATH 242 with C or better, or equivalent preparation.

MATH 300. Evolution of Mathematics  3 credit hours
A study of mathematics and mathematicians from antiquity to the present, to see how mathematics has developed from human beings' efforts to understand the world and the extent to which mathematics has molded our civilization and culture. Since mathematics is what mathematicians do, the lives of mathematicians from various ages and countries are studied. Not a mathematical skills course.

MATH 311. Introduction to Linear Algebra  1 credit hour
A study of systems of linear equations, matrices, vectors, eigenvalues and eigenvectors. Prerequisite: MATH 344 or concurrent enrollment. Credit not allowed in both MATH 211 and 311.

MATH 321. Discrete Structures I  3 credit hours
Cross-listed as CS 321. Provides a mathematical foundation essential to the entire computer science curriculum. Includes propositional and predicate logic, induction, recursion and counting techniques. Prerequisite: MATH 242 or equivalent with a grade point of 2.00 or better.

MATH 322. Discrete Structures II  3 credit hours
A continuation of MATH 321. Includes relations, graphs, trees, Boolean algebra and automata. Prerequisite: MATH 321.
MATH 344. Calculus III 3 credit hours
General education advanced further study course. A continuation of MATH 243. Includes a study of multiple integration and partial derivatives. Prerequisite: MATH 243 with a grade point of 2.000 or better.

MATH 344H. Calculus III - Honors 3 credit hours
General education advanced further study course. A continuation of MATH 243. Includes a study of multiple integration and partial derivatives. Honors section. Prerequisite: MATH 243 with a grade point of 2.000 or better.

MATH 415. An Introduction to Advanced Mathematics 3 credit hours
Develops the concept of proof in a setting of mathematical tools needed in advanced courses. Covers topics in number theory, algebra and analysis. Particular attention to equivalence relations, functions, induction and mathematical systems. Prerequisite: MATH 344 with a grade point of 2.000 or better.

MATH 451. Computational Mathematics Using MATLAB 3 credit hours
Introduces the use of MATLAB in computational algorithms. A bridge to upper-division courses in numerical methods and applied mathematics. Prerequisite: MATH 243 with a grade point of 2.000 or better.

MATH 480. Individual Projects 1-5 credit hours
Repeatable up to 10 hours. Prerequisite: departmental consent.

MATH 480F. Quantum Computing 3 credit hours
Theory and mathematics of quantum mechanics as applied to problems in quantum information; simulations of physical implementations and coding.

MATH 481. Cooperative Education 1-6 credit hours
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Graded Cr/Nc. Prerequisite: departmental consent.

MATH 501. Elementary Mathematics 5 credit hours
A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisites: elementary education major and MATH 111 or equivalent with a grade point of 2.000 or better, or departmental consent.

MATH 502. Mathematics for Middle School Teachers 5 credit hours
A study of the mathematical knowledge which forms the theoretical foundations of, the applications of, and extensions of middle school mathematics. This capstone course serves to reinforce mathematics skills learned in prerequisite courses and assists students in recognizing the unifying principles within their mathematical experiences. Prerequisites: MATH 111, 121, 123, 144, 501, and STAT 370 or equivalent with a grade point of 2.000 or better in each.

MATH 511. Linear Algebra 3 credit hours
An elementary study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite: MATH 243 with a grade point of 2.000 or better.

MATH 513. Fundamental Concepts of Algebra 3 credit hours
Defines group, ring and field, and studies their properties. Prerequisites: MATH 415 and 511 with a grade point of 2.000 or better, or departmental consent.

MATH 525. Elementary Topology 3 credit hours
Studies topological spaces, open and closed sets, bases for topology, continuous mappings, homeomorphisms, connectedness and compactness, Hausdorff and other spaces, with special emphasis on metric spaces. Prerequisite: MATH 415 with a grade point of 2.000 or better.

MATH 530. Applied Combinatorics 3 credit hours
Basic counting principles, occupancy problems, generating functions, recurrence relations, principles of inclusion and exclusion, the pigeonhole principle, Fibonacci sequences and elements of graph theory. Prerequisite: MATH 344 with a grade point of 2.000 or better.

MATH 531. Introduction to the History of Mathematics 3 credit hours
General education advanced issues and perspectives course. Studies the development of mathematics from antiquity to modern times. Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Prerequisites: MATH 511 and two additional courses at the 500 level or above, with a grade point of 2.000 or better in each.

MATH 531H. Introduction to the History of Mathematics - Honors 3 credit hours
General education advanced issues and perspectives course. Studies the development of mathematics from antiquity to modern times. Solves problems using the methods of the historical period in which they arose. Requires mathematical skills. Honors section. Prerequisites: MATH 511 and two additional courses at the 500 level or above, with a grade point of 2.000 or better in each.

MATH 545. Integration Techniques and Applications 3 credit hours
Studies the basic integration techniques used in applied mathematics. Includes the standard vector calculus treatment of line and surface integrals, Green's Theorem, Stokes's Theorem, and the Divergence Theorem. Also includes the study of improper integrals with application to special functions. Prerequisite: MATH 344 with a grade point of 2.000 or better.

MATH 547. Advanced Calculus I 3 credit hours
Covers the calculus of Euclidean space including the standard results concerning functions, sequences and limits. Prerequisites: MATH 344 and 415 with a grade point of 2.000 or better in each.

MATH 548. Introduction to Complex Variables 3 credit hours
Study of complex numbers, analytic functions, differentiation and integration of complex functions, line integrals, power series, residues and poles, and conformal mapping with applications. Prerequisites: MATH 344 with a grade point of 2.000 or better.

MATH 551. Numerical Methods 3 credit hours
Approximating roots of equations, interpolation and approximation, numerical differentiation and integration, and the numerical solution of first order ordinary differential equations. Some computer use. Prerequisites: MATH 344 and 451 with a grade point of 2.000 or better, or departmental consent.

MATH 553. Mathematical Models 3 credit hours
Covers case studies from the fields of engineering technology and the natural and social sciences. Emphasizes the mathematics involved. Each student completes a term project which is the solution of a particular problem approved by the instructor. Prerequisite: Math 344 with a grade point of 2.000 or better, or departmental consent.

MATH 555. Differential Equations I 3 credit hours
A study of first order equations including separation of variables and exact equations, second order equations including the general theory of initial value problems, constant coefficients, undetermined coefficients, variation of parameters and special methods of solution using power series and the Laplace transform methods. A standard course in differential equation for students in the sciences and engineering.
Prerequisite: MATH 243 with a grade point of 2.00 or better, or departmental consent.

**MATH 555H. Differential Equations I - Honors 3 credit hours**
A study of first order equations including separation of variables and exact equations, second order equations including the general theory of initial value problems, constant coefficients, undetermined coefficients, variation of parameters and special methods of solution using power series and the Laplace transform methods. A standard course in differential equation for students in the sciences and engineering. Honors section. Prerequisite: MATH 243 with a grade point of 2.00 or better, or departmental consent.

**MATH 580. Selected Topics In Math 1-3 credit hours**
Topic chosen from topics not otherwise represented in the curriculum. May be repeated up to a maximum of 6 hours credit with departmental consent. Prerequisite: departmental consent.

**MATH 615. Elementary Number Theory 3 credit hours**
Studies properties of the integers by elementary means. Prerequisite: MATH 344 with a grade point of 2.00 or better, or departmental consent.

**MATH 621. Elementary Geometry 3 credit hours**
Studies Euclidean geometry from an advanced point of view. Prerequisite: MATH 344 with a grade point of 2.00 or better, or departmental consent.

**MATH 640. Advanced Calculus II 3 credit hours**
A continuation of MATH 547. Prerequisites: MATH 511 and 547 with a grade point of 2.00 or better in each.

**MATH 655. Differential Equations II 3 credit hours**
A continuation of MATH 555 (but with more emphasis on theoretical issues) that covers higher order differential equations, systems of first order equations (including the basics of linear algebra), some numerical methods, and stability and behavior of solutions for large times. Prerequisite: MATH 555 with a grade point of 2.00 or better, or departmental consent.

**MATH 657. Optimization Theory 3 credit hours**
Introduces selected topics in linear and nonlinear optimization. Develops the revised simplex method along with a careful treatment of duality. Then extends the theory to solve parametric, integer and mixed integer linear programs. Prerequisite: MATH 555 with a grade point of 2.00 or better.

**MATH 713. Abstract Algebra I 3 credit hours**
Studies the standard basic topics of abstract algebra. Prerequisite: MATH 513 with a grade point of 2.00 or better, or departmental consent.

**MATH 720. Modern Geometry 3 credit hours**
Examines the fundamental concepts of geometry. Prerequisite: MATH 513 with a grade point of 2.00 or better, or departmental consent.

**MATH 725. Topology I 3 credit hours**
Studies the results of point set and algebraic topology. Prerequisite: MATH 547 with a grade point of 2.00 or better, or departmental consent.

**MATH 743. Real Analysis I 3 credit hours**
Includes a study of the foundations of analysis and the fundamental results of the subject. Prerequisite: MATH 640 with a grade point of 2.00 or better, or departmental consent.

**MATH 745. Complex Analysis I 3 credit hours**
Studies the theory of analytic functions. Prerequisite: MATH 640 with a grade point of 2.00 or better, or departmental consent.

**MATH 751. Numerical Linear Algebra 3 credit hours**
Includes analysis of direct and iterative methods for the solution of linear systems, linear least squares problems, Eigenvalue problems, error analysis, and reduction by orthogonal transformations. Prerequisites: MATH 511, 547, 551 with a grade point of 2.00 or better in each, or departmental consent.

**MATH 753. Ordinary Differential Equations 3 credit hours**
Covers existence, uniqueness, stability and other qualitative theories of ordinary differential equations. Prerequisite: MATH 545 or 547 with a grade point of 2.00 or better, or departmental consent.

**MATH 755. Partial Differential Equations I 3 credit hours**
Studies the existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite: MATH 547 with a grade point of 2.00 or better, or departmental consent.

**MATH 757. Partial Differential Equations for Engineers 3 credit hours**
A survey of some of the mathematical techniques needed in engineering including an introduction to vector analysis, line and surface integrals, and complex analysis, contour integrals and the method of residues. Not applicable toward a graduate degree in mathematics. Prerequisite: MATH 555 with a grade point of 2.00 or better.

**Mechanical Engineering (ME)**
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**ME 250. Materials Engineering 3 credit hours**
Introduces the basic principles behind materials science and engineering. Structure and properties of materials relevant to practicing engineers are looked at along with crystal structure and imperfections in metals. Studies diffusion mechanical properties, failure mechanisms, phase equilibrium diagrams and heat treatment principles for steels, cast irons, and other metal alloys. Provides the scientific foundation for an understanding of the relationships among material properties, structure and performance for the classes of engineering solids (metals and alloys, polymers, ceramics, semiconductors, etc.). Includes study of corrosion, atomic structure, mechanical properties, failure theories, fatigue, creep, cold working, heat treating, alloying, and nondestructive and other material testing. Students are expected to gain an understanding of these materials, processing techniques, their properties, and how they are applied in the industry. Prerequisites: CHEM 211, MATH 242.

**ME 251. Materials Engineering Laboratory 1 credit hour**
Experimental study and macroscopic mechanical response of ceramics, metals, polymers and composite materials, with an introduction to the underlying microstructural processes during deformation and fracture. The laboratory is designed to introduce students to some of the most common materials testing and characterization methods. Topics include optical metallography, tensile and compression testing, hardness testing, impact testing, fatigue testing, heat treating, scanning electron microscopy, plastic injection molding, melting and casting. Corequisite: ME 250.
ME 281I. Noncredit Internship  0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

ME 325. Numerical Methods for Engineers  3 credit hours
Provides the basic numerical methods to understand, analyze and design the various engineering systems. Includes linear systems of equations, least square problems, eigenvalue problems, and singular value problems, and ordinary differential equations. Students learn not only basic principles of numerical analysis, but also practical applications to the various numerical problems through commercially available computer software, e.g., MS Excel and MATLAB. Prerequisites: MATH 243 and PHYS 313.

ME 335. Dynamics for Mechanical Engineers  3 credit hours
Introduces engineering design process; synthesis and analysis of machinery and machines. Kinematic (position, velocity and acceleration) and inverse dynamic analysis of planar mechanisms by analytical, graphical and computer methods. Design of linkages for motion, path and function generation; cam design. Computer-aided engineering approach in mechanical design; projects on practical engineering designs for machinery. Prerequisite: ME 223 and MATH 344.

ME 339. Design of Machinery  3 credit hours
Introduces engineering design process; synthesis and analysis of machinery and machines. Kinematic (position, velocity and acceleration) and inverse dynamic analysis of planar mechanisms by analytical, graphical and computer methods. Design of linkages for motion, path and function generation; cam design. Computer-aided engineering approach in mechanical design; projects on practical engineering designs for machinery. Prerequisite: ME 223 and MATH 344.

ME 360. Selected Topics in Mechanical Engineering  1-3 credit hours
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisites: as published or departmental consent.

ME 398. Thermodynamics I  3 credit hours
An introduction to the terminology and analysis techniques specific to thermodynamics centered around a study of the first and second laws of thermodynamics. Prerequisites: MATH 243, PHYS 313.

ME 398H. Thermodynamics I - Honors  3 credit hours
An introduction to the terminology and analysis techniques specific to thermodynamics centered around a study of the first and second laws of thermodynamics. Honors section. Prerequisites: MATH 243, PHYS 313.

ME 439. Mechanical Engineering Design I  3 credit hours
Covers the basics of machine design, including the design process, engineering mechanics, deformations and stress analysis, failure prevention under static and variable loading conditions, design of mechanical components, and selection of materials and mechanical components from standard tables and handbooks. It offers a practical approach to the design subject through a wide range of real-world applications and examples. Prerequisites: ME 250, ME 251, AE 333, MATH 555.

ME 450. Selected Topics in Mechanical Engineering  1-3 credit hours
New or special topics presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 469. Energy Conversion  3 credit hours
Energy conversion principles and their implementation in engineering devices including thermal, mechanical, nuclear and direct energy conversion processes. Prerequisite: ME 398.

ME 481A. Cooperative Education  1-3 credit hours
Introduction to engineering practice by working in industry in an engineering-related job. Provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full-time on their co-op assignments and need not be enrolled in any other course. May be repeated. Graded Cr/NCr. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

ME 481I. Noncredit Internship  0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

ME 481N. Internship  1 credit hour
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

ME 481P. Cooperative Education  1 credit hour
Introduction to engineering practice by working in industry in an engineering-related job. Provides planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working part-time on their co-op assignments and be currently enrolled in courses leading to a mechanical engineering degree. May be repeated. Graded Cr/NCr. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

ME 502. Thermodynamics II  3 credit hours
Continuation of ME 398, emphasizing cycle analysis, thermodynamic property relationships and psychrometrics, with an introduction to combustion processes and chemical thermodynamics. For undergraduate students only. Prerequisite: ME 398.

ME 521. Fluid Mechanics  3 credit hours
The definition of a fluid and the concept of a continuum. Stress and strain in a Newtonian fluid. Description and classification of fluid motions. Hydrostatic pressure and forces on submerged surfaces. Reynolds Transport Theorem and integral analysis of conservation laws. Introduction to differential analysis of fluid motion. Dimensional analysis and similarity. Study of flow in closed conduits: pressure drop in fully developed viscous flow. The boundary layer concept and lift and drag forces on immersed bodies. For undergraduate students only. Prerequisites: ME 335, 398, MATH 555; all with a minimum grade of C (2.000).

ME 522. Heat Transfer  3 credit hours
Introduction to the three modes of heat transfer in the context of the laws of thermodynamics; the heat equation and its application to steady conduction in one- and two-dimensions as well as to unsteady one-dimensional conduction; the thermal boundary layer, Reynolds Analogy, and the problem of convection; free and forced convection in internal and external flows; boiling and condensation; thermal radiation. Emphasizes problem solving using analytical methods approximate solutions, analogies, empirical correlations, and numerical methods.
For undergraduate students only. Prerequisites: ME 325, ME 521 and PHYS 314; each with a minimum grade of C (2.000).

**ME 533. Mechanical Engineering Laboratory  3 credit hours**

2 Classroom hours; 3 Lab hours. Introduces the basics of engineering measurements. Discusses related theory, followed by applications in such areas as strain, sound, temperature and pressure measurements. Format includes lectures, recitation (presenting the concept of the experiment to be performed and the required data analysis), and laboratories. Analyzes the data obtained from measuring systems set up and operated in the laboratory to demonstrate and reinforce fundamental concepts of engineering mechanics. For undergraduate students only. Prerequisites: EE 282, AE 333, ME 325, ENGL 102, COMM 111, PHYS 315; Corequisite: ME 522.

**ME 541. Mechanical Engineering Design II  3 credit hours**

Principles of mechanical design, emphasizing practice in the application of many mechanical design elements: shafts, bearings, gears, brakes, clutches, thread fasteners, etc. Includes machine elements design, materials election, fatigue, stress concentration, statistical concepts and cost standardization. Innovative practical applications demanding integration of machine elements into a practical device. For undergraduate students only. Prerequisites: ME 339 and ME 439.

**ME 581. Introduction to Corrosion  3 credit hours**

Presents information about basic corrosion processes, underlying principles of corrosion formations, and general protection methods. Studies basic corrosion and corrosion mechanisms, importance of corrosion, coating systems, and how the materials are protected from the corrosion formations. Concerns fundamental theory of the thermodynamics and kinetics of the corrosion process of metals and alloys as well as polymer materials both in atmosphere and water solutions. Focuses on electrochemical aspects and the influences of the properties of the metals and their oxides on the corrosion behavior, which is exemplified by different corrosion types. Existing corrosion protection strategies, including surface treatments and coatings are described and choice of material is discussed from a corrosion point of view. Prerequisites: ME 250 and ME 398; or instructor’s consent.

**ME 602. Engineering for the Environment  3 credit hours**

Engineering for the environment, air, water and noise pollution, and handling of hazardous wastes. Covers briefly the main pollutants, their major sources, their effects and their attainment levels set by the U.S. Environmental Protection Agency. Emphasizes engineering systems for pollution control. Prerequisites: ME 398, AE 223, IME 255, or departmental consent.

**ME 631. Heat Exchanger Design  3 credit hours**

Covers analytical models for forced convection through tubes and over surfaces, experimental correlations for the Nusselt number and pressure drop, design of single and multiple pass shell and tube heat exchangers; compact baffle, direct contact, plat and fluidized bed heat exchangers, radiators, recuperators and regenerators. Prerequisites: ME 521 and 522, or equivalent.

**ME 633. Mechanical Engineering Systems Laboratory  3 credit hours**

2 Classroom hours; 3 Lab hours. Selected experiments illustrate the methodology of experimentation as applied to mechanical and thermal systems. Experiments include the measurement of performance of typical systems and evaluation of physical properties and parameters of systems. Group design and construction of an experiment is an important part of the course. Team and individual efforts are stressed as are written and oral communication skills. For undergraduate students only. Prerequisites: ME 522, ME 533.

**ME 637. Computer-Aided Engineering  3 credit hours**

2 Classroom hours; 3 Lab hours. Integrates computer-aided design, finite element analysis, kinematics analysis, heat transfer analysis and other considerations for design of mechanical components and systems. Provides a blend of theory and practice. Prerequisites: ME 339 and ME 439, or equivalent.

**ME 639. Applications of Finite Element Methods in Mechanical Engineering  3 credit hours**

2 Classroom hours; 3 Lab hours. Introduces the finite element method (FEM) as a powerful and general tool for solving differential equations arising from modeling practical engineering problems. Finite element solutions to one- and two-dimensional mechanical engineering problems in mechanical systems, heat transfer, fluid mechanics and vibrations. Includes Galerkin's and variational finite element models. Introduces commercial finite element computer tools such as ANSYS. Prerequisites: ME 325, ME 339 and ME 439; Corequisite: ME 522 or instructor's consent.

**ME 644. Design of HVAC Systems  3 credit hours**

Analysis and design of heating, ventilating and air-conditioning systems based on psychometrics, thermodynamics and heat transfer fundamentals with focus on advanced duct design for composite building, cooling load calculations and thermal-issues based psychometric. Focuses on design procedures for space air-conditioning, and heating and cooling loads in buildings. Prerequisites: ME 521, 522; or instructor's consent.

**ME 650. Selected Topics in Mechanical Engineering  1-3 credit hours**

New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

**ME 651. Biomaterials  3 credit hours**

Introduction to biomaterials and biotechnology for both undergraduate and graduate students focusing on biomaterials (e.g., metals and alloys, composites, polymers and ceramics), biodevices, basic fabrication and characterization techniques, and their general properties and applications. Prerequisites: ME 250, ME 251; or instructor's consent.

**ME 659. Mechanical Control Systems  3 credit hours**

Cross-listed as EE 684. Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based on the laws of physics and linear mathematics. Concerns classical methods of feedback control systems and design. Prerequisites: (1) EE 282 and MATH 555, or (2) EE 383.

**ME 660. Polymer Materials and Engineering  3 credit hours**

Introduces the basic science and engineering of polymer materials. Provides the scientific foundation for an understanding of the relationships among material structures and properties of different types of polymer materials (thermoplastics, thermostets, synthetic fibers and rubbers, etc.) for various applications from consumer electronics to aviation industry. An understanding of these materials, processing techniques, their properties, and how they are applied in the industry. Prerequisite: ME 250 or CHEM 211.

**ME 662. Senior Capstone Design  3 credit hours**

1 Classroom hour; 6 Lab hours. A culminating course that allows students nearing graduation to combine the knowledge and skills acquired in their program and apply them to a major project or assignment. An exercise in the practice of mechanical engineering for undergraduate students in their graduating semester; students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering, science and design courses. Team effort and both oral and written presentations are a part
ME 664. Introduction to Fatigue and Fracture 3 credit hours
Deals with the primary analytical methods used to quantify fatigue damage. These are the stress life approach, strain life approach and the fracture mechanics approach. Prerequisite: ME 439.

ME 665. Selection of Materials for Design and Manufacturing 3 credit hours
Focuses on the selection of engineering materials to meet product and manufacturing requirements. Solution to various product and manufacturing problems by appropriate selection of materials is illustrated through the use of numerous examples and case studies. Prerequisite: ME 439.

ME 666. Mechanical Properties of Materials 3 credit hours
Major focus on deformation mechanisms and on crystal defects that significantly affect mechanical properties. Also covers plasticity theory, yield criteria for multi-axial states of stress, fracture mechanics and fracture toughness. Includes some review of basic mechanics of materials and elasticity as needed. Prerequisite: ME 439.

ME 669. Acoustics 3 credit hours
Introduces the fundamentals of acoustics including the study of simple harmonic systems, acoustic waves, transmission phenomena, environmental and architectural acoustics. Foundations of 3D elasticity, fluid and elastic wave equations, elastic and plastic waves in rods and beams, waves in plates, and dynamics and acoustics of cylindrical shells, acoustic fluids effects such as radiation and scattering by submerged plates and shells, and interaction between structural elements. Response of plates and shells to high-intensity loads, dynamic plasticity and fracture, and structural damage caused by impulsive and impact loads. Prerequisites: MATH 555, ME 335 or instructor's consent.

ME 670. Introduction to Nanotechnology 3 credit hours
Introduction to the underlying principles and applications of the field of nanotechnology and nanoscience. Covers basic principles of nanotechnology, nanomaterials and associated technologies and provides a background of the understanding, motivation, implementation, impact, future, and implications of nanotechnology. Focuses on processing techniques of nanoparticles, nanofibers/wires, nanotubes, nanofilms and nanocomposites using physical, chemical and physicochemical techniques, as well as their characterizations and potential commercial applications. An understanding of nanomaterials, fabrication and characterization techniques, and how they are applied in nanodevice fabrication. Material covered includes nanofabrication technology (how one achieves the nanometer length scale, from "bottom up" to "top down" technologies), the interdisciplinary nature of nanotechnology and nanoscience (including areas of chemistry, material science, physics and molecular biology), examples of nanoscience phenomena (the crossover from bulk to quantum mechanical properties), and applications (from integrated circuits, quantum computing, MEMS and bioengineering). Prerequisites: ME 250 and ME 398; or instructor's consent.

ME 672. Manufacturing of Composites 3 credit hours
2 classroom hours; 3 laboratory hours. Provides the basis for understanding and use of composite materials in various engineering applications such as space and aerospace structures. Different classes of composite materials, the characteristics of their constituents, an introduction to micromechanics of composites, commonly used composite manufacturing techniques in detail, along with their capabilities and limitations, characterization methods, degradation, joining, tooling, machining, and recycling of composites is discussed. Contains laboratory modules designed to provide hands-on experience to emphasize the practical aspects of the topics covered. Prerequisites: ME 250, ME 251, AE 333; or instructor's consent.

ME 673. Recovery of Engineering Materials 3 credit hours
Introduces basic standards in recycling and reusing processes of different materials and the importance of recycling for the economy, health and environmental aspects. Focuses on basic separation techniques of various recyclable materials, recycled products reprocessing, as well as characterizations and potential commercial applications in different industries. Undergraduate and graduate students are expected to gain an understanding of recycling processes, recycled materials and applications. Prerequisites: ME 250, ME 398 and IME 255; or instructor's consent.

ME 678. Studies in Mechanical Engineering 1-3 credit hours
Arranged individual, independent study in specialized content areas in mechanical engineering under the supervision of a faculty member. Requires written report or other suitable documentation of work for departmental records. Three (3) hours maximum technical elective credit. Not for graduate credit. Prerequisite: departmental consent.

ME 682. Engineering Applications of Computational Fluid Dynamics and Heat Transfer 3 credit hours
Reviews the basic laws of fluid flow and heat transfer including the Navier-Stokes equations. Applications include a CFD software emphasizing the finite volume method and introducing turbulence modeling. Additional topics include grid generation and benchmarking exercises as well as open-ended projects. Prerequisites: ME 325 (or AE 227) and ME 522 (or AE 424) with a minimum grade of C in each, or instructor's consent.

ME 702. Energy and Sustainability 3 credit hours
Introduction to sustainability in a world of increasing population with more energy intensive lifestyles and diminishing resources; anthropogenic global climate change and the engineer's responsibilities; a critical look at our ecological footprint; survey of alternative sources with special emphasis on wind and solar energy; life cycle analysis (LCA) of engineered products; the electric grid; emissions from various transportation modes, and alternative. Consists of traditional lectures, seminars by invited experts, and the use of case-studies. Meets the ME undergraduate curricular requirement for thermal/fluids elective and/or a general ME elective. Prerequisites: EE 282, ME 398 and IME 255; or instructor's consent.

ME 709. Injury Biomechanics 3 credit hours
Offers insight into the trauma problem and methods used to quantify and reduce it. Research methods used in injury biomechanics and their limitations are discussed including tests with human volunteers, cadavers, animals, mechanical crash test dummies and computer models. Provides a basic understanding of injury mechanisms and tolerances for the different body parts, including head, spine, thorax and extremities. Presents both automotive and aircraft impact safety regulations on occupant protection and related biomechanical limits. Students are exposed to and gain experience in using mathematical/numerical/computer models for injury biomechanics. Prerequisite: instructor's consent.

ME 719. Basic Combustion Theory 3 credit hours
Introduction to the fundamental principles of combustion processes. Examines the chemistry and physics of combustion phenomena, that is, detonation and flames, explosion and ignition processes. Prerequisites: CHEM 211, ME 502.

ME 728. Advanced Electronic Materials 3 credit hours
Focuses on electronic materials which are fundamental and critical to performances and applications of electronic devices. Structure-property and property-relationships of different types of electronic
materials are discussed. Cutting edge technologies in development of advanced electronic materials and devices are introduced. High level knowledge of electronic material structures, properties and applications of electronic materials, and basic principles for material design for electronics. Prerequisites: ME 250 or PHYS 313; or instructor's consent.

ME 729. Computer-Aided Analysis of Mechanical Systems  3 credit hours
Modeling and analysis of planar motion for multibody mechanical systems including automatic generation of governing equations for kinematic and dynamic analysis, as well as computational methods and numerical solutions of governing equations. Computer applications. Open-ended student projects on engineering applications such as mechanisms design and vehicle dynamics. Technical elective course for mechanical engineering students. Prerequisites: ME 335, 339, MATH 555; or instructor's consent.

ME 730. Modeling of Engineering Systems  3 credit hours
Provides rigorous understanding of physics and engineering mathematics in order to model practical scientific and engineering problems in fluid mechanics, heat transfer, solid mechanic, and vibrations. Focuses on analytical approaches and introduces computational methods for modeling engineering systems using computer codes. Prerequisites: MATH 555 and ME 325, or departmental consent.

ME 731. Advanced Heat Exchanger Design  3 credit hours
Topics cover advanced design of fluidized bed, heat pipe, and high-temperature heat exchangers. Design experience through individual projects. Prerequisites: ME 521, ME 522.

ME 737. Robotics and Control  3 credit hours
A systems engineering approach to robotic science and technology. Fundamentals of manipulators, sensors, actuator, end-effectors and product design for automation. Includes kinematics, trajectory planning, control, programming of manipulator and simulation, along with introduction to artificial intelligence and computer vision. Prerequisite: ME 659 or equivalent.

ME 739. Advanced Machine Design  3 credit hours
A broad coverage of principles of mechanical analysis and design of machine elements. Emphasizes dynamic system modeling, prediction of natural frequencies and forced response, effect of support flexibility, failure theories used in design and fatigue life prediction. Typical mechanical systems studied are gears, bearings, shafts, rotating machinery and many types of spring-mass systems. Uses fundamentals learned in mechanics, strength of materials and thermal sciences to understand mechanical system modeling, analysis and design. Prerequisite: ME 541 or instructor's consent.

ME 745. Design of Thermal Systems  3 credit hours
Covers component design for a typical Rankine power cycle. Design of boilers, condensers, various types of turbine, pipe flow network, and power plant system integration are covered. Prerequisites: ME 521, ME 522.

ME 747. Microcomputer-Based Mechanical Systems  3 credit hours
2 Classroom hours; 3 Lab hours. Microcomputer-based real-time control of mechanical systems. Familiarizes students with design and methodology of software for real-time control. Includes an introduction to the C programming language which is most relevant to interfacing and implementation of control theory in computer-based systems. Laboratory sessions involve interfacing microcomputers to mechanical systems and software development for control methods such as PID. Prerequisite: ME 659 or instructor's consent.

ME 750. Selected Topics in Mechanical Engineering  1-3 credit hours
New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 750AC. Laser Applications in Manufacturing  3 credit hours
Looks into laser technology which is defined as the methods, processes or products that make use of the spectrum of laser light, and any systems whose function is to study, measure, transform or transmit the light. Engineers, scientists and technicians are being called on to determine how the laser beams can be employed to assist in their operations so as to produce the most cost effective products and services. A good working knowledge of lasers is required to better understand their use for specific applications. Laser technology creates new opportunities and will have pervasive economic effects and substantial employment implications.

ME 750F. Sustainability and Energy  3 credit hours
Sustainability in manufacturing and power production, and related engineering as well as environmental issues. A review of the planet earth's material and energy limits, implications of population growth and global technological advances, design and manufacturing, supply chain issues, product life cycle analysis, and our ecological footprint. Lectures and individual projects. Team-taught.

ME 751. Selected Topics in Mechanical Engineering  1-3 credit hours
New or special topics are presented on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent.

ME 752. Failure Analysis Methods and Tools  3 credit hours
Introduces the fundamental concepts of the failure analysis of engineering components at various environmental and testing conditions, and provides general knowledge on the procedures and mechanisms involved in failure analysis. Topics include procedural approaches in failure analysis; metallographic and fractographic studies; analysis of broken components by macroscopic, microscopic and nanoscopic observations; reviews common experimental methods used in failure analysis, and specific descriptions of failures for metallic, ceramic, polymeric and composite materials at micro- and nanoscales. Students learn advanced materials characterization techniques including scanning electron microscopy (SEM), energy dispersive spectroscopy (EDS) and compositional dot mapping, x-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR) optical microscopy, and fracture surface sample preparation. Undergraduate and graduate students are expected to gain an understanding of these subjects, and how they are applied in industrial applications. Prerequisites: ME 250, and ME 439; or instructor's consent.

ME 753. Advanced Materials for Energy Systems  3 credit hours
Introduces the advanced materials and fundamental principles behind the energy systems and devices. Focuses on advanced materials (e.g., metals and alloys, composites, polymers, ceramics and semiconductors) at micro- and nanosize, novel energy conversion systems and devices, fabrication and characterization techniques and their general properties and applications. Efficiencies of most energy systems are limited by materials engineering and reliability of these systems. Covers the application of scientific and engineering principles for materials used in energy systems. Equips students with knowledge and skills that enable them to solve a wide range of energy materials technology and engineering problems to minimize operational risks and maximize process reliability, and ensure a more sustainable future. Students gain an understanding of these advanced materials and devices, importance of them, and how they are applied in energy related technologies and
future developments. Prerequisites: ME 250, ME 398, ME 469 or ME 522 (either one of ME 469 or ME 522); or instructor's consent.

**ME 755. Intermediate Thermodynamics 3 credit hours**
Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisite: ME 502 or departmental consent.

**ME 758. Nonlinear Controls of Electro-Mechanical Systems 3 credit hours**
Standard first nonlinear controls course. Covers stability, feedback linearization (robotic, mechanical, electro-mechanical system applications), differentially-flat systems (with rotor-craft position tracking applications), back-stepping control-design methods (electro-mechanical, robotic and rotor-craft applications), MIMO systems, normal form, zero dynamics, and adaptive control of robotic systems. EE 792, Linear Systems, while not a prerequisite, is helpful. Prerequisite: ME 659 or EE 684; or equivalent.

**ME 759. Neural Networks for Control 3 credit hours**
Introduces specific neural network architectures used for dynamic system modeling and intelligent control. Includes theory of feed-forward, recurrent, and Hopfield networks; applications in robotics, aircraft and vehicle guidance, chemical processes, and optimal control. Prerequisite: ME 659 or departmental consent.

**ME 760. Fracture Mechanics 3 credit hours**
Covers fracture mechanics in metals, ceramics, polymers and composites. Suitable for graduate and undergraduate study in metallurgy and materials, mechanical engineering, civil engineering and aerospace engineering where a combined materials-fracture mechanics approach is stressed. Prerequisite: ME 439 or instructor's consent.

**ME 762. Polymeric Composite Materials 3 credit hours**
Designed to provide students with an understanding and knowledge about polymeric composite materials. The characteristics of various reinforcements and polymeric matrices are presented and their processing techniques, capabilities and limitations are highlighted. In addition, various methods for manufacturing of polymeric composites along with their capabilities are discussed. Characterization techniques, test methods, assembly, and joining of polymeric composites are presented. Prerequisites: ME 250, ME 251, AE 333, ME 439; and MATH 555; or instructor's consent.

**ME 764. Thermodynamics of Solids 3 credit hours**
Presents basic thermodynamic concepts which form the working tools throughout the course. Emphasizes the interpretation of certain types of phase diagrams — not upon the use of thermodynamics to assist phase diagram construction but upon the use of phase diagrams to obtain thermodynamic quantities. Also, the thermodynamics of defects and defect interactions in metals, ceramics, polymers, elemental semiconductors, and compounds. Prerequisites: ME 250 and 398 or departmental consent.

**ME 766. SEM and EDAX 3 credit hours**
Introduces Scanning Electron Microscopy (SEM), a powerful tool in materials science and engineering which can be used to analyze structural defects in materials. Discusses both the theory and experimental methods, as well as the application of these methods. Prerequisite: ME 250 or departmental consent.

**ME 767. X-Ray Diffraction 3 credit hours**
Theory of X-ray diffraction, experimental methods, and their applications which can include determination of the crystal structure of materials, chemical analysis, stress and strain measurements, study of phase equilibria, measurement of particle size, and determination of the orientation of a single crystal. Prerequisites: ME 250 and AE 333 or departmental consent.

**ME 769. Impact Dynamics 3 credit hours**
Classical methods are presented to analyze mechanical components and structures for impact response. Impact methods include stereo mechanics, contact mechanics, impulse-momentum, stress-wave, energy method and plastic impact. Finite element analysis (FEA) modeling of impact events are examined and applied to classical methods. Material properties evaluation for impact conditions, design techniques for impact and shock mitigation, and an introduction to crashworthiness are also presented. Course goals are to understand characteristics such as loading, stresses, deflections, contact forces and material response to impact events. Prerequisite: ME 439 or instructor's consent.

**ME 781. Cooperative Education 2-8 credit hours**
A work-related placement with a supervised professional experience to complement and enhance the student's academic program. Intended for master's level or doctoral students in mechanical engineering. Repeatable for credit. May not be used to satisfy degree requirements. Graded Cr/NCr. Prerequisites: graduate standing, departmental consent, graduate GPA of 3.000 or above.

**ME 781A. Cooperative Education 1 credit hour**
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. Repeatable. Prerequisite: approval by the appropriate faculty sponsor.

**ME 781P. Cooperative Education 1 credit hour**
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students must enroll concurrently in a minimum of 6 hours of coursework including this course in addition to a minimum of 20 hours per week at their co-op assignment. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. Repeatable. Prerequisite: approval by the appropriate faculty sponsor.

**Medical Laboratory Sciences (MLS)**
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**MLS 281. Cooperative Education 1-8 credit hours**
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and the cooperative education coordinator. Repeatable for credit. Prerequisites: basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment.

**MLS 311. Biochemistry for Clinical Scientists 3 credit hours**
3 Classroom hours. A discussion of the structure and metabolic pathways of carbohydrates, proteins, lipids and nucleic acids, with
emphasize on metabolic control via enzymes, hormones and vitamins, and the biochemistry of clinical pathology. Prerequisites: two semesters of general chemistry with laboratory, at the major level.

MLS 400. Clinical Laboratory Management/Education 3 credit hours
A study of the principles and methodologies of laboratory management and supervision, and teaching techniques applicable to the clinical laboratory sciences. Prerequisite: program consent.

MLS 405. Medical Immunology 3 credit hours
An introduction to the study of immunological concepts as they apply to the study, prevention and causation of the disease process. Prerequisite: BIOL 223 or HS 290.

MLS 411. Special Topics 1-6 credit hours
Supervised intensive study of special topics and problems related to health professions. Repeatable to a maximum of 6 hours. Prerequisite: program director's consent.

MLS 453. Clinical Chemistry 8 credit hours
6 Classroom hours; 4 Lab hours. Includes the study of the principles, concepts and techniques used in the clinical chemistry laboratory for the analysis of serum, plasma and other body fluids. Correlation and analysis of chemical substances in the body and the assessment of health and disease is emphasized. Applicable practice in the analysis of body fluids is provided, including the physical, chemical and microscopic analysis of urine. Coursework includes the study of clinical laboratory regulation, general laboratory operations, safety, and instrumentation methodologies, as well as discussion regarding the assessment of normal physiological function and associated disease conditions for each of the major body systems to include assessment of carbohydrates, proteins and other nonprotein nitrogen-containing compounds, heme synthesis and derivatives, enzymes, electrolytes, acid-base balance, lipids and lipoproteins, cardiac biomarkers, hormones, tumor markers, therapeutic drug monitoring, and toxicology. Prerequisite: admission to the MLS program.

MLS 458. Advanced Clinical Chemistry 4 credit hours
6 Classroom hours; 4 Lab hours. The study of the principles, concepts and techniques of laboratory testing of body fluids, including the study of advanced instrumentation principles and techniques, acid-base balance, advanced enzymology, nutrition and digestive assessment, endocrinology and toxicology. Correlation of chemical substances of the body and assessment of health and disease is emphasized. Practice in procedures used for chemical analysis of body fluids is provided. This course is designed for certified medical laboratory technicians to assist them in reaching baccalaureate level practice in laboratory medicine. Prerequisite: admission to the MLS program.

MLS 460. Clinical Hematology 8 credit hours
6 Classroom hours; 4 Lab hours. Emphasizes the theory underlying basic and advanced procedures performed in the hematology laboratory and the relationship between these procedures and the diagnosis of hematological disorders. The clinical significance of laboratory data and its correlation with pathologic conditions are discussed, including in-depth discussions of anemias, polycythemia, leukemias, lymphomas and hemostasis abnormalities. The laboratory component of the course includes performance of basic and advanced hematology procedures including manual and automated complete blood counts, normal and abnormal differentials, cytochemical stains, and routine hemostasis testing. Prerequisite: admission to the MLS program.

MLS 463. Clinical Hematology 4 credit hours
Emphasizes the theories underlying procedures performed in the hematology, hemostasis and body fluids laboratories, and the relationships between these procedures and the diagnosis of disease, including in-depth discussions of anemias and leukemias. Opportunity is given to practice specialized hematologic, hemostasis and body fluid procedures used in the clinical laboratory. Course is designed for certified medical laboratory technicians to assist them in reaching baccalaureate level practice in laboratory medicine. Prerequisite: admission to the MLS program.

MLS 473. Immunohematology 8 credit hours
6 Classroom hours; 4 Lab hours. The practices and procedures in the transfusion service and donor center are presented, including the application of genetics and immunology to blood group serology. Problem solving in transfusion medicine, including complex antibody identification techniques and resolution of serological incompatibilities encountered in blood typing. Hemolytic disease of the newborn and hemolytic anemia are explored. Practice is offered in the techniques relevant to the performance of blood bank testing by the medical laboratory scientist in both the donor center and transfusion center, including automated testing methods, collection, storage and processing of blood components for transfusion. Reagents, testing of blood products and quality principles in blood banking are summarized. Prerequisite: admission to the MLS program.

MLS 478. Advanced Immunohematology 4 credit hours
Emphasizes practice and problem solving in transfusion services and donor centers. Practice is offered in techniques relevant to the performance of blood bank testing. Designed for certified medical laboratory technicians to assist them in reaching baccalaureate level practice in laboratory medicine. Prerequisite: admission to the MLS program.

MLS 479. Applied Immunohematology 3 credit hours
Application of the theory and technical skill of immunohematology in a clinical laboratory with experiences in prenatal testing, antibody identification, direct antiglobulin evaluation, provision of safe blood or blood components for transfusion, and resolution of discrepancies encountered in performing any of the procedures. Graded Cr/NCr. Prerequisite: MLS program consent.

MLS 482. Molecular Diagnostic Techniques 3 credit hours
2 Classroom hours; 1 Lab hour. An introduction to molecular diagnostic techniques performed in the clinical laboratory, including rationale of testing methodologies, comparison of test methods, performance of lab tests, interpretation of test results, and clinical correlations of testing to specific disease, as well as the molecular basis of various pathologic conditions.

MLS 488. Core Laboratory Practicum 9 credit hours
Application of theory and techniques of clinical analysis of body fluids for the assessment of health and disease. Graded CR/NCR. Prerequisite: MLS program consent.

MLS 495. Clinical Microbiology 8 credit hours
Theory and practice of isolation and identification of human pathogenic micro-organisms, including (a) procedures for specimen processing in the clinical laboratory; (b) normal flora of human body sites; (c) morphological, cultural and serologic characteristics of medically significant micro-organisms; and (d) antimicrobial principles and susceptibility testing techniques. Prerequisite: admission to the MLS program.

MLS 498. Applied Clinical Microbiology 3 credit hours
Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Graded CR/NCR. Prerequisites: MLS program consent.

MLS 499. Advanced Clinical Microbiology 4 credit hours
The study of medically significant bacteria, viruses, fungi and parasites emphasizing their identification in the clinical laboratory. Designed
for certified medical laboratory technicians to assist them to reach baccalaureate level practice in laboratory medicine. Prerequisite: admission to the MLS program.

Modern Classical Lang and Lit (MCLL)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MCLL 351. Linguistics and Foreign Languages  3 credit hours
Cross-listed as ANTH 351 and LING 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g. phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and identity). Prerequisite: LING 151 or any third-semester foreign language course.

MCLL 351H. Linguistics and Foreign Languages - Honors  3 credit hours
Cross-listed as ANTH 351 and LING 351. Introduces general linguistic principles with an emphasis on foreign languages. Covers areas of linguistic structure (e.g. phonetics, phonology, morphology and syntax), as well as social aspects of language (pragmatics, language variation, language contact, language endangerment, and the relationship between language and identity). Prerequisite: LING 151 or any third-semester foreign language course.

MCLL 411F. Preteaching Internship PreK-6  1 credit hour
This field experience allows world language students to spend an extended length of time in a PreK-6 classroom working with a cooperating teacher. Students evaluate their own instruction and plan for improvement. Graded Cr/NCr. Prerequisites: acceptance into teacher education and successful completion of Core I and Core II through the College of Education.

MCLL 413F. Preteaching Internship 6-12  1 credit hour
This field experience allows world language students to spend an extended length of time in a 6-12-grade classroom working with a cooperating teacher. Students evaluate their own instruction and plan for improvement. Graded Cr/NCr. Prerequisites: acceptance into teacher education and successful completion of Core I and Core II through the College of Education.

MCLL 454F. ISAM: PreK-12 World Languages  3 credit hours
Examines methods of instruction in relation to world languages and teaching in a variety of settings. Covers progress assessment, classroom management, and explores instructional approaches for guiding foreign language students. Minimum grade requirement to succeed in this course: B-. Prerequisites: acceptance into teacher education and successful completion of Core I and Core II courses through the College of Education.

MCLL 455F. Teaching Internship Seminar in World Languages  1 credit hour
Examines and discusses experiences emerging from the preteaching internship, including planning school programs and assuming the responsibilities of a teacher. Minimum grade requirement to succeed in this course: B-. Prerequisites: acceptance into teacher education, successful completion of Core I, Core II and Core III courses through the College of Education. Corequisite: Teaching Internship Seminar.

MCLL 466. Teaching Internship PreK-12 in World Languages  12 credit hours
Minimum grade requirement to succeed in this class: B-. Prerequisites: acceptance into teacher education, successful completion of Core I, Core II and Core III courses through the College of Education, 2.500 GPA in the major. Corequisite: Teaching Internship Seminar.

MCLL 561. Language & Culture  3 credit hours
Cross-listed as ANTH 651 and LING 651. An introduction to the major themes in the interactions of language and society and language and culture, including ethnography of communication, linguistic relativity, and determinism; types of language contact, the linguistic repertoire, and cross-cultural discourse analysis. Content may vary with instructor. Prerequisite: 3 hours of linguistics, or MCLL 351, or 6 hours of anthropology.

MCLL 790Q. Special Topics in Music and Foreign Language  1-5 credit hours
Cross-listed as MUSP 790Q (College of Fine Arts). Allows undergraduate and graduate students to take courses in the modern foreign languages together with individualized instruction in the translation and diction of poetical texts set to music. Course may be used to satisfy the foreign language requirement of the Bachelor of Music in performance-vocal emphasis. Repeatable for credit. Prerequisite: departmental consent.

Music Applied (MUSA)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MUSA 112. Applied Music Instruction for Nonmajors  2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112A. Applied Music Instruction for Nonmajors - Bassoon  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112B. Applied Music Instruction for Nonmajors - Cello  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112C. Applied Music Instruction for Nonmajors - Clarinet  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112D. Applied Music Instruction for Nonmajors - Euphonium  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112E. Applied Music Instruction for Nonmajors - Flute  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112F. Applied Music Instruction for Nonmajors - French Horn  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.
MUSA 112G. Applied Music Instruction for Nonmajors - Classical Guitar  2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112J. Applied Music Instruction for Nonmajors - Guitar  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112K. Applied Music Instruction for Nonmajors - Harp  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112L. Applied Music Instruction for Nonmajors - Oboe  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112M. Applied Music Instruction for Nonmajors - Organ  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112N. Applied Music Instruction for Nonmajors - Percussion  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112P. Applied Music Instruction for Nonmajors - Piano  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112Q. Applied Music Instruction for Nonmajors - Viola De Gamba  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112R. Applied Music Instruction for Nonmajors - String Bass  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112S. Applied Music Instruction for Nonmajors - Trombone  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112T. Applied Music Instruction for Nonmajors - Trumpet  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112U. Applied Music Instruction for Nonmajors - Tuba  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112V. Applied Music Instruction for Nonmajors - Viola  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112W. Applied Music Instruction for Nonmajors - Violin  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112X. Applied Music Instruction for Nonmajors - Saxophone  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112Y. Voice - Nonmajors  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 112Z. Applied Music Instruction for Nonmajors - Electric Bass  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 113P. Piano Class I - Music Majors  1 credit hour
Nonpiano music majors. Class piano prepares the student to pass the piano proficiency exam. Required of all music majors. Repeatable for credit. Prerequisite: class placement interview.

MUSA 114P. Piano Class II - Music Majors  1 credit hour
Nonpiano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUSA 115P. Piano Class III - Music Majors  1 credit hour
Nonpiano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUSA 116P. Piano Class IV - Music Majors  1 credit hour
Nonpiano music majors. Repeatable for credit. Prerequisite: class placement interview.

MUSA 117J. Guitar - Beginners  1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable.

MUSA 119P. Piano Class - Piano Majors  1 credit hour
Piano majors. Prerequisite: class placement interview. Repeatable.

MUSA 120P. Piano for Fun - Nonmajors  1-2 credit hours
Nonmajors. Repeatable.

MUSA 231A. Applied Music Instruction for Majors - Bassoon  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.

MUSA 231B. Applied Music Instruction for Majors - Cello  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231C. Applied Music Instruction for Majors - Clarinet  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231D. Applied Music Instruction for Majors - Euphonium  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231E. Applied Music Instruction for Majors - Flute   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231F. Applied Music Instruction for Majors - French Horn  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231G. Applied Music Instruction for Majors - Classical Guitar  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231H. Applied Music Instruction for Majors - Guitar   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231I. Applied Music Instruction for Majors - Harp  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231J. Applied Music Instruction for Majors - Oboe  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231K. Applied Music Instruction for Majors - Organ  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231L. Applied Music Instruction for Majors - Percussion  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231M. Applied Music Instruction for Majors - Piano   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231N. Applied Music Instruction for Majors - Percussion  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231O. Applied Music Instruction for Majors - Saxophone  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231P. Applied Music Instruction for Majors - String Bass  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231Q. Applied Music Instruction for Majors - Viola da Gamba   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231R. Applied Music Instruction for Majors - Violin   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231S. Applied Music Instruction for Majors - Viola da Gamba   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231T. Applied Music Instruction for Majors - Trumpet   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231U. Applied Music Instruction for Majors - Tubophone  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231V. Applied Music Instruction for Majors - Violin da Gamba  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231W. Applied Music Instruction for Majors - Viola  1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231X. Applied Music Instruction for Majors - Voice   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231Y. Applied Music Instruction for Majors - Bassoon   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
MUSA 231Z. Applied Music Instruction for Majors - Bass   1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Lower division.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MUSA 232M.</td>
<td>Applied Music Instruction for Majors - Organ</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232N.</td>
<td>Applied Music Instruction for Majors - Percussion</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232O.</td>
<td>Voice for Musical Theatre</td>
<td>2 credit hours</td>
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<td></td>
<td>Applied voice instruction emphasizing musical theatre techniques. Students work on repertoire from legit and belt repertoire.</td>
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<tr>
<td>MUSA 232P.</td>
<td>Applied Music Instruction for Majors - Piano</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232Q.</td>
<td>Applied Music Instruction for Majors - Bass</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232R.</td>
<td>Applied Music Instruction for Majors - String Bass</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232S.</td>
<td>Applied Music Instruction for Majors - Trombone</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232T.</td>
<td>Applied Music Instruction for Majors - Trumpet</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232U.</td>
<td>Applied Music Instruction for Majors - Tuba</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232V.</td>
<td>Applied Music Instruction for Majors - Viola</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232W.</td>
<td>Applied Music Instruction for Majors - Violin</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232X.</td>
<td>Applied Music Instruction for Majors - Saxophone</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232Y.</td>
<td>Applied Music Instruction for Majors - Voice</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 232Z.</td>
<td>Applied Music Instruction for Majors - Electric Bass</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252J.</td>
<td>Jazz Guitar</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252K.</td>
<td>Jazz Drum Kit</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252L.</td>
<td>Jazz Piano</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252M.</td>
<td>Jazz String Bass</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252N.</td>
<td>Jazz Trombone</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252O.</td>
<td>Jazz Trumpet</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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<tr>
<td>MUSA 252P.</td>
<td>Jazz Electric Bass</td>
<td>2 credit hours</td>
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<td>For majors only. Repeatable for credit. Lower division.</td>
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</tbody>
</table>

**MUSA 313J. Basic Jazz Piano**  2 credit hours  
Develops an understanding of jazz harmony at the keyboard. Emphasizes performance of chord progressions from jazz works. Prerequisite: piano proficiency.

**MUSA 313A. Basic Jazz Piano**  1 credit hour  
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

**MUSA 313B. Basic Jazz Piano**  1 credit hour  
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

**MUSA 313C. Basic Jazz Piano**  1 credit hour  
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

**MUSA 313D. Basic Jazz Piano**  1 credit hour  
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.
MUSA 431Q. Applied Music Instruction for Majors - Viola da Gamba 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431R. Applied Music Instruction for Majors - String Bass 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431S. Applied Music Instruction for Majors - Trombone 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431T. Applied Music Instruction for Majors - Trumpet 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431U. Applied Music Instruction for Majors - Tuba 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431V. Applied Music Instruction for Majors - Viola 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431W. Applied Music Instruction for Majors - Violin 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431X. Applied Music Instruction for Majors - Saxophone 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431Y. Applied Music Instruction for Majors - Voice 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 431Z. Applied Music Instruction for Majors - Electric Bass 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Upper division.

MUSA 432A. Applied Music Instruction for Majors - Bassoon 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432B. Applied Music Instruction for Majors - Cello 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432C. Applied Music Instruction for Majors - Clarinet 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432D. Applied Music Instruction for Majors - Euphonium 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432E. Applied Music Instruction for Majors - Flute 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432F. Applied Music Instruction for Majors - French Horn 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432J. Applied Music Instruction for Majors - Guitar 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432K. Applied Music Instruction for Majors - Harp 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432L. Applied Music Instruction for Majors - Oboe 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432M. Applied Music Instruction for Majors - Organ 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432N. Applied Music Instruction for Majors - Percussion 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432O. Applied Music Instruction for Majors - Voice for Musical Theatre 2 credit hours
Applied voice instruction emphasizing musical theatre techniques. Students work on repertoire from legit and belt repertoire.

MUSA 432P. Applied Music Instruction for Majors - Piano 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432R. Applied Music Instruction for Majors - String Bass 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432S. Applied Music Instruction for Majors - Trombone 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432T. Applied Music Instruction for Majors - Trumpet 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432U. Applied Music Instruction for Majors - Tuba 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432V. Applied Music Instruction for Majors - Viola 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432W. Applied Music Instruction for Majors - Violin 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432X. Applied Music Instruction for Majors - Saxophone 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432Y. Applied Music Instruction for Majors - Voice 2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 432Z. Applied Music Instruction for Majors - Electric Bass 2 credit hours
For majors only. Repeatable for credit. Upper division.
MUSA 434B. Applied Music Instruction for Majors - Cello  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434C. Applied Music Instruction for Majors - Clarinet  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434D. Applied Music Instruction for Majors - Euphonium  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434E. Applied Music Instruction for Majors - Flute  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434F. Applied Music Instruction for Majors - French Horn  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434J. Applied Music Instruction for Majors - Guitar  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434K. Applied Music Instruction for Majors - Harp  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434M. Applied Music Instruction for Majors - Organ  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434N. Applied Music Instruction for Majors - Percussion  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434P. Applied Music Instruction for Majors - Piano  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434R. Applied Music Instruction for Majors - String Bass  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434S. Applied Music Instruction for Majors - Trombone  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434T. Applied Music Instruction for Majors - Trumpet  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434U. Applied Music Instruction for Majors - Tuba  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434V. Applied Music Instruction for Majors - Viola  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434W. Applied Music Instruction for Majors - Violin  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434X. Applied Music Instruction for Majors - Saxophone  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434Y. Applied Music Instruction for Majors - Voice  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 434Z. Applied Music Instruction for Majors - Electric Bass  4 credit hours
For performance, pedagogy and accompanying majors only. Repeatable for credit. Upper division.

MUSA 452J. Jazz Guitar  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452N. Jazz Drum Kit  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452P. Jazz Piano  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452R. Jazz String Bass  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452S. Jazz Trombone  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452T. Jazz Trumpet  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452X. Jazz Saxophone  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 452Z. Applied Music Instruction for Majors - Jazz Electric Bass  2 credit hours
For majors only. Repeatable for credit. Upper division.

MUSA 454. Applied Lessons Jazz Performance  4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454J. Jazz Guitar  4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.
MUSA 454N. Jazz Drum Kit 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454P. Jazz Piano 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454R. Jazz String Bass 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454S. Jazz Trombone 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454T. Jazz Trumpet 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454U. Jazz Saxophone 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 454V. Jazz Electric Bass 4 credit hours
Students study privately with a member of the applied faculty in the jazz studies area. Topics covered include intermediate to advanced improvisatory skills, jazz phrasing, style, sightreading, and other aspects of professional performance in the jazz idiom. Repeatable for credit. Prerequisites: MUSA 252 jazz and upper-level proficiency in classical performance.

MUSA 712B. Applied Music Instruction for Nonmajors – Cello 2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712C. Applied Music Instruction for Nonmajors – Clarinet 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712D. Applied Music Instruction for Nonmajors – Euphonium 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712E. Applied Music Instruction for Nonmajors – Flute 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712F. Applied Music Instruction for Nonmajors – French Horn 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712G. Applied Music Instruction for Nonmajors – Classical Guitar 2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712H. Applied Music Instruction for Nonmajors – Guitar 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712I. Applied Music Instruction for Nonmajors – Harp 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712J. Applied Music Instruction for Nonmajors – Organ 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712L. Applied Music Instruction for Nonmajors – Oboe 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

MUSA 712M. Applied Music Instruction for Nonmajors – Percussion 1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.
### MUSA 712P. Applied Music Instruction for Nonmajors – Piano
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712Q. Applied Music Instruction for Nonmajors – Viola da Gamba
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712S. Applied Music Instruction for Nonmajors – Trombone
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712T. Applied Music Instruction for Nonmajors – Trumpet
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712U. Applied Music Instruction for Nonmajors – Tuba
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712V. Applied Music Instruction for Nonmajors – Viola
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712W. Applied Music Instruction for Nonmajors – Violin
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712X. Applied Music Instruction for Nonmajors – Saxophone
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712Y. Applied Music Instruction for Nonmajors – Voice
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 712Z. Applied Music Instruction for Nonmajors – Electric Bass
1-2 credit hours
Basic applied instruction for persons who are not active in a music degree program. May not be used to fulfill music degree requirements. Repeatable for credit.

### MUSA 717W. Violin Class for Adult Beginners
2 credit hours
Beginning violin class; violin fundamentals, emphasizing tone and intonation development, basic techniques for reading (notes and rhythm). May not be applied to music major requirements. Repeatable for credit.

### MUSA 717Y. Popular Vocal Styles
2 credit hours
Class voice instruction for adults emphasizing basic vocal technique and how it can be applied for use in popular styles of singing, including vocal jazz, pop, music theatre, etc. Gives students an opportunity to explore techniques for developing their own voices and to practice singing in a supportive environment. Includes information via lecture, demonstration and listening to recordings related to stylistic differences in the popular idiom. Intended for non music majors; not applicable to music degree requirements. Repeatable.

### MUSA 731A. Applied Music Instruction for Majors - Bassoon
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731B. Applied Music Instruction for Majors - Cello
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731C. Applied Music Instruction for Majors - Clarinet
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731D. Applied Music Instruction for Majors - Euphonium
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731E. Applied Music Instruction for Majors - Flute
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731F. Applied Music Instruction for Majors - French Horn
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731G. Applied Music Instruction for Majors - Classical Guitar
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731J. Applied Music Instruction for Majors - Guitar
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731K. Applied Music Instruction for Majors - Harp
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731L. Applied Music Instruction for Majors - Oboe
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731M. Applied Music Instruction for Majors - Organ
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731N. Applied Music Instruction for Majors - Percussion
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

### MUSA 731P. Applied Music Instruction for Majors - Piano
1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.
MUSA 731R. Applied Music Instruction for Majors - String Bass 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731S. Applied Music Instruction for Majors - Trombone 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731T. Applied Music Instruction for Majors - Trumpet 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731U. Applied Music Instruction for Majors - Tuba 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731V. Applied Music Instruction for Majors - Viola 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731W. Applied Music Instruction for Majors - Violin 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731X. Applied Music Instruction for Majors - Saxophone 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731Y. Applied Music Instruction for Majors - Voice 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 731Z. Applied Music Instruction for Majors - Electric Bass 1 credit hour
For majors only. Study on secondary instruments. Basic instruction. Repeatable for credit. Graduate.

MUSA 732A. Applied Music Instruction for Majors - Bassoon 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732B. Applied Music Instruction for Majors - Cello 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732C. Applied Music Instruction for Majors - Clarinet 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732D. Applied Music Instruction for Majors - Euphonium 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732E. Applied Music Instruction for Majors - Flute 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732F. Applied Music Instruction for Majors - French Horn 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732J. Applied Music Instruction for Majors - Guitar 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732K. Applied Music Instruction for Majors - Harp 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732L. Applied Music Instruction for Majors - Oboe 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732M. Applied Music Instruction for Majors - Organ 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732N. Applied Music Instruction for Majors - Percussion 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732P. Applied Music Instruction for Majors - Piano 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732R. Applied Music Instruction for Majors - String Bass 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732S. Applied Music Instruction for Majors - Trombone 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732T. Applied Music Instruction for Majors - Trumpet 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732U. Applied Music Instruction for Majors - Tuba 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732V. Applied Music Instruction for Majors - Viola 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732W. Applied Music Instruction for Majors - Violin 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732X. Applied Music Instruction for Majors - Saxophone 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732Y. Applied Music Instruction for Majors - Voice 1-2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 732Z. Applied Music Instruction for Majors - Electric Bass 2 credit hours
For majors only. Repeatable for credit. Graduate.

MUSA 734A. Applied Music Instruction for Majors - Bassoon 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734B. Applied Music Instruction for Majors - Cello 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734C. Applied Music Instruction for Majors - Clarinet 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.
MUSA 734D. Applied Music Instruction for Majors - Euphonium 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734E. Applied Music Instruction for Majors - Flute 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734F. Applied Music Instruction for Majors - French Horn 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734J. Applied Music Instruction for Majors - Guitar 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734K. Applied Music Instruction for Majors - Harp 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734L. Applied Music Instruction for Majors - Oboe 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734M. Applied Music Instruction for Majors - Organ 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734N. Applied Music Instruction for Majors - Percussion 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734P. Applied Music Instruction for Majors - Piano 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734R. Applied Music Instruction for Majors - String Bass 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734S. Applied Music Instruction for Majors - Trombone 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734T. Applied Music Instruction for Majors - Trumpet 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734U. Applied Music Instruction for Majors - Tuba 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734V. Applied Music Instruction for Majors - Viola 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734W. Applied Music Instruction for Majors - Violin 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734X. Applied Music Instruction for Majors - Saxophone 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734Y. Applied Music Instruction for Majors - Voice 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

MUSA 734Z. Applied Music Instruction for Majors - Electric Bass 4 credit hours
For performance and pedagogy majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate.

**Music Education (MUSE)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MUSE 171. Orientation to Music Education 1 credit hour
Looks at the concepts of comprehensive musicianship and develops strategies for leading music activities in a variety of scenarios. Learn observation techniques appropriate for viewing a wide range of instrumental and vocal performances.

MUSE 238. Wind and Percussion Methods I - Woodwind Emphasis 1 credit hour
Woodwind Emphasis. Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two woodwind instruments. Students demonstrate proficiency on at least two woodwind instruments.

MUSE 239. Wind & Percussion Methods II - Brass Emphasis 1 credit hour
Brass Emphasis. Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two brass instruments. Students demonstrate proficiency on at least two brass instruments.

MUSE 240. Wind and Percussion Methods III - Percussion Emphasis 1 credit hour
Percussion Emphasis. Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two percussion instruments. Students demonstrate proficiency on at least two percussion instruments.

MUSE 241. String Rehearsal Methods 1 credit hour
Prepares the prospective instrumental music instructor to effectively teach band instruments in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials and the development of playing skills on at least two string instruments. Students demonstrate proficiency on at least two string instruments.
MUSE 242. Wind and Percussion Rehearsal Methods  1 credit hour
Wind and percussion techniques and materials for grades 4-12.
Required of majors in choral/keyboard program and choral/keyboard
majors in special music education program.

MUSE 243. Wind and Percussion Methods Lab - Rehearsal
Emphasis  1 credit hour
Rehearsal Emphasis. Provides experience in teaching and rehearsing
the beginning/intermediate band and orchestra. Includes experiences in
teaching and assessing new concepts and skills. Using peer teaching,
students have opportunities to develop tone, technique, balance, blend
and tuning, while rehearsing pieces from method books and concert

MUSE 271. Introduction to Music Education  2 credit hours
Demonstrate familiarity with the scope and program of K-12 music
education. Articulate a current music education philosophy while
developing leadership skills for a variety of music activities and
teaching scenarios. Prerequisite: MUSE 171.

MUSE 303. Elementary and General Music Methods  2 credit hours
An overview of activities for elementary general music programs.
Includes a study of objectives for elementary and general music
with consideration of materials and methods. Focus is on program
considerations for general music based on child and adolescent musical
development. Includes conceptual and skill-based learning sequences,
singing skills, use of classroom instruments, lesson planning, and
music classroom management. Prerequisite: MUSE 171 or instructor's
consent.

MUSE 305. Pre Student Teaching  1 credit hour
This field-based course allows the student to spend extended time in
an appropriate music classroom working with a cooperating teacher.
Provides opportunities for the student to plan and design instruction,
implement instruction and reflect on the role of the practitioner.
Prerequisites: acceptance into teacher education and instructor's
consent.

MUSE 309. Survey of Music for Special Education  3 credit hours
Consideration of methods and problems in preparation for student
teaching music with special education students at early childhood,
elementary and secondary levels in public schools. Includes musical
settings (self-contained and mainstreamed) in regular and alternative
schools and classes, identification, objectives, appropriate activities,
materials, and planning and implementation techniques. Also includes
observation, demonstration/participation experiences, and/or media
presentations. Grades K-12. Course includes diversity content.

MUSE 311. Introduction to Diversity Field Experience  1 credit hour
To support the coursework in Core I, this field experience provides
students with opportunities to observe and interact with diverse
populations in the context of classroom, community and family settings.
Course includes diversity content. Prerequisite: admission to teacher

MUSE 323. Fundamentals of Vocal Music for Secondary Schools  2 credit hours
The teaching of music in the secondary school, consideration of
objectives and examination of materials. For students primarily
interested in teaching music in secondary schools; includes observation
in public schools. Grades 6-12. Prerequisites: MUSP 308 and music
education major or instructor's consent.

MUSE 324. Fundamentals of Instrumental Music for Secondary Schools  2 credit hours
Covers techniques and materials for teaching instrumental music in
middle schools and senior high schools. Emphasizes instrumental
organization and administration, pedagogical practices, laboratory
experiences, guiding student behavior, evaluation and professional

MUSE 342. Survey of Choral Techniques and Literature  2 credit hours
Studies basic techniques of ensembles and examines literature for large
and small ensembles. Includes song leading. Required for all music
education majors. Grades 6-12. Prerequisite: MUSP 307 or 308.

MUSE 351. Music Fundamentals for the Classroom Teacher  2-3 credit hours
For students planning to teach in the elementary school classroom.
Includes basic fundamentals of music emphasizing development of
student's music ability in singing, playing the piano and classroom
instruments.

MUSE 403. Advanced Techniques of Vocal and General School Music  1 credit hour
Emphasizes special problems related to preparation for student
teaching; consideration of the vocal and general music programs at
all levels. Includes content area reading modules. To be taken during
student teaching semester. Grades K-12. Prerequisites: MUSE 303 and
323; also 309 for special music education majors.

MUSE 405. Teaching Internship Seminar  1 credit hour
Emphasizes special problems related to preparation for student
teaching; consideration of the vocal and general music programs at all
levels. To be taken during student teaching semester. Grades K-12.
Includes content area reading modules. Prerequisites: MUSE 303, 305
with a B- or better, and either 323 or 324.

MUSE 451. Teaching Internship Elementary School: Music  4-6 credit hours
Prerequisites: acceptance into teacher education, methods in the subject
area, MUSE 305 with a B- or better, CESP 433; 2.500 GPA in the
major. Corequisite: MUSE 405.

MUSE 452. Teaching Internship Special Music Education  2 credit hours
Practicum designed to allow students to spend a designated portion of
a semester in an appropriate special music education classroom
setting working with a cooperating teacher who has special music
education training and experience. The student and cooperating teacher,
with the approval of the university supervisor, devise a plan for the
student teacher to assume full responsibility for the classroom(s) for
a designated period of time during the semester. Prerequisites: an
appropriate ISAM course (MUSE 303, 309), Pre Student Teaching,
CESP 433. Corequisite: student teaching seminar.

MUSE 469. Teaching Internship Secondary Music  4-6 credit hours
Prerequisites: acceptance into teacher education, methods in the subject
area, MUSE 305 with a B- or better, CESP 433; 2.500 GPA in the
major. Corequisite: MUSE 405.

MUSE 481. Cooperative Education  1-8 credit hours
A field placement which integrates coursework with a planned and
supervised professional experience designed to complement and
enhance the student's academic program. Individualized programs
must be formulated in consultation with, and approved by, appropriate
faculty sponsors and cooperative education coordinators. Students may
follow one of two scheduling patterns: parallel, enrolling concurrently
in a minimum of 6 hours of coursework in addition to their co-op
MUSE 481N. Internship 1 credit hour
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

MUSE 511. Jazz Pedagogy 2 credit hours
For both music education and music performance majors interested in teaching improvisation, jazz history, and large and small jazz ensembles. Includes a review of current jazz methods and materials, rehearsal techniques for jazz ensembles, how to listen to jazz, lectures by visiting jazz performers, and effective jazz programming. Prerequisite: completion of MUSC 228 or instructor's consent.

MUSE 606. Music Methods for Early Childhood Education 2-3 credit hours
Methods and materials for teaching music in the preschool and kindergarten classroom. Includes the development of the child's musical growth through singing, listening, rhythmic and creative activities; a survey of available materials, and development of playing, singing and conducting skills.

MUSE 611. Music for Special Education 2 credit hours
Open to upper-division or graduate students and intended for the potential practicing music teacher, classroom teacher or special education teacher. Includes identification of dysfunctioning children and their problems and current theory and practices in special music education. Satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only, grades K-12.

MUSE 617. Literacy Strategies for Content Areas: Music 2 credit hours
Covers principles and strategies used in effective instruction, including vocabulary development and comprehension skills needed to more fully read to learn in content areas. Students receive training to use the six-trait analytical rating guide for assessing writing, which is the method used to score the Kansas state writing assessment. Students develop lessons and assessments appropriate for a comprehensive literacy-based music program based on national and state music standards representing appropriate and varied music education philosophies. Prerequisite: instructor's consent.

MUSE 686. Marching Band Techniques 2 credit hours
A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction and script development. Teaches both traditional drill and corps-style marching using manual methods and computer generated graphics. Field observations, films, photographs, and live performances by marching bands complement the class syllabus. Required for all instrumental majors.

MUSE 732. Instructional Methods in Middle Level/Secondary Music 2 credit hours
Includes administrative structures, the curriculum, adolescent development, teaching as behavior and competencies needed for successful teaching of general, choral and instrumental music for adolescent learners.

MUSE 750. Music Education Workshop 1-4 credit hours
Repealtable for credit.

MUSE 750AJ. Technology for the Music Classroom 1 credit hour
Participants are introduced to current trends in educational technology for the music classroom. Teachers gain experience with sound reinforcement tools, recording equipment and software, composition software, and pedagogical tools.

MUSE 750AK. Instrument Repair for Teachers 1 credit hour
Provides teachers with the information and skills necessary for basic instrument repair in the instrumental classroom. Teachers learn how to identify problems with instruments and make simple repairs.

MUSE 761. Kodaly Methods Level One 3 credit hours
Kodály curriculum designed for grades K-1. Transcriptions of 50 folk songs with teaching activities appropriate for young learners. Introduction of music literacy components. Concurrent enrollment with MUSE 762 recommended.

MUSE 762. Kodaly Solfege Level One 2 credit hours
Includes one- and two-part materials in major and minor tonalities. Demonstrated ability to conduct folk song literature appropriate for beginning singers. Prerequisite: prior or concurrent enrollment in MUSE 761.

MUSE 763. Kodaly Methods Level Two 3 credit hours
Kodály curriculum designed for grades 2-4. Song analysis for 50 additional folk songs and appropriate literacy activities for general music programs. Added emphasis on folk dance and listening lessons for masterworks. Prerequisites: MUSE 761, 762 or instructor's consent. Concurrent enrollment with MUSE 764 recommended.

MUSE 764. Kodaly Solfege Level Two 2 credit hours
Adds chromatic, whole tone and modes. Demonstrated ability to conduct folk song literature up to four parts. Prerequisite: MUSE 762.

MUSE 765. Kodaly Methods Level Three 3 credit hours
Kodály curriculum designed for grades 4-12. Expansion of song repertoire with emphasis on activities which develop choral singing independence and music theory skills. Prerequisites: MUSE 763, 764 or instructor's consent. Concurrent enrollment with MUSE 766 recommended.

MUSE 766. Kodaly Solfege Level Three 2 credit hours
Includes advanced materials from a variety of literature. Demonstrated ability to conduct expanded literature appropriate for public and private school choral programs. Prerequisites: MUSE 762, 764.

MUSE 767. Kodaly Applications 2 credit hours
Provides individually supervised research and application opportunities for the advanced student who has completed an OAKE endorsed Kodály certification program. Repeatable for credit. Prerequisites: MUSE 761, 762, 763, 764, 765, 766, or OAKE endorsed Kodály certification.

MUSE 781. Cooperative Education 1-3 credit hours
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated with, and approved by, appropriate faculty sponsors and cooperative education coordinators. May be repeated for credit. Graded Cr/NCr. Note: a maximum of 4 S/U or Cr/NCr hours may be counted toward a graduate degree and must be taken in consultation with the graduate advisor for an approved graduate plan of study. Prerequisite: satisfactory academic standing prior to the first job assignment.
MUSE 790. Special Topics in Music  1-4 credit hours
For individual or group instruction. Individual study enrollment requires departmental consent. Repeatable with departmental consent.

**Music Performance (MUSP)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**MUSP 105. Recital Attendance  0 credit hours**
Recital attendance and performance. Laboratory observation of performance media, literature and recital techniques. Election is required for BA and BM majors according to the requirements of the degree check sheet at the time of enrollment. Repeatable.

**MUSP 121. Italian Diction  1 credit hour**
For the vocal performer. Includes a comprehensive study of Italian consonant and vowel sounds.

**MUSP 122. English Diction  1 credit hour**
For the vocal performer. Includes a comprehensive study of English consonant and vowel sounds.

**MUSP 148. Double Reed Making and Adjusting  1 credit hour**
Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: MUSE 238 or instructor's consent.

**MUSP 149. Percussion Techniques and Section Playing  1 credit hour**
Provides training in small instruments and development of the percussionist's understanding of section playing. Repeatable for credit.

**MUSP 207. Piano Repertoire  1 credit hour**
Gives performing and listening experience to piano majors. Repeatable for credit.

**MUSP 210B. Symphonic Wind Ensemble  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211A. Orchestra  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211E. Opera Lab  1 credit hour**
Provides opportunities for students to perform staged arias, scenes and one act operas. Students who audition for Opera Theatre but are not cast should enroll in Opera Lab. Those interested in stage management, directing and backstage work may also enroll. Audition is required.

**MUSP 211F. Summer Choir  1 credit hour**
A nonauditioned ensemble open to all university students and community members. The ensemble sings a wide variety of repertoire representative of composers from the past five centuries. Performs one major concert during their summer season.

**MUSP 211J. Piano Accompanying  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211K. Opera Theatre  1 credit hour**
Provides the opportunity for students to gain performance experience as a chorus member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

**MUSP 211L. Madrigal Singers  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211M. Jazz Combo/Banda Hispanica  1 credit hour**
Coached performing ensemble.

**MUSP 211N. Woodwind Ensemble  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211O. Saxophone Quartet  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211P. Brass Chamber Ensemble  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211R. Percussion Ensemble  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211T. Jazz Arts Ensemble 1  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 211U. Musical Theatre Performance  1 credit hour**
Cross-listed as DANC 320 and THEA 180E. An interdisciplinary practicum class for students cast in a musical theatre production. Admission is by audition. Gain rehearsal and performance experience in a Mainstage production with orchestra. Rehearsals are in the evenings for 6-10 weeks. Repeatable for credit.

**MUSP 211V. Guitar Ensemble  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 212D. Women's Glee Club  1 credit hour**
Nonauditioned women's chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members.

**MUSP 212F. A Cappella Choir  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 212K. Opera Theatre  2 credit hours**
Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

**MUSP 212L. Chamber Singers  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 212S. String Chamber Ensemble  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 212T. Jazz Arts Ensemble 2  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 213B. Concert Band  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 213F. Concert Chorale  1 credit hour**
Repeatable for credit. Prerequisite: audition required.

**MUSP 218. Choral Conducting  2 credit hours**
Fundamentals of conducting, score reading, and rehearsal techniques. Practical experience conducting classroom groups. Prerequisites: MUSC 128 and 130.

**MUSP 221. German Diction  1 credit hour**
For the vocal performer. Includes a comprehensive study of German consonant and vowel sounds.

**MUSP 222. French Diction  1 credit hour**
For the vocal performer. Includes a comprehensive study of French consonant and vowel sounds.

**MUSP 223. Applied Piano Accompanying  2 credit hours**
Individual private study of standard accompaniment literature. Prerequisites: successful completion of two semesters of piano study and sophomore standing.
MUSP 224. Applied Piano Accompanying  2 credit hours
Individual private study of standard accompaniment literature.
Prerequisites: successful completion of two semesters of piano study and sophomore standing.

MUSP 250. Applied Piano Concerto  2 credit hours
Gives students concerto performance experience. Prerequisites: sophomore standing and admittance to the BM performance program.

MUSP 251. Applied Piano Concerto  2 credit hours
Gives students concerto performance experience. Prerequisites: sophomore standing and admittance to the BM performance program.

MUSP 300. Junior Recital  1 credit hour
Required for BM piano majors, performance or accompanying emphasis. Prerequisite: departmental consent.

MUSP 307. Instrumental Conducting  2 credit hours
Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience in conducting laboratory and classroom groups. Prerequisites: MUSC 128, 130.

MUSP 308. Choral Conducting  2 credit hours
Fundamentals of conducting, score reading and rehearsal techniques. Practical experience conducting classroom groups. Prerequisites: MUSC 128, 130.

MUSP 340. Voice Coaching  1 credit hour
Vocal coaching offers intense focus on diction and the dramatic, musical and stylistic interpretation of musical theatre, art song and opera literature. Prerequisites: upper-class or graduate-level majors only, and instructor's consent.

MUSP 390. Special Topics in Music Performance  3-5 credit hours
For individual or group instruction. Repeatable with departmental consent. Graded Bg/NBg (for badge sections). Standard letter grading for other sections.

MUSP 390BB. International Phonetic Alphabet Badge: Italian Diction  0.5 credit hours
The Italian Diction IPA course is useful to singers, voice teachers, linguists, and actors. It reviews the IPA, presents new characters specific to the Italian language, clarifies differences in articulation between other languages and Italian, and assists in authentic Italian pronunciation. Assists students in learning foreign languages and learning to produce authentic sounds or accents in languages. Assists choir conductors in teaching choirs to sing consistent sounds in any language, and assists actors in developing clear speech or in developing an accent for a particular role. Graded Bg/NBg.

MUSP 390BC. International Phonetic Alphabet Badge: French Diction  0.5 credit hours
The French Diction IPA course is useful to singers, voice teachers, linguists, and actors. It reviews the IPA, presents new characters specific to the French language, clarifies differences in articulation between other languages and French, and assists in authentic French pronunciation. Assists students in learning foreign languages and learning to produce authentic sounds or accents in languages. Assists choir conductors in teaching choirs to sing consistent sounds in any language, and assists actors in developing clear speech or in developing an accent for a particular role. Graded Bg/NBg.

MUSP 400. Senior Recital  1 credit hour
Prerequisite: departmental consent.

MUSP 407. Piano Repertoire  1 credit hour
Gives performing and listening experience to piano majors. Repeatable for credit.

MUSP 410B. Symphonic Wind Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411A. Orchestra  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411E. Opera Lab  1 credit hour
Provides opportunities for students to perform staged arias, scenes and one act operas. Students who audition for Opera Theatre but are not cast should enroll in Opera Lab. Those interested in stage management, directing and backstage work may also enroll. Audition is required.

MUSP 411F. Summer Choir  1 credit hour
A nonauditioned ensemble open to all university students and community members. The ensemble sings a wide variety of repertoire representative of composers from the past five centuries. Performs one major concert during their summer season.

MUSP 411J. Piano Accompanying  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411K. Opera Theatre  1 credit hour
Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

MUSP 411L. Madrigal Singers  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411M. Jazz Combo/Banda Hispanica  1 credit hour
Coached performing ensemble.

MUSP 411N. Woodwind Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411O. Saxophone Quartet  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411P. Brass Chamber Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411R. Percussion Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411T. Jazz Arts Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 411U. Musical Theatre Performance  1 credit hour
Cross-listed as DANC 320 and THEA 380E. An interdisciplinary practicum class for students cast in a musical theatre production. Admission is by audition. Gain rehearsal and performance experience in a Mainstage production with orchestra. Rehearsals are in the evenings for 6-10 weeks. Repeatable for credit.

MUSP 411V. Guitar Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 412D. Women's Glee Club  1 credit hour
Nonauditioned women's chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. Women's Glee performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic, academic, and social functions throughout WSU's campus. Repeatable for credit.

MUSP 412F. A Cappella Choir  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 412K. Opera Theatre  2 credit hours
Provides the opportunity for students to gain performance experience as a supporting cast member in fully staged, high quality productions of a
diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

MUSP 412L. Chamber Singers  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 412S. String Chamber Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 412T. Jazz Arts Ensemble  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 413B. Concert Band  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 413F. Concert Chorale  1 credit hour
Repeatable for credit. Prerequisite: audition required.

MUSP 414K. Opera Theatre  4 credit hours
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

MUSP 423. Applied Piano Accompanying  4 credit hours
Individual private study of standard accompaniment literature. Prerequisite: successful completion of solo recital.

MUSP 424. Applied Piano Accompanying  4 credit hours
Individual private study of standard accompaniment literature. Prerequisite: successful completion of solo recital.

MUSP 450. Accompanying Recital  1 credit hour
Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent.

MUSP 451. Accompanying Recital  1 credit hour
Required for BM piano majors, accompanying emphasis. Prerequisite: departmental consent.

MUSP 507. Piano Repertoire  1 credit hour
Performing and listening experience for piano performance majors. Repeatable for credit.

MUSP 511. Keyboard Pedagogy  2 credit hours
A comprehensive study of keyboard techniques, concepts and materials of studio instruction for the advanced student. Includes the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a keyboard instrument or instructor's consent.

MUSP 512. String Pedagogy: Violin and Viola  2 credit hours
Required for violin and viola performance majors. A study of tutorial techniques for violin and viola, including the teaching of mini-lessons for instructor and class critique. Prerequisite: violin or viola performance capability or instructor's consent.

MUSP 525. Voice Pedagogy  2 credit hours
Acquaints the voice major with vocal techniques, concepts and materials of private and class instruction.

MUSP 651. Advanced Conducting and Score Reading  2 credit hours
Baton technique, score reading and musicianship. Prerequisite: MUSP 307 or 308 or equivalent.

MUSP 660. Woodwind Pedagogy  2 credit hours
A comprehensive study of woodwind instrument techniques, concepts and materials of studio instruction for the advanced student. Includes the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or instructor's consent.

MUSP 411A. String Chamber Choir  1 credit hour
Repertory with orchestral accompaniment. Repeatable for credit.

MUSP 411B. Concert Choir  1 credit hour
Repertory with orchestral accompaniment. Repeatable for credit.

MUSP 411C. Collegium Musicum  1 credit hour
Repertory with orchestral accompaniment. Repeatable for credit.

MUSP 411D. Chamber Singers  1 credit hour
Repertory with orchestral accompaniment. Repeatable for credit.

MUSP 411E. Vocal Ensemble  1 credit hour
Repertory with orchestral accompaniment. Repeatable for credit.

MUSP 411F. Summer Choir  1 credit hour
A nonauditioned ensemble open to all university students and community members. The ensemble sings a wide variety of repertoire representative of composers from the past five centuries. Performs one major concert during their summer season.

MUSP 411G. Opera Theatre  1 credit hour
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.
MUSP 711L. Madrigal Singers  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 711M. Jazz Combo/Banda Hispanica  1 credit hour  
Coached performing ensemble.

MUSP 711N. Woodwind Ensemble  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 711O. Saxophone Quartet  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 711P. Brass Chamber Ensemble  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 711R. Percussion Ensemble  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 711T. Jazz Arts Ensemble 1  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 711U. Musical Theatre Performance  1 credit hour  
Cross-listed as DANC 320 and THEA 590E. An interdisciplinary practicum class for students cast in a musical theatre production. Admission is by audition. Gain rehearsal and performance experience in a Mainstage production with orchestra. Rehearsals are in the evenings for 6-10 weeks. Repeatable for credit.

MUSP 711V. Guitar Ensemble  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 712D. Women's Glee Club  1 credit hour  
Nonauditioned women's chorus made up of both music and nonmusic majors. The ensemble performs an eclectic mix of classical, folk and popular music, reflecting the diverse musical interests of its members. Women's Glee performs annual fall and spring concerts, participates in the Candlelight Christmas concert, and performs as part of athletic, academic, and social functions throughout WSU's campus. Repeatable for credit.

MUSP 712F. A Cappella Choir  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 712K. Opera Theatre  2 credit hours  
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

MUSP 712L. Chamber Singers  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 712S. String Chamber Ensemble  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 712T. Jazz Arts Ensemble 2  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 713B. Concert Band  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 713F. Concert Chorale  1 credit hour  
Repeatable for credit. Prerequisite: audition required.

MUSP 714K. Opera Theatre  4 credit hours  
Provides the opportunity for students to gain performance experience with a major role in fully staged, high quality productions of a diverse repertory with orchestral accompaniment. Repeatable for credit. Prerequisite: audition required.

MUSP 723. Applied Piano Accompanying  4 credit hours  
Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite: successful completion of two semesters of graduate piano study.

MUSP 724. Applied Piano Accompanying  4 credit hours  
Individual private study of standard accompaniment literature with preparation of a terminal project recital (either vocal or instrumental). Prerequisite: successful completion of two semesters of graduate piano study.

MUSP 725. Voice Pedagogy II  2 credit hours  
MUSP 725. Voice Pedagogy II (2). Builds on the basics explored in Voice Pedagogy, giving particular attention to a deeper understanding of voice science, vocal literature, pedagogical techniques and materials which prepare students to teach advanced and collegiate students. Prerequisite: MUSP 625 or instructor's consent.

MUSP 760. Group Piano Practicum  2 credit hours  
Supervised group piano teaching for graduate students. Prerequisites: MUSP 580, 581, or instructor's consent.

MUSP 761. Studio Piano Practicum  2 credit hours  
Supervised studio teaching for graduate students. Prerequisites: MUSP 580, 581, or instructor's consent.

MUSP 762. Opera Styles  2 credit hours  
A comprehensive study of the performance styles and practices in operatic singing, ranging from the 17th century to the present. Prerequisite: instructor's consent.

MUSP 773. Acting For Singers  3 credit hours  
Studies the external and internal techniques of acting for the singer, emphasizing characterization and development of a role, to ensure that students have the necessary understanding and skills to integrate the acting process while singing. Prerequisite: instructor's consent.

MUSP 781. Cooperative Education  1-4 credit hours  
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit. Graded CR/NCR.

MUSP 781L. Noncredit Cooperative Education  0 credit hours  
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Repeatable for credit.

MUSP 790. Special Topics in Music  1-2 credit hours  
For individual or group instruction. Repeatable with departmental consent.

MUSP 790AE. Orchestral Excerpts for Viola  2 credit hours  
This course will introduce and prepare cellists for professional orchestral auditions. Students will study, prepare and perform standard cello orchestral excerpts. Two Mock Juries will provide an opportunity for students to experience an actual audition with detailed and immediate feedback from multiple performance area faculty.

MUSP 790AF. Orchestral Excerpts for Cello  2 credit hours  
This course will introduce and prepare cellists for professional orchestral auditions. Students will study, prepare and perform standard cello orchestral excerpts. Two Mock Juries will provide an opportunity for students to experience an actual audition with detailed and immediate feedback from multiple performance area faculty.

MUSP 790E. Musical Theatre and Opera Audition  1-3 credit hours  
Cross-listed as THEA 630. Practicum course develops techniques and audition repertory singers need to gain professional employment and/or successfully compete for placement in advanced training programs. Also covers the business skills necessary to a professional career, and brings students into contact with professional guest artists who
can provide additional insight and contacts. Prerequisite: instructor's consent.

MUSP 790P. Special Topics: Pedagogy  1-2 credit hours
For individual or group instruction. Repeatable with departmental consent. For Graduate/Undergraduate Credit. (P: Piano)

MUSP 790Q. Special Topics in Music and Foreign Language  1-5 credit hours
Cross-listed as MCLL 790Q (College of Liberal Arts & Sciences). Allows undergraduate and graduate students to take courses in the modern foreign languages together with individualized instruction in the translation and diction of poetic texts set to music. Course may be used to satisfy the foreign language requirement of the Bachelor of Music in performance—vocal emphasis. Repeatable for credit. Prerequisite: departmental consent.

Musicology Composition (MUSC)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

MUSC 060. Fundamentals of Music  1 credit hour
Intended for those who do not read music and/or who need additional help in the fundamentals of music. Includes staff, clefs, keys, meter, tempo, notes, rests and other basic knowledge.

MUSC 113. Introduction to Music Literature  3 credit hours
General education introductory course. An introduction to the masterpieces of music literature. Includes comparison of contrasting styles of both Western and non-Western music. For general students with some musical background. Required for music majors. Course includes diversity content. Prerequisite: MUSC 127.

MUSC 120. Jazz Improv Level 1  2 credit hours
Develops skills used in jazz improvisation, teaching students to memorize melody and harmony to pieces from jazz bebop repertoire. Prerequisite: MUSC 128, Theory II.

MUSC 121. Jazz Improv Level 2  2 credit hours
Develops skills used in jazz improvisation, teaching students to memorize melody and harmony to pieces from jazz bebop repertoire. Prerequisite: MUSC 120.

MUSC 127. Theory I  2 credit hours
Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadences, phrase, period), basic acoustics, and simple harmonic background and contrapuntal relationships applied to literature from all periods of music. Corequisite: MUSC 129. Instructor's consent required for special honors credit.

MUSC 128. Theory II  2 credit hours
A continuation of Theory I, with emphasis on 4-part writing. Formal expansion includes binary and ternary structures. Further elaborates basic harmonic structures using figured bass and Roman numeral analysis. Prerequisite: MUSC 127 and concurrent enrollment in MUSC 130. Instructor's consent required for special honors credit.

MUSC 129. Aural Skills I  2 credit hours
Recognition, singing and dictation of melodies from all periods of music. Emphasizes interval training. Instruction assisted by computer.

MUSC 130. Aural Skills II  2 credit hours
Continuation of melodic and rhythmic perception. Includes recognition and dictation of diatonic harmonic structures. Instruction assisted by computer. Prerequisite: MUSC 129.

MUSC 160. What to Listen for in Music  3 credit hours
General education introductory course. Acquaints the nonmajor with the central traditions of music, including European concert music as well as some popular and world music. Develops listening techniques by which students may perceive and understand fundamental musical processes as they exist in various styles.

MUSC 161. Music Through the Ages  3 credit hours
General education introductory course. Open to all students, particularly those involved in alternative schedules. Helps students develop the capacity for critical music listening and an appreciation for all musical styles. Telecourse.

MUSC 162. World Music  3 credit hours
General education introductory course. A view of music as a global and cultural art form. For the general student to better understand the importance and significance of music in all world cultures. Course includes diversity content.

MUSC 227. Theory III  2 credit hours
Study of chromatic harmony, including secondary functions, mode mixture, Neapolitan and augmented sixth, and other 19th century harmonic practices such as enharmonic modulations and symmetrical octave divisions. Overview of sonata form. Prerequisite: MUSC 128. Instructor's consent required for special honors credit.

MUSC 228. Theory IV  2 credit hours
Study of 20th century resources, including extended dominants, modes, symmetrical scales, added-tone chords, parallelism, chords built in 5ths, 4ths, or 2nds, advanced rhythmic devices, free atonality and serial technique, minimalism, avant-garde styles, and chance music. Prerequisite: MUSC 227. Instructor's consent required for special honors credit.

MUSC 229. Aural Skills III  2 credit hours
Recognition, singing, and dictation of contrapuntal textures with continued harmonic practice emphasizing elementary chromaticism. Instruction assisted by computer. Prerequisite: MUSC 130.

MUSC 230. Aural Skills IV  2 credit hours
Summation and expansion of previous skills further emphasizing harmonic chromaticism and modern melodic and rhythmic resources. Instruction assisted by computer. Prerequisite: MUSC 229.

MUSC 230A. Aural Skills IV: Music Education  2 credit hours
Focuses on skills important to music education including sequence of instruction, start/stop cues, and solfege.

MUSC 240. Jazz Music Theory 3  2 credit hours
Introduces jazz music theory with emphasis on chord progression, chord extensions and symbols, with practical knowledge of common practice theory. Prerequisite: MUSC 128.

MUSC 241. Jazz Aural Skills 3  2 credit hours
Designed to help develop practical ear training for skills used in jazz performance, stressing the importance of the aural tradition. Prerequisite: MUSC 129.

MUSC 242. Jazz Music Theory 4  2 credit hours
A continuation of MUSC 240, which is designed to have an emphasis on chord progression, chord extensions and symbols, with practical knowledge of common practice theory. Prerequisite: MUSC 240.

MUSC 243. Jazz Aural Skills 4  2 credit hours
A continuation of MUSC 241, which is designed to help develop practical ear training for skills used in jazz performance, stressing the importance of the aural tradition. Prerequisite: MUSC 241.

MUSC 259. Introduction to Music Composition  2 credit hours
Intended for students who are interested in exploring contemporary art music composition. Students meet in a classroom setting focusing on different compositional techniques each week. Weekly composition
etudes are assigned with performances of student etudes in class. Prerequisite: MUSC 127.

**MUSC 260. Beginning Music Composition 2 credit hours**
Intended for students who want continued study in contemporary art music composition. Students meet in small group lessons where work on small projects is done, and a concert is given at some point in the academic year. Repeatable for credit. Prerequisite: MUSC 259.

**MUSC 310. Interrelated Art 3 credit hours**
*General education advanced issues and perspectives course.*
Presents an aesthetic analysis of three fine arts. Emphasizes style and commonality among the fine arts (art, music, drama).

**MUSC 334. History of Music I 3 credit hours**
*General education advanced further study course.* Survey of the evolution of musical styles and practices in the Western world through 1750. Includes lectures, reference readings and studies representative examples of music. Prerequisites: MUSC 113, 227, or instructor's consent.

**MUSC 335. History of Music II 3 credit hours**
*General education advanced further study course.* Survey of the evolution of musical styles and practices in the Western world from 1750 to the present. Includes lectures, reference readings, and studies representative examples of music. Prerequisites: MUSC 113, 228, or instructor's consent.

**MUSC 345. Jazz Arranging 2 credit hours**
Arranging for small and large jazz ensembles emphasizing current big band styles. Prerequisites: MUSC 228, 230, or instructor's consent.

**MUSC 346. Styles of Jazz 3 credit hours**
*General education advanced further study course.* A survey of all eras in the evolution of the many styles in the jazz idiom from the end of the 19th century to the present. Open to majors and nonmajors. Course includes diversity content.

**MUSC 348A. History of Jazz 3 credit hours**
A chronological survey of the major styles and artists of jazz, from African influences to the present. Course includes diversity content.

**MUSC 390. Special Topics in Music Theory and Musicology 1-3 credit hours**
For individual or group instruction. Repeatable with departmental consent.

**MUSC 493. American Popular Music 3 credit hours**
*General education advanced further study course.* Focuses on music of the popular culture in this country from colonial times into the 20th century and representing a melding of social, political, artistic and historical elements of many diverse cultures. Course includes diversity content.

**MUSC 510. Interrelated Art 3 credit hours**
Presents an aesthetic analysis of the fine arts: music, visual arts, drama, literature and dance. Emphasizes style and commonality among the arts disciplines.

**MUSC 523. Form And Analysis 2 credit hours**
Extensive analysis of the forms and formal processes of musical literature. Prerequisite: MUSC 228.

**MUSC 531. Introduction to Electronic Music 2 credit hours**
Basic techniques of electronic music. Directed toward musicians who wish to use the electronic medium in teaching, performing or communicating through music in any way.

**MUSC 560. Applied Composition 2 credit hours**
Individual study in advanced musical composition emphasizing writing for small ensembles in the smaller forms. For theory-composition majors. Repeatable. Prerequisites: MUSC 260 and consent of theory-composition area faculty and musicology-composition coordinator, to continue as a theory-composition major.

**MUSC 561. 18th Century Counterpoint 2 credit hours**
Contrapuntal devices of the 18th century as found in the works of J.S. Bach. Prerequisite: MUSC 228.

**MUSC 587. Organ Literature & Design I 2 credit hours**
Broad survey of the historical eras of organ literature and design. Open to non-organ majors. Prerequisite: minimum of two years applied organ study or departmental consent.

**MUSC 588. Organ Literature & Design II 2 credit hours**
Broad survey of the historical eras of organ literature and design. Open to non-organ majors. Prerequisite: minimum of two years applied organ study or departmental consent.

**MUSC 616. Symphonic Literature 3 credit hours**
An advanced course in orchestral literature covering the development of the symphonic music from Baroque to the present day. Designed primarily for music majors who have already had MUSC 334 and 335.

**MUSC 623. Opera Literature 3 credit hours**
A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. MUSC 113 is strongly recommended before taking the course. For upper-division or graduate students. Not limited to music majors.

**MUSC 624. Oratorio and Cantata Literature 2 credit hours**
A study of the solo vocal literature of the larger sacred and secular forms from the 17th century to the present. Not limited to music majors.

**MUSC 641. Orchestration 2 credit hours**
The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite: MUSC 227.

**MUSC 660. Applied Composition 2 credit hours**
Individual study in musical composition emphasizing writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisites: MUSC 560 and instructor's consent.

**MUSC 671. Chromatic Harmony 2 credit hours**
Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Emphasizes analysis and creative writing. Prerequisite: MUSC 228.

**MUSC 672. Contemporary Techniques 2 credit hours**
Advanced study of music from impressionism to the present, emphasizing related literature and creative writing. Prerequisite: MUSC 228.

**MUSC 685. String Literature & Materials 2 credit hours**
A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period.

**MUSC 726. Voice Literature 3 credit hours**
A comprehensive survey of early Italian arias, French chansons, German lieder, contemporary English songs, and Russian and Spanish literature.

**MUSC 750. Musicology-Composition Workshop 1-4 credit hours**
Repeatable for credit. Prerequisite: instructor's consent.

**MUSC 753. Choral Literature I 2 credit hours**
A historical and stylistic survey of choral literature of the Renaissance and Baroque eras.

**MUSC 754. Choral Literature II 2 credit hours**
A historical and stylistic survey of choral literature of the Classical, Romantic and Contemporary eras.
MUSC 782. Piano Literature I  2 credit hours
Survey of the historical eras of professional piano repertory.

MUSC 783. Piano Literature II  2 credit hours
Survey of the historical eras of professional piano repertory.

MUSC 786. Chamber Music Literature I  2 credit hours
Survey of composers, styles and works of chamber music from Baroque to about 1828.

MUSC 787. Chamber Music Literature II  2 credit hours
Survey of composers, styles and works of chamber music from about 1828 to the present.

MUSC 790. Special Topics in Music  1-4 credit hours
For individual or group instruction. Repeatable with departmental consent.

Nursing (NURS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

NURS 285. Introduction to Nursing Practice  1 credit hour
Introduces the discipline and scope of nursing as practiced in diverse settings. Examines dimensions of current and emerging roles of nursing within the context of the student's self-awareness of personal and professional goals. Prerequisite: sophomore standing.

NURS 302. Professional Nursing Practice  3 credit hours
Explores the discipline and scope of professional nursing as applied to diverse settings in the evolving health care system. Prerequisite: admission to the School of Nursing.

NURS 310. Fundamentals of Nursing Care  4 credit hours
2.5 Theory hours; 4.5 Practicum hours. Focuses on beginning skills in nursing practice and provides exposure to individuals in health care settings. Corequisites: semester 5 classes.

NURS 320. Nursing Care of Adults I  4 credit hours
Emphasizes the identification and management of health alterations of adults in this first of two sequential courses. Alterations in acute and chronic conditions of selected body systems are presented using the nursing process and research-based evidence to guide therapeutic care, including life span variations. Corequisites: semester 5 courses.

NURS 325. Introduction to Evidence-Based Practice  2 credit hours
Cross-listed as DH 334. An overview of the process of evidence-based practice for health care. Emphasizes the discovery and analysis of evidence to support clinical practice. Open to nonmajors. Prerequisite: departmental consent.

NURS 329. Evidence-Based Nursing for the Practicing RN  3 credit hours
Provides opportunities for students to examine the application of evidence-based practice in the global health care environment with emphasis on developing skills in the critical evaluation of published research and use of evidence to support nursing practice. Prerequisites: admission to the RN-BSN program and completion of STAT 370 or equivalent, or departmental consent.

NURS 334. RN Bridge Course  4 credit hours
Web-based course. Enhances the knowledge base of the RN-BSN student in leadership and management theory and application, issues in professional nursing, therapeutic communication and nursing theory. Prerequisite: admission to WSU School of Nursing.

NURS 335. Transitions to Professional Nursing  2 credit hours
Introduces the licensed practical nurse (LPN) to the study of nursing as a practice discipline and professional nursing roles. Emphasizes the nursing process and the self-care concept of nursing and its use in professional practice, education, and scholarship. Prerequisites: current license as an LPN in Kansas and admission to the School of Nursing.

NURS 337. Foundations of Nursing Leadership for the Practicing RN  4 credit hours
Designed for the transitioning of registered nurses entering the BSN completion program. Focuses on professional concepts to advance the student's repertoire of nursing knowledge in an ever changing and complex arena of professional nursing. Prerequisite: admission to the RN-BSN program; and completion of NURS 329.

NURS 340. Mental Health Nursing Care  4 credit hours
2 Theory hours; 6 Practicum hours. Studies mental health nursing with clinical applications in community and hospital settings. Focuses on nursing care of clients across the life span who have mental illness. Course includes diversity content. Prerequisites: semester 5 courses. Corequisites: semester 6 courses.

NURS 340H. Mental Health Nursing Care - Honors  4 credit hours
2 Theory hours; 6 Practicum hours. Studies mental health nursing with clinical applications in community and hospital settings. Focuses on nursing care of clients across the life span who have mental illness. Course includes diversity content. Prerequisites: semester 5 courses. Corequisites: semester 6 courses.

NURS 345. Health Assessment  4 credit hours
3 Theory hours; 3 Lab hours. Emphasizes multiple methods of data collection relevant to the health status of individuals and families across the life span. Focuses on holistic assessment of individuals and families from diverse populations. Corequisites: semester 5 classes.

NURS 346. Health Assessment for the Practicing RN  3 credit hours
Emphasizes multiple methods of data collection relevant to the health status of individuals and families across the life span. Focuses on drawing valid inferences from available data. Prerequisite: admission to the RN-BSN program.

NURS 360. Clinical Care of Adults I  4 credit hours
18 Practicum hours; 4 Lab hours. Clinical course emphasizes care for patients with acute illness and/or acute complications of chronic illness in acute care settings. Focuses on the application of therapeutic interventions to maximize health potential in individuals from the young adult to the frail elderly. Prerequisites: successful completion of semester 5 courses. Corequisites: semester 6 courses.

NURS 365. Nursing Care of Older Adults  2 credit hours
In-depth study of the physiological and psychosocial changes of aging. Emphasizes adult patients experiencing acute and chronic alterations in health related to the effects of the aging process. The focus is on application of concepts and principles of care across multiple settings. Course includes diversity content. Prerequisites: semester 5 courses.

NURS 370. Nursing Care of Adults II  4 credit hours
Emphasizes the identification and management of health alterations of adults in this second of two sequential courses. Alterations in acute and chronic conditions of selected body systems are presented using the nursing process and research-based evidence to guide therapeutic care, including life span variations. Emphasizes application of didactic knowledge to meet individual patient needs. Prerequisites: semester 5 courses. Corequisites: semester 6 courses.

NURS 410. Clinical Care Adults II  4 credit hours
Emphasizes comprehensive patient care of young adults to frail elderly individuals with complex health problems. Prerequisites: successful
completion of semester 5 and 6 courses. Corequisites: semester 7 courses.

**NURS 425. Special Projects in Nursing 1-6 credit hours**
Individual study of selected topics, didactic and/or clinical designed to enhance the student's knowledge base and competencies in nursing practice. Repeatable. Elective. Prerequisite: school consent.

**NURS 427. Special Projects in Nursing 1-6 credit hours**
Elective. Individual study of selected topics, didactic and/or clinical designed to enhance the student's knowledge base and competencies in nursing practice. Repeatable. Prerequisite: school consent.

**NURS 430. Pediatric Nursing Care 3 credit hours**
Focuses on family-centered nursing of children from infancy through adolescence with clinical application in community and hospital settings. Prerequisites: successful completion of semester 5 and 6 courses. Corequisites: semester 7 courses.

**NURS 440. Maternal/Newborn Nursing Care 3 credit hours**
Focuses on family-centered maternal nursing care with clinical application in community and hospital settings. Prerequisites: semester 5 & 6 courses. Corequisites: semester 7 courses.

**NURS 450. Nursing Care of Populations 3 credit hours**
2.5 Theory hours; 5.5 Practicum hours. Focuses on the role of the professional nurse in community health settings. Community health nursing functions, care coordination principles for clients, and the continuum of care on local, national and global levels are integral components. Prerequisites: all semester 7 courses.

**NURS 451. Care of Populations for the Practicing RN 3 credit hours**
Focuses on public health nursing practice which integrates public health standards, competencies, essential services, principles and core functions toward the goal of improving the health of populations. Determinants of health including genetics, environmental and biopsychosocial factors are examined. Infectious disease, epidemiology, bioterrorism and disaster management principles are incorporated. Prerequisite: admission to the RN-BSN program; NURS 329.

**NURS 456. Primary Prevention 2 credit hours**
A Web-based course for RN students. Focuses on health promotion concepts to enhance wellness of individuals, families and communities. Emphasizes public health concepts. Prerequisite: admission to School of Nursing.

**NURS 460. Leadership and Clinical Decision Making 4 credit hours**
Focuses on the development and application of leadership and management in the health care setting. Sound clinical decision making in the care of clients is emphasized. Prerequisites: successful completion of semester 5, 6 & 7 courses. Corequisites: semester 8 courses.

**NURS 461. Care Manager - RN 4 credit hours**
Web-based course. Explores the role of the professional nurse in the community setting. Students select an area of focus for community nursing enhancement and complete a community assessment project. Includes topics related to management and financial implications for nursing. Prerequisite: admission to School of Nursing.

**NURS 470. Nursing Care of Clients with Critical Illness 5 credit hours**
Emphasizes the complex nursing care of critically ill clients across the life span in the critical care and emergent settings. Prerequisites: successful completion of semester 5, 6 & 7 courses. Corequisites: semester 8 courses.

**NURS 481. Cooperative Education Field Study 1-8 credit hours**
A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Students may follow one of two scheduling patterns: parallel, enrolling concurrently in a minimum of 6 hours of coursework in addition to their co-op assignments, or alternating, working full-time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit.

**NURS 490. Healthcare Leadership for the Practicing RN 3 credit hours**
Provides students with an opportunity to examine managerial and leadership concepts, issues, roles and functions. Leadership concepts are applied to the nursing role in the evolving health care environment. Prerequisite: admission to the RN-BSN program or departmental consent; NURS 329; NURS 337, NURS 346 and NURS 451.

**NURS 495. Clinical Capstone - RN 2 credit hours**
96 Practicum hours. Enhances the registered nurse's skills in the community and other settings. Provides opportunity to perform therapeutic nursing interventions in student-selected settings. Prerequisites: all required RN-BSN courses.

**NURS 496. Nursing Leadership Practicum for the Practicing RN 2 credit hours**
Offers the student a leadership practice experience. The clinical experience results in collaborative partnerships with health care leaders. Prerequisite: completion of NURS 346, NURS 329, NURS 337, NURS 451 and NURS 490.

**NURS 499. Clinical Capstone 4 credit hours**
36 Practicum hours (5 weeks). Focuses on the transition from the role of student to the role of professional nurse through immersion in the clinical setting. The student focuses on a selected area of practice within the current health care environment. Prerequisites: successful completion of semester 5, 6 & 7 courses, NURS 460, 470.

**NURS 499H. Clinical Capstone - Honors 4 credit hours**
36 Practicum hours (5 weeks). Focuses on the transition from the role of student to the role of professional nurse through immersion in the clinical setting. The student focuses on a selected area of practice within the current health care environment. Honors section. Prerequisites: successful completion of semester 5, 6 & 7 courses, NURS 460, 470.

**NURS 505. Directed Study in Nursing 1-4 credit hours**
Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: departmental consent.

**NURS 543. Women and Health Care 3 credit hours**
Cross-listed as WOMS 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care, and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to non-nursing majors. Course includes diversity content.

**NURS 566. Perspectives on Self-Help Groups 3 credit hours**
Cross-listed as PSY 566 and SCWK 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and
research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experiences with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness and parenting.

NURS 567. Psychology of Helping Relationships 3 credit hours
Cross-listed as PSY 506 and SOC 506. Introduces students to a psychological perspective on helping relationships that is useful in both practice and research. Topics covered include the definition of relationship and identification of the ways in which the roles of helper and help-seeker can be structured to maximize effectiveness: e.g., power, distance, similarity and reciprocity. Relationships of interest include: counseling and psychotherapy, nursing and doctoring, family caregiving, mentoring, self-help/mutual aid, and volunteering. The emerging topic of relationship-centered care models in the education of health care professionals is discussed. Prerequisite: 6 hours in psychology including PSY 111 or instructor's consent.

NURS 701. Advanced Health Assessment 2 credit hours
Designed to assist students to refine history taking, psychosocial assessment and physical assessment skills. Focuses on assessment of individuals throughout the life span. Emphasis is placed on detailed health history taking, differentiation, interpretation and documentation of normal and abnormal findings. Course includes lecture, discussion, and integrated history-taking and physical assessment assignments. Prerequisite: admission to graduate nursing program. May be taken concurrently with or prior to NURS 702.

NURS 702. Advanced Health Assessment Laboratory 1 credit hour
Companion course for NURS 701. Apply history-taking and assessment skills within a laboratory setting. Emphasizes differentiation, interpretation and documentation of normal and abnormal findings. Requires a complete history and physical examination of a client. Prerequisite: admission to graduate nursing program. May be taken concurrently with, or within one year of completion of, NURS 701.

NURS 703. Theoretical Foundations of Advanced Nursing Practice 3 credit hours
Emphasizes the role of theory in developing knowledge-based advanced nursing practice. Relationships among theory, research and practice are addressed. The application of selected theories, models and frameworks to advanced practice nursing is discussed. Prerequisite: admission to graduate nursing program.

NURS 715. Advanced Nursing Practice Roles 1 credit hour
Designed for the student preparing for advanced practice nursing. The historical development of the advanced practice role, as well as current and future professional and legal descriptions of advanced practice nursing roles is explored. Prerequisite: admission to graduate nursing program.

NURS 720. Human Lactation 2-4 credit hours
For the graduate student preparing for practice as a lactation consultant. Provides an in-depth focus on the anatomical and physiological basis of lactation and breastfeeding. Explores factors that impact maintenance of health during lactation and clinical decisions for disease prevention. Addresses preparation for lactation consultant certification. Students work on case studies, develop a paper for publication and take a final examination via the Internet. Open to non-nursing majors. Prerequisite: admission to graduate program.

NURS 723. Foundations of Nursing Education 3 credit hours
Assists the student to explore theoretical and practical aspects of curriculum development, and teaching of nursing in higher education and continuing education. Prerequisite: departmental consent.

NURS 724. Nursing Education Practicum 1-3 credit hours
Students, under professional guidance, become directly involved in clinical and classroom teaching, curriculum development and participation in other faculty functions in higher education and continuing education, or patient education. A seminar and directed observation of a master teacher accompanies the field experience. Repeatable for a total of 6 credits. Prerequisite: departmental consent. Pre- or corequisite: NURS 723.

NURS 726. Common Dermatological Conditions in Primary Care 1-3 credit hours
Interactive online course guides students through an instructional program based on a profile of common dermatological conditions encountered in primary care. Information is presented in brief case scenarios; students identify the condition. Resource links are available for in-depth study of each condition. For clinical use, patient education links are provided. Cases give the didactic information needed to make clinical decisions. Prerequisite: senior rule or admission to the Graduate School or instructor's consent.

NURS 727. Low Back Pain 1-3 credit hours
Interactive online course guides students through an instructional program based on the low back pain guidelines from the Agency for Health Care Policy and Research. Case study format stimulates critical thinking. Linked information gives information needed to make clinical decisions. Prerequisite: senior rule or admission to the Graduate School or instructor's consent.

NURS 728. Advanced Practice Technology and Skills 3 credit hours
Focuses on application of clinical skills, advanced health assessment, and interpretation of technologies used in a variety of clinical settings. Students practice these skills in laboratory and clinical settings. Students practice history-taking and physical examination, with emphasis on differentiation, interpretation and documentation of normal and abnormal findings. A 40-hour precepted experience is included.

NURS 733. Diabetes Mellitus Nursing 3 credit hours
Exploration of clinical theories; identifies and studies appropriate nursing systems for clients with diabetes mellitus. Emphasizes attaining and maintaining optimal levels of functioning and the psychological adjustment of the client and family to a potentially devastating disease. Open to non-nursing majors.

NURS 734. Diabetes Mellitus Nursing Practicum 3 credit hours
An intensive clinical experience; the student studies, designs and implements nursing systems for individuals or groups in the area of diabetes mellitus nursing management. A weekly one-hour seminar accompanies the practicum. Open to non-nursing majors.

NURS 750. Workshops in Nursing 1-4 credit hours
An opportunity for intensive study of special topics related to nursing practice, education or research. Open to non-nursing majors.

NURS 757. Teaching Strategies for Nursing Education 3 credit hours
Analysis of teaching strategies for the nurse educator to accommodate the changing health care scene. Teaching methods, including technology appropriate for a variety of learners, and learning environments are discussed. Roles of the nurse educator across the scope of learning environments are investigated: nursing education, in-service and patients/clients/families. Current issues and trends influencing nursing education are explored. The course focuses on the use of research-based evidence to guide teaching strategies. Pre- or corequisite: NURS 723. May be taken by graduate nursing students or undergraduate nursing students with senior standing.
NURS 775. Health Care Information Systems  3 credit hours
Examines information systems as they relate to health care. Analyzes information systems in clinical management, administration, education and research. Emphasizes issues surrounding information systems and hands-on experience with selected health care information management exercises.

NURS 791. Special Studies in Nursing  1-6 credit hours
Students engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Open to graduate or undergraduate students. Prerequisite: departmental consent.

NURS 793. Advanced Pathophysiology I  4 credit hours
Explores in depth scientific knowledge base relevant to selected pathophysiological states confronted in advanced nursing practice. Provides the basis for the foundation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age-specific and developmental alterations are correlated with clinical diagnosis and management. Application is made through age-appropriate examples and case studies. Prerequisite: admission to graduate nursing program or instructor's consent.

NURS 795A. Applied Drug Therapy I  3 credit hours
Discusses the clinical application of specific categories of drugs commonly encountered in primary care settings. Explains the use of protocols, prescription writing, and the ethical/legal and economic issues surrounding the advanced nurse's role in prescribing and monitoring pharmacologic therapies in the ambulatory setting. Discusses factors such as age-appropriate content related to pharmacokinetics, dosages, expected outcomes and side effects of the drugs. Addresses first line versus second line drugs, alternate drugs, drug interactions, adjusting drug dosages, patient education and compliance issues related to drug therapy. Explores the nurse practitioner's role and responsibility related to data collection, problem identification and consultation with the physician. Application is made through age-appropriate case studies. Prerequisites: admission to graduate nursing program and departmental consent.

NURS 795B. Applied Drug Therapy II  3 credit hours
Expands the clinical application of drug therapy in the primary care setting. Employs evidence-based medicine to determine the proper management of the various disease states discussed. Application is made through age appropriate case studies including complex patients. Prerequisites: NURS 795A, admission to graduate nursing program.

NURS 796. Nursing Practicum in Special Settings  1-6 credit hours
Opportunity for directed practice in various settings including clinical specialties, nursing administration, nursing education and consultation. Prerequisite: departmental consent.

Personal Computing (PC)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

PC 105. Introduction to Computers and Applications  3 credit hours
2 Classroom hours; 2 Lab hours. General education introductory course. A computer literacy course introduces students to the Internet and other networks, multimedia, CD ROM, historical development of the computer, uses of the computer in business, industry, government, education and the home; hardware components of a computer system, data representation, systems analysis and design, and issues of ethics posed by technology. The laboratory section includes hands-on experience with the Internet, Windows, and personal computer applications packages such as word processors and spreadsheets. No credit granted toward the BS in computer science. Prerequisites: some familiarity with typewriter keyboard and minimal typing skills.

Philosophy (PHIL)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

PHIL 100. Meaning of Philosophy  3 credit hours
General education introductory course. An exploration of the meaning of philosophic activity. Through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures and essential functions of the philosophic endeavor. Introduces some of the fundamental problems and possible values of philosophy. Develops a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise.

PHIL 100H. Meaning of Philosophy-Honors  3 credit hours
General education introductory course. An exploration of the meaning of philosophic activity. Through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures and essential functions of the philosophic endeavor. Introduces some of the fundamental problems and possible values of philosophy. Develops a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise. Honors section.

PHIL 105. Critical Reasoning  3 credit hours
General education introductory course. Helps students become better at reasoning. Focuses on different patterns of reasoning common in college-level studies and in everyday life. Some patterns are treated in concrete and content-specific ways, and others are treated in highly abstract ways. Students also learn to be critical by different kinds of standards. For example, students learn about how much precision to demand when reasoning about different kinds of topics, and how to evaluate considerations in terms of relevance. Ultimately, students learn how to strengthen their own capacities for reasoning and how to recognize and correct errors in their own thinking and in other people's reasoning.

PHIL 125. Introductory Logic  3 credit hours
General education introductory course. Deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion and advertising.

PHIL 125H. Introductory Logic - Honors  3 credit hours
General education introductory course. Deals with the uses of logical concepts and techniques to evaluate and criticize reasoning. Studies some elementary systems of formal logic. Arguments evaluated are drawn from such diverse fields as law, science, politics, religion and advertising. Honors section.

PHIL 144. Moral Issues  3 credit hours
General education introductory course. An introduction to philosophical thought about ethics. Discusses a number of contemporary moral issues and considers various philosophical approaches to their solutions. Course includes diversity content.

PHIL 300. Science and the Modern World  3 credit hours
General education advanced issues and perspectives course. Develops an understanding of the methods and accomplishments of science and how they have affected the way people understand themselves, society and the universe. The approach is both historical, with respect to the re-creation of the prescientific world view and the developments of science, and analytical with respect to understanding the goals, methods and limits of contemporary science. No prerequisite but prior
PHIL 300H. Science and the Modern World - Honors  3 credit hours
General education advanced issues and perspectives course. Develops an understanding of the methods and accomplishments of science and how they have affected the way people understand themselves, society and the universe. The approach is both historical, with respect to the re-creation of the prescientific world view and the developments of science, and analytical with respect to understanding the goals, methods and limits of contemporary science. No prerequisite but prior completion of general education requirements in science is desirable. Course includes diversity content.

PHIL 302. Values & the Modern World  3 credit hours
General education advanced issues and perspectives course. Examines the philosophical pressures on values brought about by rapid modern cultural and technological change. Explores the relations between social values and social institutions, provides a framework for critically and objectively thinking about moral values, and considers various standards proposed for resolving moral dilemmas. Course includes diversity content. Honors section.

PHIL 303. 19th Century Philosophy  3 credit hours
A study of selected 19th century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, Peirce, Nietzsche, Comte, Dilthey, Schleier-Macher, idealism, materialism, positivism, empiricism and pragmatism.

PHIL 305. Analytic Philosophy  3 credit hours
General education advanced further study course. Studies the rise of analytic philosophy in the 20th century, emphasizing the themes unifying philosophers who originated modern philosophical analysis. Includes the nature of analysis and the relationship between analysis and classical philosophical problems, such as the nature of reality, the nature of knowledge, the nature of language, the nature of morality.

PHIL 306. Business Ethics  3 credit hours
General education advanced issues and perspectives course. A critical examination of representative moral issues that arise in the context of business. Focuses on topics such as the nature of professionalism, the social responsibility of business, regulation, employee rights and obligations, sexual harassment, economic justice, environmental impact, the limits of property rights, and conflicting international mores and practices. Course includes diversity content. Prerequisite: PHIL 105 with a grade of C or better.

PHIL 311. Philosophy of Law  3 credit hours
General education advanced further study course. An introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justifiability of civil disobedience, the limits of legal constraints on the individual, and the nature and justification of punishment. Attention to classical and contemporary readings. Course includes diversity content.

PHIL 311H. Philosophy of Law - Honors  3 credit hours
General education advanced further study course. An introduction to philosophical problems arising in the theory and practice of law. Includes the objective basis of legal systems, the relationship between morality and legality, the justifiability of civil disobedience, the limits of legal constraints on the individual, and the nature and justification of punishment. Attention to classical and contemporary readings. Course includes diversity content. Honors section.

PHIL 313. Political Philosophy  3 credit hours
General education advanced further study course. Examines various philosophical issues concerning political systems. Discusses issues such as the nature of political authority, the rights of individuals, constitutionalism and civil disobedience. Course includes diversity content.

PHIL 315. Late Modern Philosophy  3 credit hours
General education advanced further study course. Studies philosophical thought in the 18th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Hutcheson, Wolff and Kant, and movements such as empiricism, rationalism, the Scottish common sense school, and idealism.

PHIL 320. Philosophy of Science  3 credit hours
General education advanced further study course. Studies the methods, goals and world views of the sciences with attention to such topics as the structure and evaluation of scientific theories, the nature of explanation, the dynamics of scientific revolutions, and the impact of science on human society and values.

PHIL 321. The History and Philosophy of the Physical Sciences in the 20th Century  3 credit hours
The 20th century saw radical changes in our theories about the nature of the physical world. This course uses a brief initial survey of the so-called "classical" physics of the late 19th century as a springboard for exploring the rise and development of our current views about space, time, matter, energy, gravitation, cosmology and more. The emphasis is not on mastery of technical details but rather on understanding important results in the physical sciences from a humanistic perspective, including their cultural, philosophical and technological implications.

PHIL 322. Early Modern Philosophy  3 credit hours
General education advanced further study course. Studies philosophical thought in the period from the Renaissance through the 17th century with selections from philosophers such as Pico, Vico, Galileo, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche and Locke.

PHIL 325. Formal Logic  3 credit hours
Studies systems of formal logic including sentential and predicate logic. Emphasizes the uses of these systems in the analysis of arguments. Prerequisite: PHIL 125.

PHIL 327. Bioethics  3 credit hours
General education advanced further study course. Examines ethical issues related to health care such as truth-telling to patients, confidentiality, euthanasia, abortion, prenatal obligations and distribution of health care. Course includes diversity content.

PHIL 331. Ancient Greek Philosophy  3 credit hours
General education advanced further study course. Examines the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoras, the Atomists, the pluralists, the Sophists, Socrates, Plato and Aristotle.

PHIL 338. Philosophy of Feminism  3 credit hours
General education advanced further study course. Cross-listed as WOMS 338. Explores philosophical issues raised by the feminist movement emphasizing conceptual and ethical questions. Course includes diversity content.

PHIL 341. Contemporary Ethics  3 credit hours
General education advanced further study course. A study of contemporary developments in ethics. Highlights landmark works from the 20th century to the present. May explore contemporary approaches to an important ethical issue or investigate recent defenses of such ethical theories as Kantian deontology, consequentialism, virtue ethics,
contractualism, care ethics, and feminist ethics. Prerequisite: PHIL 100, 125, or 144.

PHIL 342. History of Ethics 3 credit hours
General education advanced further study course. Examines the development of ethics from its ancient Greek origins to the present, or focuses on the ethics of an important historical period such as the modern period. Highlights the substantive and methodological shifts, as well as the historical, social and philosophical pressures that make such shifts explicable.Engages such historically influential philosophers as Socrates, Plato, Aristotle, Cicero, Hume, Kant, Mill and Nietzsche. Prerequisite: PHIL 100, 125, or 144.

PHIL 345. Philosophy of Sex & Love 3 credit hours
Examines the ethical, metaphysical and conceptual dimensions of sex and love. Includes the nature of sex, sexual perversion, homosexuality, pornography, sadomasochism, the nature and varieties of love, the features of love, and the relationship between love and sex. Uses selections from writings of both historical and recent authors.

PHIL 346. Philosophy of Religion 3 credit hours
General education advanced further study course. Examines some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality, and the problem of evil.

PHIL 350. Ancient Chinese Philosophy 3 credit hours
A survey of Chinese philosophy during the pre-Han period, roughly 500-200 B.C.E. Includes major figures Confucius, Mencius, Mo-Tzu, Hsun-Tzu, Chuang-Tzu, Lao-Tzu and Han-Fei-Tzu. Includes the major positions of Confucianism, Mohism, Legalism, Taoism and Dialecticalism.

PHIL 352. Contemporary Chinese Philosophy 3 credit hours
General education advanced further study course. Survey of Chinese philosophy from the late 19th century to the present day. Covers major figures such as Sun Zhongshan (Sun Yat-sen) Chen Duxiu, Li Dazhao, Mao Zedong and Deng Xiaoping. It also covers major schools of thought such as the New Culture Movement, Nationalism, Communism, Socialism, Maoism and the post-Mao Economic Reform Movement. Prerequisite: PHIL 100 or 144.

PHIL 354. Ethics and Computers 3 credit hours
General education advanced issues and perspectives course. Ethics with application to the ethical issues which may arise from the use of computers, including the moral responsibility of computer professionals for the effect their work has on persons and society; the moral obligations of a computer professional to clients, employer and society; the conceptual and ethical issues surrounding the control and ownership of software; and the justifiability of regulation of the design, use and marketing of computer technology. Course includes diversity content. Prerequisite: junior standing or departmental consent.

PHIL 360. Ethical Theory 3 credit hours
General education advanced further study course. A study of selected topics in ethics. Investigates issues such as the meaning and justification of moral judgments, the nature of morality, the relations between normative categories and the concept of justice, and the problem of revolution in moral schemes. Prerequisite: one course in philosophy.

PHIL 361. Metaethics 3 credit hours
General education advanced further study course. A study of selected topics in metaethics. Investigates, for example, ethical realism, moral relativism, expressivism, moral knowledge, moral motivation and moral value. Readings may include work from figures such as G.E. Moore, A.J. Ayer, R.M. Hare, J.L. Mackie, Gilbert Harman, Philippa Foot, Bernard Williams and Christine Korsgaard. Prerequisite: PHIL 100, 125, or 144.

PHIL 365. Survey of Asian Philosophy 3 credit hours
A survey of philosophical systems of Asia, including Confucianism, Taoism, Buddhism and Hinduism. Key points of similarity and contrast among these systems and between these systems and those dominant in Western societies, regarding the nature of the self and reality, and the sources of moral, political, and social value are considered.

PHIL 385. Engineering Ethics 3 credit hours
General education advanced issues and perspectives course. An examination of representative ethical issues that arise in engineering. Topics include: professional responsibility and integrity, whistleblowing, conflict of interest, ethical issues in engineering consulting and research, engineering and environmental issues, and engineering in a global context. Course includes diversity content. Prerequisite: junior or senior standing.

PHIL 421. Philosophy of Mind 3 credit hours
Critically examines recent developments in the philosophy of the mind. Possible topics include the nature of consciousness, mental representation, the mind-body problem, mental causation, psychological explanation, and the computational theory of mind.

PHIL 450. Truth & Reality 3 credit hours
A survey of philosophical theories of truth, including the correspondence, pragmatic and deflationary theories. Topics to be covered include skepticism, realism and anti-realism, and social constructionism. Reading may include selections from figures such as James, Peirce, Dewey, Wittgenstein, Russell, Tarski, Quine, Davidson, Austin, Strawson, Field, Hacking and Horwich.

PHIL 481. Cooperative Education 1-6 credit hours
Provides practical field experience, under academic supervision, that complements and enhances the student's academic program. Graded Cr/NCr. Prerequisite: departmental consent.

PHIL 501. Philosophy of Language 3 credit hours
Examines the relationships between philosophy and language. Focuses on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems? Prerequisite: one 300-level or higher course in philosophy.

PHIL 510. Philosophy of History 3 credit hours
A philosophical examination of the meta-level issues that arise in the discipline and practice of history. Issues investigated include: What is history? What is the proper form of explanation in history? How are causal claims in history to be understood? Is it possible to achieve objectivity in historical explanations? What criteria should be employed in evaluating historical explanations? What are the moral obligations which should guide historical research and presentation? Prerequisite: instructor's consent.

PHIL 525. Evidential Reasoning 3 credit hours
Explores philosophical issues related to reasoning about evidence. Topics may include: induction, confirmation, falsification, the under-determination of theories by evidence, theories of probability, and scientific method. Examines some case studies of reasoning about evidence in, for example, poker, medicine, risk analysis, forensic sciences and the law.

PHIL 540. Theory of Knowledge 3 credit hours
A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism, knowledge of the self, material objects, other minds, the past, present and future, universals,
PHIL 546. Rationalism 3 credit hours
A study of the philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge with particular attention to the philosophies of Descartes, Spinoza and Leibniz.

PHIL 549. Topics in Ancient Philosophy 3 credit hours
Explores one decisive issue in philosophy from the time of Thales through the Stoics. The examination of an issue may confine itself to one period within the total span of ancient philosophy or it may trace the issue throughout the span, indicating its contemporary treatment. Some issues treated are: the nature of what is, the concept of the sacred, the meaning of truth, the relation of invariance and process, the existence of universal standards of thought and conduct, the problem of knowledge, skepticism, the nature of language, and the character of philosophical inquiry.

PHIL 550. Metaphysics 3 credit hours
An exploration of some basic topics in the theory of reality. Includes such notions as space, time, substance, causality, particulars, universals, appearance, essence and being. Prerequisite: one course in philosophy.

PHIL 555. Philosophy of the Social Sciences 3 credit hours
Studies such topics as the relation of social sciences with natural sciences and philosophy, methodological problems peculiar to social sciences, the nature of sound explanation concepts and constructs, and the roles of mathematics and formal theories in social sciences.

PHIL 557. Contemporary European Philosophy 3 credit hours
An exploration of a theme, issue, philosopher, or movement in contemporary European philosophy. Includes philosophers Husserl, Heidegger, Jaspers, Gadamer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault, and Ricoeur. Examines philosophical movements such as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics, and Marxism.

PHIL 558. Studies in a Major Philosopher 3 credit hours
A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent.

PHIL 585R. Major Philosopher: Nietzsche 3 credit hours
Examines Nietzsche's writings as philosophy and as literature, and considers the implications of Nietzsche's "perspectivism" for philosophy, morality and interpretation. Nietzsche's own writings are, of course central, although students also engage the celebrated book, "Nietzsche: Life as Literature," and consider Nietzsche's influence on contemporary approaches to literary, biblical and constitutional interpretation.

PHIL 585RH. Major Philosopher: Nietzsche 3 credit hours
Examines Nietzsche's writings as philosophy and as literature, and considers the implications of Nietzsche's "perspectivism" for philosophy, morality and interpretation. Nietzsche's own writings are, of course central, although students also engage the celebrated book, "Nietzsche: Life as Literature," and consider Nietzsche's influence on contemporary approaches to literary, biblical and constitutional interpretation. Honors section.

PHIL 590. Special Studies 1-3 credit hours
Topic for study announced by instructor. Repeatable for credit. Prerequisite: instructor's consent.

PHIL 699. Directed Readings 1-3 credit hours
For the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent.

Physics (PHYS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

PHYS 111. Introductory Physics 4 credit hours
3 Classroom hours; 3 Lab hours. General education introductory course. A general physics course for liberal arts students and those who have not had physics in high school. Includes mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Not open to students who can meet prerequisites for PHYS 313. Prerequisite: two years of high school algebra or one each of algebra and geometry or equivalent.

PHYS 131. Physics for Health Sciences 3 credit hours
General education introductory course. A background in basic physics for students in health-related professions. The choice of topics, the emphasis on problems, and the detailed applications are directed toward the special uses of physics in the health sciences. Prerequisites: two years of high school algebra or one year each of algebra and geometry or equivalent.

PHYS 151. Preparatory Physics 2 credit hours
A general physics course for those who have not had adequate preparation for PHYS 313. Emphasizes problem solving using selected areas of physics, including vectors, one-dimensional motion, rotational motion, equilibrium, elasticity, hydrostatics, thermal effects, lenses and mirrors. Prerequisite: MATH 112.

PHYS 195. Introduction to Modern Astronomy 3 credit hours
General education introductory course. A survey of astronomy for the student with little or no background in science or math. The nature and evolution of the universe and objects in it are considered from the perspective of the question: Why do things happen the way they do? May include comparison of the planets, stars and black holes, galaxies and quasars, and the expansion of the universe.

PHYS 196. Laboratory in Modern Astronomy 1 credit hour
3 Lab hours. The application of the techniques and analysis of the data of modern astronomy. For the student with some background in the physical sciences. When PHYS 196 is completed, 195 and 196 count as a laboratory science. Requires field trips. Prerequisites: two semesters of high school algebra or the equivalent, or instructor's consent, and PHYS 195, which may be taken concurrently.

PHYS 210. Physics of Sound 3 credit hours
2 Classroom hours; 1 Lab hour. General education advanced issues and perspectives course. Studies the physical nature of sound generation by the human vocal system and musical instruments, including sound propagation and wave properties. Covers sound reception in the human ear, electronic sound generation, recording and measurements. Basic
principles of physics are introduced to build a working knowledge of the subject for students in speech-language pathology, audiology, music and related fields.

**PHYS 213. General College Physics I 5 credit hours**
4 Classroom hours; 3 Lab hours. General education introductory course. Mechanics, heat and wave motion. For students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or MATH 112. Credit is given for only one of PHYS 213 or 313.

**PHYS 214. General College Physics II 5 credit hours**
4 Classroom hours; 3 Lab hours. General education advanced further study course. A continuation of PHYS 213. Electricity, light and modern physics. Prerequisite: PHYS 213 or 313.

**PHYS 214H. General College Physics II - Honors 5 credit hours**
4 Classroom hours; 3 Lab hours. General education advanced further study course. A continuation of PHYS 213. Electricity, light and modern physics. Honors section. Prerequisite: PHYS 213 or 313.

**PHYS 303. Physics for Engineers I 3 credit hours**
*General education introductory course.* The first semester of a three-semester, calculus-based physics sequence. Topics include motion, forces, energy, rotation and gravitation. Credit is only given for one of PHYS 213, 303 or 313. Knowledge of high school physics is assumed. Corequisite: MATH 243.

**PHYS 304. Physics for Engineers II 3 credit hours**
*General education advanced further study course.* The second semester of a three-semester, calculus-based physics sequence. Topics include oscillations, waves, electricity, magnetism, basic circuits and Maxwell's equations. Credit is only given for one of PHYS 214, 304 or 314. Prerequisites: MATH 243 with a grade of C or better, and either PHYS 303 or 313; or PHYS 213 with a grade of B or better.

**PHYS 313. Physics for Scientists I 4 credit hours**
*General education introductory course.* The first semester of a three-semester, calculus-based physics sequence. Topics include motion, forces, energy, fluids, oscillations, waves and thermodynamics. Natural sciences majors are required to take the lab, PHYS 315, that accompanies this course. Corequisite: MATH 243 with a grade of C or better. Credit is given for only one of PHYS 213 or 313.

**PHYS 314. Physics for Scientists II 4 credit hours**
*General education advanced further study course.* The second semester of a calculus-based physics sequence. Topics include electricity, magnetism, circuits, EM waves, light and selections from modern physics. Credit is only given for one of PHYS 214 or 314. Natural sciences majors are required to take the lab, PHYS 316, that accompanies this course. Prerequisites: MATH 243 with a grade of C or better and PHYS 313.

**PHYS 315. University Physics Lab I 1 credit hour**
3 Lab hours. General education introductory course. Lab experiments in mechanics, waves and thermodynamics. Required for natural sciences majors enrolled in PHYS 313. Prerequisite: MATH 242. Corequisite: PHYS 313.

**PHYS 316. University Physics Lab II 1 credit hour**
3 Lab hours. General education advanced further study course. Lab experiments in electricity, magnetism and optics. Required for natural sciences majors taking PHYS 314. Corequisite: PHYS 314.

**PHYS 320H. Scientific Thinking - Honors 3 credit hours**

**PHYS 395. Solar System Astronomy 3 credit hours**
*General education advanced further study course.* Studies the sun, major planets and minor bodies of the solar system, particularly their nature and origin. Discusses classical ground-based observations and the results of satellite investigations. Primarily for students with little prior contact with science.

**PHYS 481. Cooperative Education in Physics 1-4 credit hours**
Complements and enhances the student's academic program by providing an opportunity to apply knowledge gained through coursework to job-related situations. No more than 4 hours earned in PHYS 481 may be applied toward satisfying the requirements for a major in physics. Graded Cr/NCr. Prerequisite: departmental consent.

**PHYS 481N. Internship 1-4 credit hours**
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

**PHYS 501. Special Studies in Physics for Educators 1-3 credit hours**
3 Lab hours. A series of courses covering basic physical concepts which provide a physical science background for teachers. Repeatable for a maximum of 5 hours. Prerequisite: inservice or preservice teacher.

**PHYS 502. Science Investigations: Physics 3-5 credit hours**
Introductory course for prospective teachers. Basic physics concepts in mechanics, heat, and electricity and magnetism developed through laboratory investigations. Emphasizes science process skills and the nature of the scientific endeavor. Prerequisite: MATH 111 or equivalent; inservice or preservice teacher.

**PHYS 516. Advanced Physics Laboratory 2 credit hours**
4 Lab hours. Experiments in classical and modern physics to stress scientific methods and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of 8 credit hours. Corequisite: PHYS 551.

**PHYS 517. Electronics Laboratory 2 credit hours**
1 Classroom hour; 3 Lab hours. Experiments in electronics that treat some of the applications of electronics in scientific physics research. Experiments cover the uses of transistors, op-amps, integrated and digital circuits. Prerequisite: PHYS 314.

**PHYS 551. Topics in Modern Physics 3 credit hours**
An introduction to selected areas of modern physics emphasizing the features of atomic, nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite: PHYS 214 or 314, or departmental consent. Corequisite: MATH 344.

**PHYS 555. Modern Optics 3 credit hours**
Geometrical and physical optics, coherence theory and Fourier optics. Additional topics may include radiation, scattering, optical properties of solids and optical data processing. Prerequisites: PHYS 214 or 314 and MATH 344.

**PHYS 595. Astrophysics 3 credit hours**
Covers the formation, life and death of stars. Topics include: HR-diagrams, atomic and molecular spectra, radiative and convective transfer, the structure and spectra of stellar atmospheres, and stellar evolution. Prerequisite: PHYS 551.

**PHYS 600. Individual Readings in Physics 1-3 credit hours**
Repeatable but total credit may not exceed 6 hours for physics majors. Prerequisite: departmental consent.
PHYS 601. Individual Readings in Astrophysics  1-3 credit hours
Studies several topics in astronomy and astrophysics in depth. Lectures, independent readings and student projects may be assigned. May be repeated up to 6 hours. Prerequisite: instructor's consent.

PHYS 616. Computational Physics Laboratory  2 credit hours
1 Classroom hour; 2 Lab hours. Provides a working knowledge of computational techniques with applications in both theoretical and experimental physics, including an introduction to the FORTRAN and C++ languages as used in physics. Corequisite: MATH 555.

PHYS 621. Analytical Mechanics  3 credit hours
Motion of a particle or system of particles in one or several dimensions, central forces, rotating coordinate systems, the harmonic oscillator and the Lagrangian and Hamiltonian formulation of mechanics. Prerequisites: PHYS 214 or 314, and MATH 344 with grades of C or better.

PHYS 623. Advanced Mechanics  3 credit hours
Continuation of PHYS 621. Covers dynamics of a system of coupled particles, fluid mechanics, systems with continuum distributions of mass, and theory of small oscillations all in a Lagrangian or Hamiltonian formulation. Prerequisite: PHYS 621, or MATH 553 or 555, or instructor's consent.

PHYS 631. Electricity and Magnetism  3 credit hours
Electric and magnetic field theory, direct and alternating currents and Maxwell's electromagnetic wave theory. Prerequisites: PHYS 214 or 314, and MATH 344 with grades of C or better.

PHYS 641. Thermodynamics  3 credit hours
The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations, and an introduction to statistical mechanics. Prerequisites: PHYS 214 or 314, and MATH 344.

PHYS 651. Quantum Mechanics I  3 credit hours
Introduction to quantum mechanics, the Schrodinger equation, elementary perturbation theory and the hydrogen atom. Prerequisite: PHYS 551.

PHYS 652. Quantum Mechanics II  3 credit hours
A continuation of PHYS 651 and covers time dependent perturbation theory, WKB, scattering, Bell's theorem, quantum reality, applications of quantum mechanics, and nanotechnology. Prerequisite: PHYS 651.

PHYS 661. Introduction to Atomic Physics  3 credit hours
Quantum mechanics is the basis of all our physical understanding of atomic and molecular spectra. This course uses quantum mechanics to understand the nature and formation of the spectra of one, two and many-electron atoms. A discussion of atomic collisions is included. Corequisite: PHYS 651.

PHYS 675. Nuclear/Particle Physics  3 credit hours
Theories of nuclear and particle physics, including experimental techniques and important features of current data. Summary of mesons, baryons and leptons, and their electromagnetic, strong and weak nuclear force interactions. Phenomenological descriptions of nuclear and high-energy scattering and particle production leading to the quark theory of matter and other new exotic particles. Prerequisite: PHYS 551.

PHYS 681. Solid State Physics  3 credit hours
A one-semester introduction to solid state physics, which explores and explains-in terms of the microscopic processes that produce them-the thermal, mechanical and electronic properties of solids. Discusses practical applications and interdisciplinary material. Prerequisite: PHYS 551.

PHYS 714. Theoretical Physics  3 credit hours
A study of mathematical techniques applicable to physics and other sciences. Instructor selects topics, such as power series, infinite products, asymptotic expansions, WKB method, contour integration and residue methods, integral transforms, Hilbert spaces, special functions and integral equations. Prerequisite: MATH 555 or instructor's consent.

PHYS 730. Principles of Computer Modeling  2 credit hours
1 Classroom hour; 2 Lab hours. Essential elements, principles and strategies of forward and inverse numerical computer modeling. Formulation of a qualitative problem (parametrization), model design, implementation, and interpretation of model results. Working knowledge of computational techniques with examples in physics, geology, chemistry and environmental sciences. Prerequisites: PHYS 616 or EEPS 701, plus knowledge of a programming language or numerical or symbolic mathematics package, or instructor's consent.

PHYS 761. Environmental Physics  3 credit hours
Covers the application of physics to the environment, including the production and use of energy, the transport of pollutants, and the study of noise. Topics include basic thermodynamics with applications to fossil fuels, hydroelectric, wind, geothermal and solar energies, plus effects on global warming, pollution and climate. Prerequisites: PHYS 313-314 and MATH 242, or EEPS 721, or instructor's consent.

PHYS 795. Earth and Space Physics  3 credit hours
Cross-listed as GEOL 795. An introduction to the geosciences and astrophysics of the solar system. Topics include the surface, interior and atmospheres of the planets with a comparative planetology approach, and the sun-planet system including solar physics and the effect of the sun on the earth's environment and geologic history. Prerequisites: PHYS 313-314, and MATH 242, or EEPS 721, or instructor's consent.

Political Science (POLS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

POLS 121. American Politics  3 credit hours
General education introductory course. An analysis of the basic patterns and structure of the American political system emphasizing policies and problems of American politics.

POLS 121H. American Politics - Honors  3 credit hours
General education introductory course. An analysis of the basic patterns and structure of the American political system emphasizing policies and problems of American politics. Honors section.

POLS 150. Political Science Workshop  1-3 credit hours
Prerequisite: instructor's consent.

POLS 150B. National Politics  0.5-3 credit hours
The Constitution, election campaigning, lobbying, presidential leadership and policymaking.

POLS 153. Model United Nations I  2-4 credit hours
A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model U.N. in St. Louis.

POLS 220. Introduction to International Relations  3 credit hours
General education introductory course. Examines approaches to the study of international relations. Includes foreign policy, international conflict and conflict management, international organizations and law, development and globalization. Course includes diversity content. Either POLS 220 or 336, but not both, may be accepted toward a major in history.

POLS 226. Comparative Politics  3 credit hours
General education introductory course. Analyzes the basic patterns and structures of Western democratic and political systems, transitional systems, and dictatorial or totalitarian systems.
POLS 232. Political Theory & Philosophy  3 credit hours  
*General education advanced issues and perspectives course.* Shows the direct relationship between political philosophy and practical political structures and policies. Examines the political philosophies of six important Western philosophers at an introductory level. Studies different models of democracy to demonstrate the relationship between a set of basic philosophic assumptions and the political society that seems appropriate to that set of assumptions. Examines one or two major political issues to illustrate the various kinds of solutions that may be suggested by different political philosophies.

POLS 232H. Political Theory & Philosophy - Honors  3 credit hours  
*General education advanced issues and perspectives course.* Shows the direct relationship between political philosophy and practical political structures and policies. Examines the political philosophies of six important Western philosophers at an introductory level. Studies different models of democracy to demonstrate the relationship between a set of basic philosophic assumptions and the political society that seems appropriate to that set of assumptions. Examines one or two major political issues to illustrate the various kinds of solutions that may be suggested by different political philosophies. Honors section.

POLS 305. Environmental Politics  3 credit hours  
*General education advanced further study course.* Examines the politics of environmental protection and the management of natural resources. Examines such politics at local, national and global levels. No prerequisites, but a background in introductory political, economic and environmental science courses is helpful.

POLS 310. Latin American Politics  3 credit hours  
*General education advanced further study course.* An overview of domestic political processes in Latin American countries. A synopsis of historical developments in the region up to and including the transitions from authoritarianism to democracy that took place in the mid 1980s. Presents a regional perspective on key current issues related to governance and democratization such as institutional frameworks (constitutional aspects, elections, political parties and the State), the rule of law, citizen participation and civil society, the role of the elites and the military, the impact of socio-economic factors and the importance of political culture. *Course includes diversity content.*

POLS 315. The Presidency  3 credit hours  
*General education advanced further study course.* Focuses upon the evolution of the presidential office, the recruitment of presidents, and the nature of presidential power.

POLS 315H. The Presidency - Honors  3 credit hours  
*General education advanced further study course.* Focuses on the evolution of the presidential office, the recruitment of presidents, and the nature of presidential power. Honors section.

POLS 316. The Congress  3 credit hours  
*General education advanced further study course.* Focuses on the Congress with particular attention to interest articulation at both state and national levels.

POLS 317. Urban Politics  3 credit hours  
Examines politics in urban areas, including the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems, and political solutions and trends in urban politics.

POLS 318. Political Parties  3 credit hours  
*General education advanced further study course.* Examines the role of political parties in the American political decision-making process at the national, state and local levels.

POLS 318H. Political Parties - Honors  3 credit hours  
*General education advanced further study course.* Examines the role of political parties in the American political decision-making process at the national, state and local levels. Honors section.

POLS 319. State Government  3 credit hours  
*General education advanced further study course.* Examines the role of the states in the federal system and compares state politics and their political institutions.

POLS 320. Developing World  3 credit hours  
*General education advanced further study course.* Examines the politics and processes of development and change in developing nations in Latin America, Africa, Asia and the Middle East, and the implications for developed nations, including the United States. Attempts to provide students with the theoretical tools and concepts to evaluate politics in these societies. Looks at the theories of political development and modernization, the political institutions, the relationships between the state and society, and the social forces that influence politics and economics in these states. Examines the regime types that exist in the different regions, emphasizing the recent transitions from authoritarianism to democracy. Deals with current challenges for developing nations in the economic and social realm. *Course includes diversity content.*

POLS 321. Introduction to Public Administration  3 credit hours  
A general survey of the scope and nature of public administration, policy and administration, administrative regulations and adjudication, organization and management, budgeting and fiscal management, public personnel administration, political, judicial and other controls over the administration.

POLS 321H. Introduction to Public Administration - Honors  3 credit hours  
A general survey of the scope and nature of public administration, policy and administration, administrative regulations and adjudication, organization and management, budgeting and fiscal management, public personnel administration, political, judicial and other controls over the administration. Honors section.

POLS 325. Women In Political System  3 credit hours  
Cross-listed as WOMS 325. Examines the political process of policy making using policies of current interest concerning women. Explores the association of societal gender role expectations with existing and proposed public policies that pertain to women's lives. *Course includes diversity content.* Prerequisite: 6 hours of social sciences or instructor's consent.

POLS 330. Post-Communist Europe  3 credit hours  
Systematically studies contemporary political developments in the former Soviet Union and East Europe. Examines major policy-making institutions and processes, and considers the fundamental principles on which the political system is based. Includes selection of leaders and their roles in policy making, legislative bodies, organization and representation of interest groups, political parties and elections, political aspects of the educational system, the media, religious institutions, and ethnicity.

POLS 336. International Organizations  3 credit hours  
*General education advanced further study course.* Focuses on the role of international organizations in the international system. Emphasizes the United Nations. Also covers some regional organizations. Either POLS 220 or 336, but not both, may be accepted toward a major in history.

POLS 337. Conflict Analysis  3 credit hours  
*General education advanced further study course.* Explores the causes of war on three different levels of analysis: international, domestic and
individual. It examines historical conflicts as well as more recent wars, and the diplomatic efforts that have been made to achieve lasting peace settlements.

POLS 337H. Conflict Analysis - Honors  3 credit hours
General education advanced further study course. Explores the causes of war on three different levels of analysis: international, domestic and individual. It examines historical conflicts as well as more recent wars, and the diplomatic efforts that have been made to achieve lasting peace settlements. Honors section.

POLS 340. Global Challenges  3 credit hours
Seminar-style course in which students actively discuss the scope of, and potential solutions to, many global problems. Topics include: proliferation of weapons of mass destruction, prevention of terrorism, protection of human rights, promotion of development, protection of the environment, alleviation of poverty, and promotion of free trade/globalization. Course includes diversity content.

POLS 345. Classical Medieval Political Theory  3 credit hours
General education advanced further study course. Examines the beginnings of Western political philosophy through works of Plato and Aristotle. This original body of political ideas dominated the Western world for more than 2,000 years. Traces the changes in emphasis that occurred in this tradition through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent political philosophies.

POLS 345H. Classical Medieval Political Theory - Honors  3 credit hours
General education advanced further study course. Examines the beginnings of Western political philosophy through works of Plato and Aristotle. This original body of political ideas dominated the Western world for more than 2,000 years. Traces the changes in emphasis that occurred in this tradition through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent political philosophies. Honors section.

POLS 352. Law and Political Power  3 credit hours
General education advanced further study course. Focuses on the growth of government power in the United States, with an emphasis on the decisions of the Supreme Court and other interpretations of the Constitution. Subjects examined may include economic regulation, federalism and states' rights, separation of powers, and war powers. 

POLS 352H. Law & Political Power - Honors  3 credit hours
General education advanced further study course. Focuses on the growth of government power in the United States, with an emphasis on the decisions of the Supreme Court and other interpretations of the Constitution. Subjects examined may include economic regulation, federalism and states' rights, separation of powers, and war powers. Honors section.

POLS 353. Model United Nations II  2-4 credit hours
A workshop to prepare students to participate effectively in various model United Nations especially the Midwest Model U.N. in St. Louis.

POLS 356. Civil Liberties  3 credit hours
General education advanced further study course. Focuses on the rights individuals and groups claim against the government of the United States, with emphasis on decisions of the Supreme Court. Areas of law covered include freedom of speech, freedom of religion, rights of the accused, privacy and abortion rights, and equal rights. Course includes diversity content.

POLS 356H. Civil Liberties - Honors  3 credit hours
General education advanced further study course. Focuses on the rights individuals and groups claim against the government of the United States, with emphasis on decisions of the Supreme Court. Areas of law covered include freedom of speech, freedom of religion, rights of the accused, privacy and abortion rights, and equal rights. Honors section. Course includes diversity content.

POLS 357. Supreme Court  3 credit hours
Focuses on the U.S. Supreme Court as a political institution. Readings and class discussion examine judicial selection, judicial behavior, Supreme Court doctrine, and connections between the court and American politics broadly conceived. Readings include works of political science and judicial opinions. Students participate in simulated Supreme Court decisions.

POLS 357H. Supreme Court - Honors  3 credit hours
Focuses on the U.S. Supreme Court as a political institution. Readings and class discussion examine judicial selection, judicial behavior, Supreme Court doctrine, and connections between the court and American politics broadly conceived. Readings include works of political science and judicial opinions. Students participate in simulated Supreme Court decisions. Honors section.

POLS 358. American Political Thought  3 credit hours
General education advanced further study course. Considers selected topics in the development of political ideas in the United States.

POLS 360. Human Rights  3 credit hours
Considers the concept of human rights and the Universal Declaration of Human Rights. Also considered are Western and non-Western conceptions of human rights and the problem of cultural relativism. Examples of topics discussed are women in a patriarchal world, the treatment of minorities, genocide, and international legal instruments to protect human rights. Videos on different topics are viewed, including on the leaders of the countries where violations of human rights have been openly perpetrated. Course includes diversity content.

POLS 365. Political Data Analysis  3 credit hours
Introduces students to the use of different types of quantitative data often used by political scientists. Provides the foundation for students to effectively employ a variety of research sources, organize information, conceptualize problems, interpret and analyze data, turn data into usable information, perform basic quantitative analysis, use summary statistics, design basic research and test theories and hypotheses. A hands-on course taught in a computer lab, where students learn where to find data, how to differentiate between aggregate and survey data, raw and secondary data, and the basics of SPSS software. Required for political science majors and a prerequisite for POLS 600.

POLS 370. European Politics  3 credit hours
An in-depth study of the politics of Western and Eastern European countries. Europe's special relationship with democracy and democratization will be examined. The European Union and the goals of European integration receive special attention as well as the impact of globalization on the European democracies.

POLS 375. Latin-American International Politics  3 credit hours
Reviews historical and current issues relating to the international relations of Latin America and the Caribbean. Examines the relations among Latin-American countries, as well as the relations of Latin-American states with other regions of the world, in particular the United States, the European Union and Canada. Looks at the position of Latin-American and Caribbean states in the major sub-regional, regional and hemispheric organizations. Discusses current political issues such as democratization, human rights, security, transnational
crime and migration, as well as those related to economic issues (trade agreements, international investment and globalization).

POLS 375H. Latin-American International Politics - Honors 3 credit hours
Reviews historical and current issues relating to the international relations of Latin America and the Caribbean. Examines the relations among Latin-American countries, as well as the relations of Latin-American states with other regions of the world, in particular the United States, the European Union and Canada. Looks at the position of Latin-American and Caribbean states in the major sub-regional, regional and hemispheric organizations. Discusses current political issues such as democratization, human rights, security, transnational crime and migration, as well as those related to economic issues (trade agreements, international investment and globalization). Honors section.

POLS 380. Campaigns and Elections 3 credit hours
General education advanced further study course. Examines electoral contests at all levels, national, state and local, with an emphasis on the practical aspects of competitive campaigns. Offered during the fall semester of election years, the course features candidates, campaign strategists, pollsters, fund raisers, and political advertising and media experts. Students have the choice of working on a local campaign and writing a report on it, or researching and writing on a competitive gubernatorial or U.S. Senate race.

POLS 385. Global Democracy 3 credit hours
General education advanced further study course. In the past 30 years a large number of countries have made the transition from authoritarian to some form of democratic rule. Whereas several countries began their democratization process several years ago, some are just starting to do so. The challenges that new democracies face have raised many theoretical and practical questions for political science. This course addresses some of those questions. It provides an overview of the different regime types that can exist and examines the concept of democracy itself. It also explores topics such as the preconditions for democracy, the different waves of democratization that have occurred, and the modes of transition from authoritarianism to democracy. A major part of the course is devoted to examining the problems associated with democratic consolidation. It also addresses the possible distortions of democracy, the conditions that can lead to democratic breakdowns, ways of measuring and assessing democracy, as well as in policies for promoting democracy in countries around the world. Course includes diversity content.

POLS 390. Special Topics in Political Science 3 credit hours
General education advanced further study course. An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

POLS 390A. Human Rights 1-3 credit hours
General education advanced further study course.

POLS 390C. Developing World 3 credit hours
General education advanced further study course.

POLS 390E. Film/Great Trials 3 credit hours
General education advanced further study course.

POLS 390F. Lobbyists and Interest Groups 3 credit hours
General education advanced further study course.

POLS 390G. Presidential Nominations 3 credit hours
General education advanced further study course.

POLS 390GH. Presidential Nominations - Honors 3 credit hours
General education advanced further study course.

POLS 390I. Mass Politics and Public Opinion 3 credit hours
General education advanced further study course.

POLS 390J. African American Politics 3 credit hours
General education advanced further study course.

POLS 390K. Democracy and Political Development 3 credit hours
General education advanced further study course.

POLS 390M. Dictatorships 1-3 credit hours
General education advanced further study course.

POLS 390P. Election 2006 3 credit hours
General education advanced further study course.

POLS 390Q. Political Simulations 1-3 credit hours
General education advanced further study course.

POLS 390S. European Politics 3 credit hours
General education advanced further study course.

POLS 390V. Russian Politics 3 credit hours
General education advanced further study course.

POLS 390W. Practical Politics 3 credit hours
General education advanced further study course.

POLS 390X. Political Biography 3 credit hours
General education advanced further study course.

POLS 390Y. Global Issues 3 credit hours
General education advanced further study course.

POLS 390Z. Public Opinion 3 credit hours
General education advanced further study course.

POLS 391. Special Topics in Political Science 3 credit hours
General education advanced further study course. An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit.

POLS 391A. Diplomacy & Negotiation 3 credit hours
General education advanced further study course.

POLS 391B. Arab-Israeli Conflict 3 credit hours
General education advanced further study course.

POLS 391C. Civil Rights Films 3 credit hours
General education advanced further study course.

POLS 391D. China Today 3 credit hours
General education advanced further study course.

POLS 391E. Middle East Politics 3 credit hours
General education advanced further study course.

POLS 391F. Immigration Today 3 credit hours
General education advanced further study course.

POLS 391G. 4-Star Films 3 credit hours
General education advanced further study course.

POLS 391I. Model Congress 1 credit hour
General education advanced further study course.

POLS 391J. Lobbying and Nongovernmental Organizations 3 credit hours
"Who hires a lobbyist? Everyone." This statement, made by a leading lobbyist 10 years ago, is even more true today; for with the rapid expansion of NGO’s – local, state, national and global – the need for lobbyists continues growing rapidly. Students learn how interest groups and NGO’s function in raising money, electioneering, and lobbying throughout the year rather than waiting until legislators convene. Readings focus on actual case studies. Because the public is unaware that legislators and administrators also lobby, they explain how they operate. Traditional lobbyists, in addition to sharing their strategies
and techniques, also describe the background and skills they seek when hiring new lobbyists for their expanding firms.

POLS 391K. American Exceptionalism  3 credit hours
America's organizational principles and founding institutions are viewed as exceptional and qualitatively different from those of other Western democratic countries. The United States, then, has developed as an outlier among countries. Why has America never had a strong Socialist party? Why is the center in American politics considerably to the right of center in the politics of other industrialized countries? What accounts for why Americans are so individualistic? How does this impinge on policymaking? Why are Americans more suspicious of state power than are most Europeans? Why are Americans considered to be a unique people in an exceptional country?

POLS 391L. Democracy and Authoritarianism  3 credit hours
The countries of the world can be divided into democratic and authoritarian regimes, but in between those extremes there are many shades. Course discusses the features that define a democracy and distinguish it from a hybrid or authoritarian regime. It evaluates the theories of democracy and authoritarianism and also looks at quantitative indicators and public opinion data. In addition it discusses the role that different domestic actors and international factors can play in the process of democratization in any given country. Other topics include: the preconditions for democracy, the different waves of democratization that have occurred in the world, the modes of transition from authoritarianism to democracy, and the possible distortions to or total breakdown of democracy.

POLS 391M. Legislative Leadership & Politics  3 credit hours
Examines the practice of leadership in legislative institutions, particularly how individuals attempt to create positive change in institutions like Congress and state legislatures. Taught by Kansas Rep. Brandon Whipple, this course is designed for all Wichita State students. Of particular appeal to those interested in careers in public service and politics.

POLS 391MH. Legislative Leadership & Politics - Honors  3 credit hours
Examines the practice of leadership in legislative institutions, particularly how individuals attempt to create positive change in institutions like Congress and state legislatures. Taught by Kansas Rep. Brandon Whipple, this course is designed for all Wichita State students. Of particular appeal to those interested in careers in public service and politics. Honors section.

POLS 395. U.S. Foreign Policy  3 credit hours
General education advanced further study course. Explores the dynamic decision-making process in the development of U.S. foreign policy. Examines the variety of actors involved, including the military, the State Department, the President and others. Bilateral as well as global policy issues are examined.

POLS 396. Comparative Foreign Policy  3 credit hours
General education advanced further study course. Examines the foreign policies and the decision-making structures and processes of various countries.

POLS 398. Directed Readings  1-3 credit hours
For exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisites: senior standing and departmental consent.

POLS 399. Travel Seminar  1-4 credit hours
An interdisciplinary travel seminar that allows students to gain credit for the study of culture, art, literature, architecture, politics, society, science and/or economics while visiting historic places of interest. Students observe the political systems of the places they visit, analyze their dynamics, and demonstrate their understanding of those systems through a project which has the approval of the department's adviser.

POLS 444. Modern Political Theory  3 credit hours
General education advanced further study course. Continues the study of Western political philosophy beginning with the decisive break with the classical tradition made by Machiavelli early in the 16th century. Studies major philosophers Hobbes, Locke and Rousseau, known as philosophers of the social contract who exercised a great influence on the creation of the American political system. Also studies Marx, a political thinker who moves strongly in the direction of 20th century political philosophy. Philosophers of this period have collectively had a profound impact on political life in this century.

POLS 444HI. Modern Political Theory - Honors  3 credit hours
General education advanced further study course. Continues the study of Western political philosophy beginning with the decisive break with the classical tradition made by Machiavelli early in the 16th century. Studies major philosophers Hobbes, Locke and Rousseau, known as philosophers of the social contract who exercised a great influence on the creation of the American political system. Also studies Marx, a political thinker who moves strongly in the direction of 20th century political philosophy. Philosophers of this period have collectively had a profound impact on political life in this century. Honors section.

POLS 481. Cooperative Education in Political Science  1-3 credit hours
Provides practical experience to complement the student's more formal political science curriculum. Student programs must be approved by the department. Graded Cr/NCr.

POLS 481A. Cooperative Education  1-3 credit hours
Introduces the student to professional practice by working in industry in an academically-related job and provides a planned professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and cooperative education coordinators. Intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Graded Cr/NCr unless student has received permission before enrolling for course to be used as an elective. Repeatable for credit. Prerequisites: junior standing and approval by the appropriate faculty sponsor.

POLS 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

POLS 490. Internship in Government/Politics  1-6 credit hours
(Washington, 6 credit hours; Topeka, 3 credit hours). Credit for an approved work experience in a public, quasi-public or governmental agency, including an academic component. Washington interns participate in the program co-sponsored with the University of Kansas for which an on-site coordinator is provided. Kansas legislative interns spend two days per week in Topeka while the legislature is in session. Both internships offered each spring semester. Prerequisites: sophomore or upper-class standing, POLS 121 or equivalent, and instructor's consent.

POLS 523. Government and Politics of Latin America  3 credit hours
General education advanced further study course. An examination of the political institutions and processes that currently exist in the Latin American republics. Emphasizes the social, economic and psychocultural factors affecting these institutions and processes.
POLS 524. Politics of Modern China  3 credit hours
General education advanced further study course. Studies China's political system since 1949 in terms of non-Western goals and ideas of social organization. Uses themes of political integration and political development to minimize distortion or cultural bias. Encompasses the roots of the political system, the system as it is now, and the goals China is striving to realize. Some assessment about the future development of communism in China. Includes Chinese communism and the ideological heritage, political culture, political leadership, leadership succession, political participation, the Chinese Communist Party, political communications and socialization, legal developments, policy choices, and major events, such as the Hundred Flowers Campaign, Great Leap Forward, and the Proletarian Cultural Revolution.

POLS 570. International Political Economy  3 credit hours
Cross-listed as ECON 570. Examination of policy decisions regarding exchanges of trade, money and labor that span national boundaries. Studies the interaction of politics and economics at the international level, as well as the modern history of the global economy. Economics often studies the material benefits and costs of different policies. Political science asks why these policies exist in the first place with a focus on who gets the benefits, who pays the costs, and how decisions about allocating benefits and costs are made. Course includes diversity content.

POLS 580. Administration and the Policy-Making Process  3 credit hours
The problems of government encountered in the administration of public policy. Analytical approach rather than descriptive. Repeatable for credit.

POLS 600. Senior Thesis  3 credit hours
Capstone course for political science majors designed to pull together many of the themes and concepts covered in introductory and upper-division courses. The main component is writing a senior thesis in which students conduct in-depth research about a topic of their interest. The topic should be related to one of the main areas of political science: American politics, international relations or comparative politics. In exceptional cases, students may write a paper related to political theory. Course professor provides guidelines and a schedule of activities, supervises and grades the overall research process; however each student works closely with a faculty member in order to develop his or her research projects. For undergraduate students only.

POLS 655. Urban Government Finance  3 credit hours
Cross-listed as ECON 655. Analysis of urban government expenditure and revenue systems. Introduction to urban financial administration.

POLS 687. Introduction to Urban Affairs  3 credit hours
Cross-listed as ECON 687 and SOC 687. Introduction to the study of the metropolis as a social, political and economic system.

POLS 687H. Introduction to Urban Affairs - Honors  3 credit hours
Cross-listed as ECON 687H and SOC 687H. An introduction to the study of the metropolis as a social, political and economic system. Honors section.

POLS 700. Advanced Directed Readings  1-3 credit hours
Repeatable for credit. Graded S/U. Prerequisite: departmental consent.

POLS 710. Public Sector Organizational Theory and Behavior  3 credit hours
Cross-listed as PADM 710. Review of the scope of the field of public administration including a survey of key concepts and schools of thought underlying the field and identification of issues shaping the future development of the field.

POLS 725. Public Management of Human Resources  3 credit hours
Cross-listed as PADM 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation and pay promotion policies. Emphasizes the laws governing public personnel management and the unique merit, equal employment opportunity, productivity, unionization and collective bargaining problems found in the public sector.

POLS 750. Workshop  2-4 credit hours
Prerequisite: instructor's consent.

POLS 760. Local Government Finance  3 credit hours
Cross-listed as ECON 760. An analysis of state and local government expenditure and revenue systems with an introduction to state and local financial administration. Prerequisites: ECON 202Q and a course in statistics or instructor's consent.

POLS 761. State and Local Financial Systems  3 credit hours
Deals with selected aspects of state and local government financial management. Introduction to fund accounting, costing of government services, capital budgeting and asset management.

Psychology (PSY)

PSY 111. General Psychology  3 credit hours
General education introductory course. Introduces the general principles and areas of psychology. Includes learning, perceiving, thinking, behavioral development, intelligence, personality and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology.

PSY 111H. General Psychology - Honors  3 credit hours
General education introductory course. Introduces the general principles and areas of psychology. Includes learning, perceiving, thinking, behavioral development, intelligence, personality and abnormalities of behavior. Course is a prerequisite for advanced and specialized courses in psychology. Honors section.

PSY 150. Workshop in Psychology  1-4 credit hours
Workshops in a variety of psychology topics. Different topics are indicated by a letter following the course number.

PSY 301. Psychological Statistics  3 credit hours
Introduces basic quantitative techniques for the description and measurement of behavior, as well as tests for making decisions regarding the compatibility of data to scientific hypotheses. Covers probability models, t, chi square and F. Prerequisites: PSY 111.

PSY 311. Research Methods in Psychology  4 credit hours
3 Classroom hours; 3 Lab hours. Covers the philosophy of research methods, experimental designs, appropriate data analysis techniques, and historical trends and developments in experimental psychology. The laboratory exposes students to representative experimental lab techniques in the major subdivisions of psychology. Actively involves all students in research project(s). Prerequisite: PSY 301.

PSY 320. Biological Psychology  3 credit hours
General education advanced further study course. A review of the biological foundations of cognition and behavior. Includes evolutionary influences on brain and behavior, the role of hormones in cognition and behavior, neurochemical correlates of cognition and behavior, and recent advances in cognitive neuroscience. Prerequisite: PSY 111.

PSY 321. Psychology of Learning  3 credit hours
General education advanced further study course. Explores basic principles of how organisms learn and highlights key concepts such
as reinforcement and punishment, generalization of behavior across settings, and extinction of specific behaviors. Important research, theoretical issues and current trends are discussed. Prerequisite: PSY 111.

**PSY 322. Cognitive Psychology  3 credit hours**
*General education advanced further study course.* Presents a coherent picture of human memory and cognition within the framework of the information-processing approach and as a function of neural activity. This approach views the individual as an active, constructive planner in remembering and organizing new and prior learned knowledge. The study of attention, memory, thought, decision-making and problem-solving processes are included. Prerequisite: PSY 111.

**PSY 323. Social Psychology  3 credit hours**
*General education advanced further study course.* The study of perception of self, others and groups. Includes attitude formation and change, group processes like conformity, compliance and conflict, and interpersonal processes such as attraction and the formation of close relationships. Also includes the application of social psychological principles to the study of prosocial and aggressive behavior. Prerequisite: PSY 111.

**PSY 323H. Social Psychology - Honors  3 credit hours**
*General education advanced further study course.* The study of perception of self, others and groups. Includes attitude formation and change, group processes like conformity, compliance and conflict, and interpersonal processes such as attraction and the formation of close relationships. Also includes the application of social psychological principles to the study of prosocial and aggressive behavior. Honors section. Prerequisite: PSY 111.

**PSY 324. Psychology of Personality  3 credit hours**
*General education advanced further study course.* An examination of psychoanalytic, behavioral, trait and other contemporary theories of human personality. Gives consideration to major factors influencing personality, results of research in the area, ways of assessing personality, and some of the methods of treating personality disorders. Presents and discusses case studies. Prerequisite: PSY 111.

**PSY 324H. Psychology of Personality - Honors  3 credit hours**
*General education advanced further study course.* An examination of psychoanalytic, behavioral, trait and other contemporary theories of human personality. Gives consideration to major factors influencing personality, results of research in the area, ways of assessing personality, and some of the methods of treating personality disorders. Presents and discusses case studies. Honors section. Prerequisite: PSY 111.

**PSY 325. Developmental Psychology  3 credit hours**
*General education advanced further study course.* Descriptive survey of human development from conception to death emphasizing the interplay of environmental, genetic and cultural determinants of development. Selected topics emphasized and elaborated by demonstrations and class projects. Prerequisite: PSY 111.

**PSY 327. Systems and Theories in Psychology  3 credit hours**
Includes behaviorism, Gestalt psychology and structuralism. Attempts to develop the logical relations of these theories to each other as well as to common historical themes and current issues. Prerequisite: PSY 111.

**PSY 328. Psychological Testing and Measurement  3 credit hours**
A critical analysis of the psychological foundations of tests and the interpretation of test findings. Surveys several tests representing the areas of intelligence, personality, normal and abnormal psychology, interests, special abilities and aptitudes to illustrate general principles of testing. Prerequisite: PSY 301.

**PSY 403. Introduction to Individual Counseling  3 credit hours**
Surveys contemporary theories and techniques of individual counseling. Compares various theoretical approaches and includes practical applications of each theory studied. Introduces professional and ethical issues involved in individual counseling. Emphasizes the therapeutic relationship, effective listening, issues surrounding defense mechanisms, and crisis intervention. Prerequisite: PSY 111.

**PSY 404. Psychology of Aging  3 credit hours**
*General education advanced further study course.* Cross-listed as AGE 404. An examination of the issues surrounding the adult aging process. Includes personality and intellectual change, mental health of the elderly, and the psychological issues of extending human life. Special emphasis on the strengths of the elderly and prevention of psychological problems of the elderly. Prerequisite: PSY 111.

**PSY 405. Human Factors Psychology  3 credit hours**
The study of how people respond to the demands of complex machines and the varied environments of workplace, home and other settings. Introduces the tools and methods of machine, task and environment design to achieve the matching of human capabilities and the demands of machines and environments so as to enhance human performance and well being. Prerequisite: PSY 111.

**PSY 406. Introduction to Community Psychology  3 credit hours**
*General education advanced further study course.* A review of the historical, societal, theoretical and empirical bases of community psychology which focuses on interdisciplinary approaches to improving lives in community settings. Presents contemporary models of community psychology, including the ecological and social action perspectives. Includes social support, self-help, social policy, prevention, community development, and program development and evaluation. Course includes diversity content. Prerequisite: PSY 111.

**PSY 409. Psychology of Perception  3 credit hours**
*General education advanced further study course.* An exploration of current research and theory in perception and sensation. Emphasizes how organisms come to perceive and understand their environments with regard to perception of space, form, objects and events. Prerequisite: PSY 111.

**PSY 410. Substance Use & Abuse  3 credit hours**
*General education advanced further study course.* Study of the individual, social and cultural aspects of alcohol and other legal and illegal drug use and abuse. Investigates both nonproblem and problem substance use, treatment of alcoholism and other drug addictions, prevention of abuse, addiction and abuse-related problems, and the needs of special populations. Prerequisite: PSY 111.

**PSY 412. Psychology of Motivation  3 credit hours**
*General education advanced further study course.* Examines the psychological and biological forces leading to goal-directed acts to understand the complexity of influences on behavior. Motivational topics include reward and punishment, stress, aggression, achievement and the role of the brain structures in influencing organized behavior. Prerequisite: PSY 111.

**PSY 413. Leadership in Self and Society  3 credit hours**
*General education advanced issues and perspectives course.* Cross-listed as HMCID 308. Examines factors influencing the effectiveness of individuals leading change, including values, conflict and power. Studies the human side of organizational change focusing on understanding how and why people react to change, and identifying opportunities for enhancing the effective implementation of change. Students reflect on their own leadership development and work in teams to recommend public health strategies for change in a project, community setting or organization.
PSY 413H. Leadership in Self and Society - Honors 3 credit hours
General education advanced issues and perspectives course. Cross-listed as HMCD 308. Examines factors influencing the effectiveness of individuals leading change, including values, conflict and power. Studies the human side of organizational change focusing on understanding how and why people react to change, and identifying opportunities for enhancing the effective implementation of change. Students reflect on their own leadership development and work in teams to recommend public health strategies for change in a project, community setting, or organization. Honors section.

PSY 414. Child Psychology 3 credit hours
General education advanced further study course. Covers psychological development from conception through infancy and childhood. Includes the development of language, perceptual and cognitive functioning, social-emotional attachment, and socialization. Attention to practical issues of discipline and child rearing. Prerequisite: PSY 111.

PSY 416. Psychology and Problems of Society 3 credit hours
General education advanced issues and perspectives course. A study of the special role of psychological theory, research and principles applied to contemporary social issues and problems such as environmental concerns, problems in the schools, substance abuse, nuclear proliferation, racism/sexsism, mental illness, child abuse, juvenile delinquency, aggression, behavioral control, aging, technology, etc. Course includes diversity content. Prerequisite: PSY 111.

PSY 428. Field Work In Psychology 1-3 credit hours
Special projects and practicums under supervision in public and/or private agency settings. Psychological study, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of 6 credit hours, but only 3 hours may be earned per semester. Graded Cr/NCr. Prerequisites: PSY 111 and departmental consent.

PSY 481. Cooperative Education 1-3 credit hours
Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty sponsor are necessary. Graded Cr/NCr.

PSY 481N. Internship 1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

PSY 506. Psychology of Helping Relations 3 credit hours
Cross-listed as NURS 567 and SOC 506. Introduces students to a psychological perspective on helping relationships that is useful in both practice and research. Topics covered include the definition of relationship, and identification of the ways in which the roles of helper and help seeker can be structured to maximize effectiveness: e.g., power, distance, similarity and reciprocity. Relationships of interest include: counseling and psychotherapy, nursing and doctoring, family caregiving, mentoring, self-help, mutual aid, and volunteering. The emerging topic of "relationship-centered care models" in the education of health care professionals is discussed. Honors section. Prerequisite: 6 hours in psychology including PSY 111 or instructor's consent.

PSY 508. Psychology Tutorial 1-3 credit hours
Selected topics in psychology. Repeatable for a maximum of 6 hours credit. Instructor's consent may be required. Check Schedule of Courses. Prerequisite: PSY 111.

PSY 511. Introduction to School Psychology 3 credit hours
Cross-listed as CLES 511. Introduces students to a career in school psychology. School psychologists work in schools to solve students' academic and behavioral problems through consultation, assessment and intervention. Course examines the roles and functions of school psychologists, the methods used to address students' psychoeducational needs, and the school and community systems within which they operate. Course includes diversity content.

PSY 512. Exploring Concepts and Careers in Educational Psychology 3 credit hours
Cross-listed as CLES 512. Explores the field of educational psychology and its application in different areas, such as teaching, learning, coaching, training, assessment and research. Introduces students to the wide variety of careers in educational psychology. Also introduces students to the practical application of educational psychology by considering topics such as cognition (problem solving, memory, decision making), behavioral learning principles, motivation, human development, curriculum development, assessment, basic research design, and the role of research. Course includes diversity content.

PSY 514. Psychology of Health and Illness 3 credit hours
A survey of the relationships between psychology/behavior and physical health and illness. Includes stress and coping, health habits, symptom perception, health care provider-client relationships, hospitalization and prevention. May include a self-study of lifestyle and behavior in relation to health and illness. Prerequisite: PSY 111.

PSY 516. Drugs and Human Behavior 3 credit hours
General education advanced further study course. A survey of the actions and effects of use of legal and illegal psychoactive drugs and of the use of prescription drugs in the treatment of psychological disorders. Details social-cultural, personal, and situational determinants and consequences of drug use and abuse. Prerequisite: PSY 111.

PSY 534. Psychology of Women 3 credit hours
General education advanced issues and perspectives course. Cross-listed as WOMS 534. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. Course includes diversity content. Prerequisite: PSY 111.

PSY 536. Behavior Modification 3 credit hours
A study of the basic assumptions, principles and issues of behavioral approach to helping persons with psychological problems. Includes demonstration and individualized practice in general helping skills as well as individual projects in applying these skills. Course includes diversity content. Prerequisites: PSY 111 and instructor's consent.

PSY 544. Abnormal Psychology 3 credit hours
PSY 546. Aerospace Psychology 3 credit hours
Exploration of the many roles of scientific psychology in aviation and aerospace science. Surveys the research and literature in areas such as psychophysiological aspects of flight, environmental effects on human performance in aviation, aircrew skill requirements and training, pilot workload, cockpit control and display systems, and aviation safety. Prerequisite: 15 hours of psychology or instructor's consent.

PSY 556. Introduction to Clinical Psychology 3 credit hours
PSY 556. Introduction to Clinical Psychology (3). A survey of current ethical, conceptual and research issues involved in the assessment and treatment of psychopathology. Reviews contemporary psychotherapies emphasizing the relative efficacy of each and the therapeutic mechanisms through which they initiate behavioral change. Prerequisite: PSY 324.

PSY 559. Successful Aging: Theory, Research & Practice 3 credit hours
Cross-listed as AGE 559, SCWK 559, and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedica and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts & Sciences and Engineering. Course includes diversity content. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

PSY 566. Perspectives on Self-Help Groups 3 credit hours
Cross-listed as NURS 566 and SCWK 566. Provides an interactive format that constitutes a community resource for health and human service professionals and promotes an interdisciplinary understanding of the nature and diversity of self-help groups for persons with virtually any health problem or personal issue. Reviews contemporary theory and research, explaining the attractiveness and effectiveness of self-help groups. Panels of support group members share their experience with self-help groups on such topics as addiction, cancer and other illnesses, eating disorders, bereavement, mental illness and parenting.

PSY 568. Computer Applications to the Behavioral Sciences 3 credit hours
Introduction to state of the art programming environments designed for psychological research. Students learn how to perform basic statistical analyses, program visual and auditory experiments, and analyze data. Applications include such areas as mathematical modeling and creating experiments. Previous programming experience is encouraged, but not required. Repeatable for different topics. Prerequisite: 9 hours in the social sciences.

PSY 608. Special Investigation 1-3 credit hours
Upon consultation with instructor, advanced students with adequate preparation may undertake original research or directed readings in psychological problems. Repeatable for a maximum of 6 credit hours. Requires consultation with, and approval by, appropriate adviser prior to registration. Prerequisites: 9 hours in psychology and instructor's consent.

PSY 727. Selected Topics in Human Factors Psychology 3 credit hours
Introduction to one of several special topics in the area of human factors. Students review relevant literature and learn theory and application of specific methodologies in a variety of work environments. Repeatable. Graded S/U only. Prerequisite: instructor's consent.

PSY 750. Psychology Workshop 1-3 credit hours
Specialized instruction, using various formats in selected topics and areas of psychology. Graded S/U.

Public Administration (PADM)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

PADM 400. Issues and Perspectives on the City 3 credit hours
General education advanced issues and perspectives course. An interdisciplinary introduction to issues facing the city. Includes trends in urbanization, market forces and the development of cities, the social context of the city, governing the city, financing local government, urban planning and public infrastructure, urban service delivery, and urban problems such as poverty, unemployment, crime, and pollution.

PADM 501. Integrity in Public Service 3 credit hours
Cross-listed as CJ 501. Exposes the student to basic principles of personal and professional integrity and how those principles apply to daily life as a member of the community and as an employee of a government or social service agency. Employs a case study method, using cases and examples from a wide range of government and nonprofit agency experiences. Students become aware of the moral and ethical issues which may arise in their professional and personal lives, begin to develop critical thinking and analytical skills regarding ethical behavior, and become more personally and professionally responsible. Prerequisite: junior- or senior-level or instructor's permission.

PADM 550. Workshop 1-3 credit hours
Specialized instruction using variable formats in relevant urban and public affairs subjects. Repeatable for credit up to 6 hours. Prerequisite: departmental consent.

PADM 701. Public & Nonprofit Governance 3 credit hours
Designed to help students develop an understanding of: (a) the governmental and political complexities within which public administration operates; (b) the nonprofit sector-including its major public-benefit sub components-and its role in the public administration environment; and (c) challenges facing both public and nongovernmental actors. Students should develop a working awareness of the significant concepts and components of the governance, politics and institutions, that enables them to analyze forces of change in this challenging environment.

PADM 702. Research Methods 3 credit hours
Cross-listed as AGE 702. Acquaints students with applied public policy research methods. Emphasizes locating, collecting, appraising and using both primary and secondary sources of data of the type used in policy, planning and administrative research. Students must complete several short research projects. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership when completed in conjunction with PADM 802.

PADM 709. Urban Economics 3 credit hours
Cross-listed as RE 709 and ECON 709. A survey of the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisites: for undergraduate students, ECON 201 and 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

PADM 710. Public Sector Organizational Theory and Behavior 3 credit hours
Cross-listed as POLS 710. Reviews the scope of the field of public administration, including a survey of key concepts and schools of thought underlying the field. Examines issues shaping the future development of the field.
PADM 725. Public Management of Human Resources  3 credit hours
Cross-listed as POLS 725. Surveys the major areas of management of human resources in the public sector. Includes hiring, training, evaluation and pay promotion policies. Emphasizes the laws governing public personnel management, and on the unique merit, equal employment opportunity, productivity, unionization and collective bargaining problems found in the public sector.

PADM 750. Public Administration Workshops  1-3 credit hours
Specialized instruction using variable formats in a public administration relevant subject. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

PADM 750F. Social Entrepreneurship  3 credit hours
Social entrepreneurship is a growing field that depends on market driven practices to create social change. Social entrepreneurs leverage available economic resources and innovation to support their passion to have a positive impact on the global and local community. Social entrepreneurship is a critical topic for students and professionals who plan careers in both for-profit and not-for-profit organizations. A global interest in ecological, economic, political and social welfare requires that organizations respond wisely to societal demands. An examination of social entrepreneurship provides the framework for understanding and practicing socially responsible behaviors. Proponents of social entrepreneurship recognize that innovation, creativity, adaptation and planning are key ingredients in creating ventures that respond to critical social needs. Course introduces students to the complex dynamics underlying social entrepreneurship as an emerging national and global phenomenon. Challenges the student to look beyond well-established business objectives — the creation of wealth — and investigate how wealth creation can impact public good. Consists of lectures, case discussions, and original research conducted by the students. An investigation of global social entrepreneurial initiatives including the establishment of India’s Grameen Bank, Transparency International, Social Accountability International, the Ethos Institute, the Ashoka Foundation, and other well known, and lesser well known, “social value” initiatives and their leaders is useful in understanding the entrepreneurial aspects of business planning, scaling and sustainability.

PADM 755. Special Topics in Urban and Public Affairs  1-3 credit hours
Provides students with an opportunity to engage in advanced study in topics that are of immediate concern and arise only occasionally. Content varies with issues that arise, student needs, and faculty expertise. Directed to Master of Public Administration students. May be repeated if topics are different. Prerequisite: instructor's consent.

PADM 760. State and Local Economic Development  3 credit hours
Explores the roles of state and local governments and officials in economic development through the use of case studies. Examines financing in economic development from the perspectives of public purpose and community objectives.

PADM 765. Public Sector Economics  3 credit hours
Cross-listed as ECON 765. Examination of theories of economic decision making and institutions, with a focus on how economic tools can be used to inform policy and management in the public and nonprofit sectors. Covers economic principles as well as discussing market failures and public policies intended to correct or alleviate market failure. Economic decision making tools for public and nonprofit management are also introduced.

PADM 771. Planning Process  3 credit hours
For students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state or federal level. Also for students seeking an understanding of the complex process of urban-related life. Examines the role of planning in solving human and environmental problems. Emphasizes the relationship between specialists, citizens and elective officials as participants in the planning process.

PADM 775. State and Local Government Law  3 credit hours
Exposes students to the legal principles which undergird the foundation of governmental operation and administration.

PADM 785. Public Works Administration  3 credit hours
Introduces public works administration and management. Includes discussion of public works professionals, public works organizations and institutions, infrastructure planning, policy and project analysis; procurement, purchasing and contract administration; geographic information systems; and transportation, water, waste water and surface water system construction, maintenance and replacement.

PADM 798. Independent Study  1-3 credit hours
For graduate students to pursue research in areas not normally covered in coursework. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

Public Health Sciences (PHS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

PHS 101. Introduction to Public Health  3 credit hours
General education introductory course. Develops an informed appreciation for the immense impact of public health on society. Topics include basic public health principles, philosophical foundations, key terms and concepts, historical contributions from the field, ethical bases, system organization, and an overview of the social, behavioral, environmental and biological factors that contribute to community health outcomes. Focuses on applying concepts to understanding local, state, national and global health problems in the 21st century.

PHS 150. Workshop  1-3 credit hours
Intensive study of topics related to health sciences. Differing topics are denoted by a letter following the course number (i.e., 150C, 150P, etc.).

Real Estate (RE)
Department of Finance, Real Estate & Decision Sciences
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

RE 310. Principles of Real Estate  3 credit hours
A broad and fun introduction to real estate markets and decision making for students of all backgrounds and career goals. Emphasizes how individuals and businesses interact with real estate on a daily basis. Topics cover legal and physical characteristics of real estate, zoning and other restrictions on land use, urban development and growth patterns, the real estate sales process, mortgage finance, appraisal, business location decisions, and the basics of real estate investment. (Note: non-Barton School students do not need special permission to enroll in this course.) Prerequisite: junior standing.

RE 390. Special Group Studies in Real Estate  1-3 credit hours
Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

RE 420. Real Estate Property Management  3 credit hours
Covers all aspects of both multi-family and commercial property management. Topics include commercial leases, multi-family leases, cash flow management, tenant relations, personnel issues, Fair Housing, ADA laws, the management contract, take-over procedures, insurance,
RE 618. Real Estate Investment Analysis  3 credit hours
Cross-listed as FIN 618. Covers the tools and techniques used to evaluate the financial profitability of real estate investments, as well as real estate decisions affecting businesses. Students learn about pro forma and discounted cash flow analysis of real estate, the effects of leverage on real estate investments, Federal tax treatment of real estate investments, and disposition and renovation decisions. In addition, topics such as lease-versus-own analysis, sale-leasebacks and other corporate real estate issues are discussed. Prior enrollment in RE 310 recommended for students with a declared emphasis in real estate. Prerequisites: FIN 340 with a grade of C+ (2.300) or better, junior standing, advanced standing.

RE 619. Urban Land Development  3 credit hours
A hands-on course focusing on the challenges and opportunities associated with real estate development projects. Class time is devoted to analyses of actual development projects, with numerous guest lecturers and field trips. Topics covered include market and feasibility analysis, site selection, development financing, ownership structures and marketing strategies. (Note: non Barton School students do not need special permission to enroll in this course.) Prior enrollment in RE 310 recommended for students with a declared emphasis in real estate. Prerequisites: junior standing and RE 310, or admission into either the Master of Public Administration or Master of Business Administration program; students with a declared emphasis in real estate are strongly recommended to take as many other real estate classes as possible before taking RE 619.

RE 690. Seminar in Selected Topics  1-5 credit hours
Repeatable with departmental consent. Prerequisites: junior standing, advanced standing.

RE 709. Urban Economics  3 credit hours
Cross-listed as ECON 709 and PADM 709. A survey of the economic structure and problems of urban areas on both the microeconomic and macroeconomic levels. Stresses the application of regional economic analysis in the study of urban areas as economic regions. Prerequisites: for undergraduate students, ECON 201 and 202, junior standing; for graduate students, the equivalent of ECON 201, 202.

RE 750. Workshop in Real Estate  1-4 credit hours
Prerequisite: junior standing.

Religion (REL)

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

REL 110. Old Testament  3 credit hours
General education introductory course. An introduction to the books of the Old Testament, including the histories of patriarchs and matriarchs, descriptions of Israelite religion and history, depictions of gender relations, and examples of wisdom literature.

REL 115. New Testament  3 credit hours
General education introductory course. Introduces students to the world of the New Testament, the second section of the Christian Bible and basis for Christian belief and practice. Examines the historical context and contemporary applications of the New Testament paying attention to how it fits into or challenges its social milieu, with specific focus on gender, authority and use of violence.

REL 311A. Topic: Moses and David  3 credit hours
Focuses on the lives of Moses and David, the two greatest leaders of the Old Testament. Examines both the biblical stories of Moses and David and the ways in which the two are portrayed and discussed in post-biblical Judaism, Christianity, and Islam. Students are also introduced to the fascinating array of novels, poems, works of art, films and political writings which portray and assess their personalities and careers.
REL 311G. Archaeology and the Bible  3 credit hours
Explores the intersection of the biblical text and the archaeology of “biblical lands.” Includes a consideration of the history of archaeological exploration in the areas and time periods associated with the Bible, and how archaeology has impacted the study of the Bible. Students learn about the social and religious aspects of the cultures and people of biblical time periods. Periods covered include: the Kingdoms of Israel and Judah, Persian period Yehud, Judea under Hellenistic and Roman rule, the empires of the ancient Near East. Topics include: social organization and settlement patterns, urban and rural life, trade and commerce, gender roles in ancient societies, religious and cultic life, culture, arts and literature.

REL 327. Magic, Witchcraft and Religion  3 credit hours
*General education advanced further study course.* Cross-listed as ANTH 327. An examination of various concepts concerning the realm of the supernatural as held by various peoples around the world. Relates such religious beliefs and the resultant practices to the larger patterns of cultural beliefs and behaviors. *Course includes diversity content.*

REL 334. Islam  3 credit hours
Cross-listed as WOMS 334. Introduction to Islam, one of the major world religions. Looks at how Islamic practices and beliefs affect the lives of people around the world. Specific attention is paid to the gendered dimensions of life, what it means to be a Muslim man or woman. Students have an opportunity to interview women and men from the Muslim community in Wichita. *Course includes diversity content.*

REL 370. Women In World Religions  3 credit hours
Cross-listed as WOMS 370. Examines past and present roles and statuses of women in various religious traditions of the world, e.g., Judaism, Christianity, Islam, Hinduism, Buddhism, Confucianism and Taoism. Examines the portrayal of women’s roles in various religious and philosophical texts and the redefinition of women’s roles in the modern age within the contexts of these belief systems. *Course includes diversity content.*

REL 380. Special Studies  3 credit hours
A concentrated intermediate study of a particular component of religious studies. Repeatable for credit.

REL 380U. Biblical Cities  0.5 credit hours
Combines archaeological discovery with Biblical texts to visit some of the key cities and landscapes of the Bible.

REL 384. Paul  3 credit hours
Cross-listed as WOMS 384. Introduces students to the life, world and writings of the apostle Paul. His journey through the ancient Mediterranean world speaking to women and men about his understanding of the gospel is appreciated and used to examine the development of the early church. Highlights issues in Paul's letters such as women and gender, the socio-historical situation of the early church, and the question of authorship. *Course includes diversity content.*

REL 420. Women and the Bible  3 credit hours
Cross-listed as WOMS 420. Examines the roles and statuses of women in biblical narrative, poetry and law, as well as the position of women in various Near Eastern societies. Attention may be given to the ways in which later theologians, novelists and artists have refashioned and re-evaluated the biblical portrayal of women in their works. *Course includes diversity content.*

REL 480. Special Studies  1-3 credit hours
A concentrated study of a religious issue or text announced by the instructor when course is scheduled. Repeatable for credit.

REL 490. Independent Work  1-3 credit hours
Designed for the student capable of doing advanced independent work in a specialized area of the study of religion that is not formally offered by the department. Repeatable for credit. Prerequisite: departmental consent.

REL 542. Religion in America  3 credit hours
Cross-listed as HIST 542. Surveys various religious traditions in American history from Colonial times to the present. Discusses how religions, groups, beliefs and issues have changed over time and how they interact with each other. Includes the different branches of Christianity and Judaism, the study of awakenings and revivals, the stories of prominent religious thinkers and leaders, immigrant religious traditions, the tensions between liberal and traditional religious forms, the prophetic and apocalyptic traditions in American, and the impact of Native American, Asian and African beliefs and practices on the religious landscape.

REL 780. Special Topics in Religion  1-3 credit hours
Intensive study of topic(s) in religion. Discussion, reports and research projects. Repeatable for credit with departmental consent. Prerequisite: instructor's consent.

REL 790. Independent Study  1-3 credit hours
For the student who is capable of doing graduate work in a specialized area of the study of religion not formally offered by the department. Repeatable for credit. Prerequisite: departmental consent.

**Russian (RUSS)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**RUSS 111. Elementary Russian  5 credit hours**
A presentation of the sounds and structure of Russian to develop the four basic skills of understanding, speaking, reading and writing.

**RUSS 112. Elementary Russian  5 credit hours**
A continuation of RUSS 111 to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: RUSS 111 or equivalent.

**RUSS 210. Intermediate Russian  5 credit hours**
*General education introductory course.* Reading, grammar review, and audiovisual presentations in Russian to enhance listening comprehension, speaking, reading and basic writing skills. Prerequisite: RUSS 112 or equivalent.

**RUSS 224. Intermediate Russian  3 credit hours**
*General education advanced further study course.* A continuation of Russian 210; further enhancement of listening comprehension and speaking, reading and writing skills. Prerequisite: RUSS 210 or instructor's consent.

**RUSS 225. Russian Conversation and Composition  2 credit hours**
Development of oral and written skills. May be taken concurrently with RUSS 224. Prerequisite: RUSS 112 or instructor's consent.

**RUSS 300. Intermediate Russian Readings  3 credit hours**
*General education advanced further study course.* Intensive reading and analysis of Russian literary works of all periods. Prerequisite: RUSS 224 or instructor's consent.

**RUSS 325. Intermediate Russian Conversation and Composition  2 credit hours**
Continued development of speaking and listening skills, focusing on the vocabulary of everyday Russian life and idiomatic usage. Prerequisite: RUSS 224 or 225, or instructor's consent.
RUSS 398. Travel Seminar Russian 1-4 credit hours
An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science and economics, while visiting historic places of interest. Prerequisite: departmental consent.

RUSS 505. Russian Phonology 2 credit hours
Cross-listed as LING 505B. Corrective pronunciation and auditory perception for non-native speakers of Russian. Includes articulatory phonetics, phonemics and morphophonemics, as well as the study and production of intonation contours (intonatsionnye konstruktsii). Prerequisite: any 200-level course or instructor's consent.

RUSS 515. Special Studies In Russian 1-3 credit hours
Advanced reading and translation in Russian social sciences, literature and civilization. Repeatable for credit. Prerequisite: departmental consent.

RUSS 540. Russian Literature in English 3 credit hours
General education advanced issues and perspectives course. Survey course in representative Russian literature (prose) of the 19th century, of the Soviet (socialist realism) or post-Soviet period, or of a particular author. The survey of 19th century Russian literature typically includes major prose works of Pushkin, Lermontov, Gogol, Goncharov, Turgenev, minor prose works of Tolstoy and Dostoevsky, and the more popular plays of Chekhov. Emphasis on Russian and European history, historiography and intellectual movements, as well as fundamental concepts of general literary analysis and criticism. No knowledge of Russian is required, although some is desirable. Prerequisite: departmental consent.

Social Work (SCWK)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

SCWK 150. Workshop 1-5 credit hours
Intensive study of topics related to social work. Differing topics are denoted by a letter following the course number (i.e., 150C, 150P, etc.).

SCWK 201. Introduction to Social Work and Social Welfare 3 credit hours
General education introductory course. Introduction to, and examination of, social problems, policies and services in social welfare and social work. Includes history of social welfare, an introduction to the helping process, and current trends in social services and programs. Concepts of diversity are integrated throughout to provide awareness of social issues, poverty, government and social welfare history.

SCWK 300. Policy I: Understanding Social Welfare Policy 3 credit hours
Surveys a broad spectrum of social welfare programs, policies and controversies with an emphasis on public and private systems which address individual, family and group needs. Explores social welfare historical developments and policy trends which have an impact on service provisions and needs of diverse populations. Examines the relationship of area services to larger social welfare institutions and provides an introduction to social work professional roles, organizations, values and goals.

SCWK 302. Techniques and Skills in Generalistic Practice 4 credit hours
Introduces the study and practice of interpersonal professional interaction skills within the framework of a social work helping process. Focuses on developing skills in professional observation, communication, interviewing, recording and reporting. Course is didactic as well as interactive and includes an integrated laboratory component focusing on experiential learning. Required for social work majors. Prerequisite: SCWK 201.

SCWK 304. Social Diversity and Ethics 3 credit hours
General education advanced further study course. Explores the dynamics and theories of oppression and diversity in society as applied to the helping professions. Applies ethics and values of the social work profession to advancing social justice. Course includes diversity content.

SCWK 340. Human Sexuality 3 credit hours
Cross-listed as WOMS 340. Provides a forum for information and discussion on topics relating to physical, psycho-social and cultural components of human sexuality. Includes female and male sexual attributes and roles, sexual problems, alternate lifestyles, birth control, values, sexuality and cultural components of sexuality. Course includes diversity content.

SCWK 351. Introduction to Social Work Research 3 credit hours
Introduction to social work research and evaluation using a human rights and social justice lens. Describes the historical contribution of social work research and evaluation to promoting social work research. Provides a framework for applying human rights and social justice to research and evaluation, and reviews the research and evaluation cycle from problem formulation to sharing and acting upon the findings. Students obtain basic research and evaluation competencies understanding and applying research paradigms, critical thinking and decision-making processes, ethics and values, diverse research methods such as quantitative, qualitative and action research approaches, as well as writing and other advocacy efforts.

SCWK 360. Person in Society: Micro 3 credit hours
Provides a beginning theoretical framework within which the integration of prior knowledge can be made regarding the physical, mental and social development of the human being, perspectives on American culture and subcultural variations and their effects on human adaptability in the social environment, and the relationship of those entities to beginning professional social work practice. Prerequisite: school approved human diversity course.

SCWK 361. Person in Society: Macro 3 credit hours
Explores theories and perspectives which explain human behavior in groups, organizations and communities. Includes application of systems theory to macro and mezzo systems, social interaction theories, group and family dynamics, community structures, and the effects of discriminatory structures and practices on minority groups and communities in our society.

SCWK 385. Lesbian, Gay, Bisexual, Transgender Studies 3 credit hours
General education advanced further study course. Cross-listed as WOMS 385. Focuses on Lesbian, gay, bisexual, transgender people, their history and culture, considering sexualities and genders as identities, social statuses, categories of knowledge, and as lenses to help us frame how we understand our world. Course examines a broad range of contemporary gay, lesbian, bisexual, transgender issues in various contexts including mass media, literary, sociological, political, racial, socioeconomic, biomedical and sexual. Students have the opportunity to develop critical thinking skills and practical academic skills vital to university success. Course includes books, articles, films, guest speakers. Course includes diversity content.

SCWK 400. Policy II: Connecting Policy & Practice 3 credit hours
Provides development of analytical frameworks for understanding the processes of policy formation, factors shaping policy decisions, the content of program designs, and the performances of social welfare
policy and service programs. Examines voluntary and proprietary systems in the development of knowledge and skills for the engagement of complex community resources, the promotion of service innovations, and the shaping of decisions in the arenas of public policy. Emphasizes diverse populations in metropolitan environments. Prerequisites: POLS 121 or HIST 131 or 132; SCWK 300.

SCWK 401. General Practice With Groups  3 credit hours
Introduces practice competencies needed for working with groups. Presents small group theories, interventions and ethics necessary for beginning generalist social work practice. Prerequisites: SCWK 302 and admission to the major.

SCWK 402. Practicum I  4 credit hours
Placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing performance of basic practice skills and understanding of the social service agency and its role in the community service network. Prerequisites: SCWK 302 and admission to the major.

SCWK 403. General Practice With Individuals  3 credit hours
Introduces practice competencies needed for working with individuals. Presents assessment, intervention and evaluation for generalist practice. Focuses on processes, skills, techniques and ethics of social work practice with individuals. Prerequisite: SCWK 302 and admission to major.

SCWK 404. Practicum II  3-4 credit hours
Placement in community social service agencies for supervised direct service assignments emphasizing formulation of appropriate goals. Includes the selection of various social work roles and in-depth development of techniques and skills common to practice in the social service field. Prerequisites: SCWK 402 and admission to major.

SCWK 407. Generalist Practice With Children and Families  3 credit hours
Introduces practice competencies needed for working with children and families. Special emphasis on risk assessment, identification of environmental factors that contribute to neglect and violence in families, and legal procedures relevant to children and families.

SCWK 411. Social Work Badge Topics  0.5 credit hours
Selected topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable. Graded Bg/NBg. Prerequisite: instructor's or program consent.

SCWK 411BA. Social Work Badge: Professionalism in Practice  0.5 credit hours
Introduction to current issues related to professionalism in fields of practice, with particular attention to values and ethics. Writing standards, documentation, and social media presence are also explored through the class, as well as the ethics of technology usage. Graded Bg/NBg.

SCWK 411BB. Social Work Badge: Trauma Informed Care  0.5 credit hours
Covers the core principals of trauma informed care (individual, family and community) and reviews the identification of trauma and symptoms of adverse childhood experiences. Addresses secondary trauma exposure and the necessity of clinician self-care. This review reflects the core areas of cultural competency, empowerment and social justice, and provides opportunities for applying theories and critical thinking. Ethics, knowledge of self, and development of practice skills for human service fields (medical, social work, substance abuse, education and criminal justice) are emphasized. At the end of the course students: are aware of theoretical perspectives of trauma informed care and interventions in response to trauma experiences, are able to apply basic assessment skills in the presence of possible trauma reactions, demonstrate initial understanding of the range of responses to trauma, and are familiar with resources available to clinicians and clients when trauma has occurred. Graded Bg/NBg.

SCWK 451. Social Work Research  3 credit hours
Reviews basic social science research knowledge and extends student awareness of issues which confront the social worker in combining practice and research. Course develops research skills. Social workers need to be consumers of social science research, to apply research findings to the field, and be able to evaluate social work practice. Course includes a combination of lecture, group activities, experiential learning, and conducting a research project from start to finish. Requires using a computer statistical package to assist in the understanding of research findings.

SCWK 470. Generalist Practice with Organizations and Communities  3 credit hours
Introduces practice competencies needed for working with organizations and communities. Presents macro practice roles and skills for beginning-level social work interventions with organization and community systems. Prerequisites: SCWK 302 and admission to major.

SCWK 481. Cooperative Education  1-4 credit hours
A practical experience with public and private sector agencies which addresses a broad range of individual needs and community problems. Topical journals focus upon individual knowledge and skill development through field experiences while engaged in the major social work curriculum. Repeatable as elective credit not to exceed 12 hours. Graded Cr/NCr.

SCWK 481N. Internship  1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

SCWK 521. Forensic Social Work  3 credit hours
Cross-listed as CJ 521. Introduction to and overview of the field of forensic social work. Course content focuses on the role of social workers in forensic arenas, and the issues related to recent practice trends, relevant theoretical frameworks, collaborative team roles, and multisystem interactions. Psychosocial and legal issues are explored, with particular focus on intersections with family and social services, education, child welfare, mental health, substance abuse, criminal justice, diversity and human rights. Prerequisite: 6 hours of social sciences.

SCWK 531. Social Work Practice in Addictions  3 credit hours
Prepares students for social work practice in the field of substance abuse and to intervene effectively when working in other areas where addictions are a concern. Includes content on the epidemiology of alcoholism and drug addiction, intervention approaches and prevention, public policy toward the regulation of drugs and their consequences, and the treatment of chemical dependency among special populations. Included in the curriculum to fulfill requirements for the Licensed Addiction Counselor (LAC) with the Behavioral Sciences Regulatory Board (BSRB). The program requires an addiction treatment focused practicum. Interested students should be advised by the social work adviser assigned to this program. Replaces SCWK 610V effective fall 2013.
SCWK 532. Pharmacology and Drug Classification in Social Work 3 credit hours
Prepares students for social work practice in the field of substance abuse and to intervene effectively when working in other areas where addiction may be a concern. It includes psychological, physiological and sociological effects of mood altering substances and behaviors and their implications for the addiction process. An emphasis on pharmacological effects of tolerance, dependency/withdrawal, cross addiction and drug addiction are covered. Understanding common patterns and causes of drug use among subcultures of diverse populations is included. Included in the curriculum to fulfill requirements for the Licensed Addiction Counselor (LAC) with the Behavioral Sciences Regulatory Board (BSRB). The program requires an addiction treatment focused practicum. Interested students should be advised by the social work adviser assigned to this program.

SCWK 541. Women & Poverty 3 credit hours
General education advanced issues and perspectives course. Cross-listed as WOMS 541. Addresses the problem of poverty among women in the U.S. today, and examines existing and proposed public policies designed to alleviate the problem. Explores theoretical models of poverty policy analysis and the role of values in their formulation and implementation. Discusses issues of age, race and family; special attention is given to poverty among Kansas families. Course includes diversity content. Prerequisite: 6 hours of social science.

SCWK 542. International Social Work 3 credit hours
Introduces the student to international social work and social welfare policy. Provides an overview of micro and macro practice outside of one's own culture and internationally that facilitates skill development in cross-cultural assessment and intervention at the individual, group and community levels. It includes a history of international social work, community and social development. Course examines social problems, policies, programs, services, and national and multinational responses as well as current trends in the global community.

SCWK 551. Independent Studies 1-3 credit hours
Individual projects for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit not to exceed 6 hours. Prerequisite: instructor's consent.

SCWK 559. Successful Aging: Theory, Research & Practice 3 credit hours
Cross-listed as AGE 559, PSY 559 and SOC 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts & Sciences and Engineering. Course includes diversity content. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

SCWK 571. Contemporary Issues and Perspectives: LGBTQ 3 credit hours
General education advanced issues and perspectives course. Cross-listed as WOMS 571. Explores contemporary issues within the lesbian, gay, bisexual, transgender and queer communities. Explores personal attitudes regarding the social context for LGBTQ persons as well as other issues which have emerged as matters of concern and celebration with LGBTQ individuals and communities. Empowerment principles are employed and used to highlight a positive and affirming framework of the LGBTQ community. Students acquire basic skills in understanding issues of diversity and other contemporary conditions of life and culture. Course includes diversity content.

SCWK 572. Social Work Practice with Families of Diverse Cultures 3 credit hours
Designed to introduce students to the global context of working with families. Provides students with a working knowledge of the elements of diversity when working with families (i.e. families where a grandparent(s) is raising their grandchildren). Course enhances students' knowledge, skills and ethics to contribute to more effective work with families in general. Course includes diversity content.

SCWK 590. Domestic Violence 3 credit hours
Cross-listed as WOMS 580J, CJ 381V and CJ 783F. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. Course includes diversity content.

SCWK 591. Sexual Assault Issues 1 credit hour
Cross-listed as WOMS 591. Explores the cultural myths and stereotypes about sexual assault, the legal system, methods of self-protection, community resources providing help for victims, and other related issues. Primary focus is on education to not only prevent, but eradicate sexual assault. Course includes diversity content. Repeatable for credit.

SCWK 610. Topics In Social Work 1-3 credit hours
Selected topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable. Prerequisite: instructor's or program consent.

SCWK 611. Special Topics in Social Work 1-3 credit hours
Special topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners, and area service institutions. Repeatable. Prerequisite: instructor's or program consent.

SCWK 611K. Social Work & Entrepreneurship 1-3 credit hours
Introductive course seeks to expand student awareness about the role of social workers as entrepreneurs within the nonprofit and for-profit environments. Examines nonprofit practices of economic empowerment and nonprofit enterprise. Presents opportunities for the social work profession to engage in entrepreneurial practices, including business plan development and grant writing. The contemporary landscape of social entrepreneurship & innovation is covered where new business models are focusing on social responsibilities.

SCWK 611Q. Social Work in Sports 3 credit hours
Explores the role of social work practice in serving the holistic needs of an athlete while understanding their involvement in the culture of sport. Explores the vulnerabilities and resiliencies of individuals who participate in youth, secondary, collegiate and professional sports. Provides a foundation for professionals interested in social work practice in sporting environments and begins to prepare social workers to assist athletes at all levels and in various settings.

SCWK 611R. Hip Hop & Social Justice 3 credit hours
Helps students move beyond the traditional classroom pedagogy and experience an inclusive and culturally competent approach to learning, synthesizing, and ultimately engaging in action. Critical evaluation occurs under the broad Hip Hop umbrella and involve music, literature, speech/language, culture, politics, stories and experiences as modes of expression. Ultimately creates an understanding of Hip Hop as a world view, a culture, and a part of the story of diversity.
SCWK 611S. Understanding Contemporary State Insurance Resources 1 credit hour
Designed to introduce students to Medicaid in Kansas. Specific programs are defined and eligibility criteria presented. Current programs offering services to persons with physical disabilities, intellectual and developmental disabilities, autism, etc. are discussed. In addition, the course delves into ways current programs and services are impacted by a variety of factors. Participants are introduced to tools to prepare them in roles where they may assist consumers with Medicaid application completion, grievance/appeal processes as well as accessing services for eligible clients. Other areas of study include: a comparison of Medicare and Medicaid, an overview of client money obligations, value-added service options, and nursing home care/alternatives.

SCWK 700. Foundations of Generalist Practice I 3 credit hours
Provides foundation content in the knowledge and skills for empowerment-based generalist social work practice with individuals, families, groups, organizations, and communities. Includes professional role development, communication and interviewing theory, skill development in social work assessment, intervention and evaluation methods. Prerequisite: degree admission to MSW program. Corequisite: SCWK 720.

SCWK 702. Foundations of Generalist Practice II 3 credit hours
Provides continued social work practice foundation content emphasizing developing generalist knowledge and skill at the group, organizational, community and societal levels. Emphasizes material on group process and organizational and community leadership in the development of a problem-solving model for work with systems of all sizes. Prerequisites: SCWK 700, degree admission to MSW program. Corequisite: SCWK 721.

SCWK 710. Micro Human Behavior and the Social Environment 3 credit hours
Provides theories and knowledge of human bio-psycho-social development and functioning of individuals and families, and of the transaction between individuals and families and their environment. Presents theoretical perspectives on development over the life span and family functioning. Explores areas of universality and differences across gender, race, ethnicity, class, physical and mental ability, and sexual orientation. Prerequisite: degree admission to MSW program. Corequisite: SCWK 717.

SCWK 712. Macro Human Behavior and the Social Environment 3 credit hours
Provides theories and content on organizational and community structure, dynamics and change, social movements, large groups and structural oppression, and provides a theory base for the contextualization of social work practice within diverse environments and macro systems. Emphasizes understanding the needs of minority communities and understanding change and empowerment strategies which further social justice in communities and organizations. Prerequisites: SCWK 710, degree admission to MSW program. Corequisite: SCWK 751.

SCWK 717. Policy I: Social Welfare and Analysis 3 credit hours
Surveys social welfare institutions, emphasizing the strengths and weaknesses of programs within the context of the social problems they address. The comparison of these structures and provisions enables the development and use of frameworks for analyzing social policies and evaluating programs in light of the mission of the social work profession, the principles of social and economic justice, and the historical, economic and political factors which impinge on policy. Content on the effects of policy and social work practice includes the uses of professional roles in shaping the processes of policy formulation in agency and governmental arenas. Prerequisite: degree admission to the MSW program. Corequisite: SCWK 710.

SCWK 720. Field Practicum I 4 credit hours
Placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social service agency and its role in the community service network. Corequisite: SCWK 700.

SCWK 721. Field Practicum II 4 credit hours
Requires placement in community social service agencies for supervised periods of observation and direct service assignments emphasizing development of basic practice knowledge and skills. Promotes an understanding of the social service agency and its role in the community service network. Corequisite: SCWK 702.

SCWK 730. Graduate Topics in Social Work 1-3 credit hours
Specialized instruction using a variable format in a social work relevant subject. Repeatable.

SCWK 731. Social Work & The Law 3 credit hours
Students develop an integrated, advanced generalist framework for interdisciplinary, advanced generalist practice within a legal setting. Students develop a basic knowledge of the law, the roles social workers play within the legal system, and the issue of crime and social justice with respect to race and ethnicity. Students develop an understanding of how the law shapes and regulates social work practice and the actions of social workers and their clients alike. As legal and social problems are often interdependent, students develop skill in communicating with attorneys to enhance their effectiveness in resolving clients’ problems.

SCWK 750. Social Work Workshops 2-5 credit hours
Selected topics in practice, policy, research and human behavior in the social environment within a selected field of social welfare. Covers specific topics identified by the program in consultation with majors, groups of community practitioners and area service institutions. Repeatable for up to a total of 6 hours of credit.

SCWK 751. Fundamentals of Social Work Research 3 credit hours
Introduces students to the components of quantitative and qualitative research methods and describes how research is designed to conduct studies which seek to improve social work practice. Introduces the basic concepts of the social work research process as well as the methods that are employed. Students develop a framework for critically evaluating (1) methods employed in current social work research, and (2) potential benefits of applying these research findings to social work practice. Prerequisite: degree admission to the MSW program. Corequisite: SCWK 712.

SCWK 760. Advanced Generalist Practice Seminar I 1 credit hour
Builds on the graduate social work student’s knowledge, experience and skills by integrating social work theory, values, ethics, methodology and literature. It is based on the generalist perspective and prepares students for the advanced generalist practice curriculum. This course is a prerequisite to all 800-level MSW core courses and must be completed in the summer before beginning the advanced generalist 800-level courses. Prerequisite: degree admission to the MSW program.

Sociology (SOC)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

SOC 111. Introduction to Sociology 3 credit hours
General education introductory course. Introduces basic concepts, propositions and theoretical approaches of sociology, including
elementary methods of studying social phenomena. The basic course for students who intend to take additional courses in sociology.

**SOC 306. Introduction to Gender Studies  3 credit hours**

*General education advanced further study course.* Cross-listed as WOMS 306. Serves as an introduction to the sociology of gender. Examines how gender is socially constructed through culture, everyday interactions, the media, and institutions such as the family, education, and work. Considers the consequences of gender for relationships, sexuality, economic opportunity, and well-being, with a goal of connecting theory and research on gender to personal experiences. Examines how gender intersects with other forms of social inequality, including race, social class, and sexual orientation. *Course includes diversity content.*

**SOC 307. Romantic Relations in a Changing Society  3 credit hours**

Romantic relationships are studied from the perspective that rapid changes in society can and do affect what we experience as romance. Technology, aging, urbanization, the Internet, the emancipation of women, cohabitation, divorce and later marriage are social variables that impact romantic relations. Examines such subjects with an eye to contemporary research on the topics.

**SOC 308. Relationship Problems  3 credit hours**

Looks at different relationship types and the common problems found in such relationships. Course has practical information about how to avoid the pitfalls of close relationships. Students are exposed to romantic relationships, friendships, family and co-worker relationship types and look at how these relationships are affected by such variables as gender, power, conflict, communication and boundary problems.

**SOC 312. Introduction to Social Research  3 credit hours**

Provides students with a general understanding of the core concepts and techniques used in designing and executing a social research project. Special emphasis is given to the major data collection techniques commonly used by sociologists. Prerequisite: SOC 111.

**SOC 315. Marriage & Families  3 credit hours**

*General education advanced further study course.* Aids students in the acquisition of a sociological perspective of relationship processes as they exist in the United States today. Explores dating relationships, mate selection, the transition to parenthood, marital and family interaction, communication and other issues relating to families over the life course. Prerequisite: SOC 111.

**SOC 316. Men and Masculinities  3 credit hours**

*General education advanced issues and perspectives course.* Cross-listed as WOMS 316. Presents the sociological perspective on contemporary masculinities. Students are exposed to developmental changes in masculinity across the life course, and such topics as: masculine socialization, race/ethnicity variations, work, relationships, sexualities, media, family and the men’s movement. *Course includes diversity content.*

**SOC 320. Contemporary Social Problems  3 credit hours**

*General education advanced further study course.* Examines the theoretical and methodological frameworks used to analyze contemporary social problems. Emphasis is placed on examining the complex interrelationship among specific social problems and on development of critical-thinking skills necessary to analyze political and social policy debates. Prerequisite: SOC 111.

**SOC 322. Deviant Behavior  3 credit hours**

*General education advanced further study course.* The structure, dynamics and etiology of those behavior systems that are integrated around systematic violations of the control norms. Presents and evaluates competing theories within the context of the assumption that humans are a social product. Prerequisite: SOC 111.

**SOC 325. Parenting  3 credit hours**

*General education advanced further study course.* Examines the role of parenting in American society from a number of different perspectives. Focuses on the major developmental changes facing couples as they move through the family life cycle. Covers the decision to have children, remaining childless, the transition into parenthood, parent-infant relationships, parents and school-age children, and the transition from active parenthood. Also includes single parents, divorce, step-parenting and dual-career parents. Discusses several different parenting techniques and styles as well.

**SOC 326. Sociology of Race & Ethnicity  3 credit hours**

*General education advanced issues and perspectives course.* Examines the overlapping concepts of culture, race and ethnicity from a sociological perspective in order to foster an understanding of race as both a category of social organization and social stratification among ethnic groups that make up American culture today. Course unpacks the intersecting contexts in which race relations are socially constructed and regulated at the micro and macro levels. Controversial topics, such as affirmative action, as well as theories of discrimination, and resistance strategies are discussed and analyzed. *Course includes diversity content.* Prerequisite: SOC 111.

**SOC 330. Social Inequality  3 credit hours**

*General education advanced further study course.* An analysis of class, status and inequality in various societies especially in the United States. Also includes the relationship of social inequality to various social institutions. *Course includes diversity content.* Prerequisite: SOC 111.

**SOC 336. Work In Modern Society  3 credit hours**

*General education advanced issues and perspectives course.* Broad overview of work in the modern economy. Examines the historical development of industrial-based capitalism, both the organizational-level changes and relations between management and labor. Also examines from a sociological perspective industrial and occupational level data focusing on changes in work environments, occupational and industrial opportunities, demographics of work occupants, and changes in compensation and work status.

**SOC 337. Young Women’s Health  3 credit hours**

*General education advanced further study course.* Examines topics in young women’s health in the United States. Explores the intersections of physical, emotional, social, economic, intellectual and spiritual health. Based on a developmental approach, it traces the underpinnings of health from childhood to adolescence and young adulthood. Students leave this class with the knowledge to enhance their own health and well-being. Prerequisite: SOC 111.

**SOC 338. Health & Lifestyle  3 credit hours**

*General education advanced further study course.* Examines the component dimensions of health and the societal-level factors and lifestyle choices that influence health across the life span. Prerequisite: SOC 111.

**SOC 346. Sociology of Globalization  3 credit hours**

*General education advanced issues and perspectives course.* Critically examines the global integration of markets, or “globalization”. Identifies and explores social processes and relations surrounding rapidly growing international flows of people, goods, services, information and assets. Identifies and explores social issues relating to political, cultural and economic causes and effects of globalization. Topics include trade agreements such as NAFTA, international institutions such as the International Monetary Foundation and the World Bank, the global restructuring of workplaces and jobs, the
globalization of American culture, effects of globalization on the natural environment, and the various types of responses to globalization by individuals, interest groups and governments. Course includes diversity content. Prerequisite: SOC 111.

SOC 350. Social Interaction 3 credit hours
General education advanced further study course. Studies the effect groups have on individuals. Primary focus on the symbolic interactionist perspective in sociology. The goal is for students to understand how social interaction influences their daily activities. Includes the meaning and importance of the symbol, the nature and development of self, social roles and their influence on individuals, and the social construction of society. Prerequisite: SOC 111.

SOC 399AA. Social Madness (The Good, the Bad & the Ugly) 3 credit hours
Provides an overview of the social dynamics and phenomena of the internet and the social world. Provides students with an understanding of the cultural and social principles of a virtual world from the perspective of social sciences and with a focus upon the relationship between social networks and society. Examines the ways in which society is changing due to the introduction and wide spread use of virtual communication. Explores the social changes due to the internet, including new social networks and their impact on social lives including cyber-bullying/stalking, online gaming, online dating/romance, cyber-warfare, virtual crime and the social dynamics of various virtual worlds.

SOC 399AB. Visual Sociology 3 credit hours
Explores the ever growing visual nature of the student’s world and the means in which the visual can represent both an avenue of investigation and a means of applying and displaying sociological concepts. Attention is given to understanding the production and consumption of a variety of modes of visual content (such as film, video, photography, comic books, memes and other emerging visual texts), as students learn common methods of conducting visual sociological study in order to analyze potential social meanings.

SOC 399Q. Sociology of Violence 3 credit hours
Designed to explore the question, what is violence? At first pass, this question may seem straightforward, but it is complex and requires a sociological imagination to see the interpersonal, institutional and structural factors at play in any violent situation or event. Moreover, the very nature of what it means to be violent is open to debate. Class is designed to help students engage in essential debates and discussion about the nature of violence and its social causes and consequences. Course includes necessary. Graded Cr/NCr. Prerequisite: instructor's consent.

SOC 399R. LOVE 3 credit hours
Examines some of the cultural, structural and theoretical perspectives of love and relationships. Looks at a subject taken for granted, but not understood — that love is both a physiological state and a socially constructed experience. Course is designed to explore whether experiences of love are socially shaped and to help the student navigate the structural and cultural factors that shape love. Explore love and love and a fundamental part of life.

SOC 399V. Social Inequalities in Health 3 credit hours
Explores the various social determinants and forces that structure health.

SOC 399W. Sports Violence and Deviance 3 credit hours
Sport, as a cultural institution, has many far-reaching effects on many demographic groups. With the high-profile nature of modern sport, increased amounts of media attention have highlighted not only individual acts of sport deviance or violence, but also the role of groups, organizations, and communities. Class exposes students to various explanations for sport deviance and violence in hopes of arms them with the conceptual tools necessary for not only understanding or responding to incidents of sport deviance, but also identifying mechanisms to decrease of eliminate sport deviance. An emphasis on explanations of sport deviance or violence via theoretical description helps students develop complicated answers regarding complicated questions of how sport deviance occurs.

SOC 399X. Media & Society 3 credit hours
Survey course is designed to increase student awareness and general understanding of the relationship between mass media and society. By exploring the history of the development of media industry from a sociological perspective, students are encouraged to examine their own reflexivity (personal world view) within the influence of a society that is immersed “from cradle to grave” in media. As students examine the social, legal, ethical and political implications of the relationship between mass media and society through readings, lectures, films, group discussions and activities, they expand their knowledge and achieve measurable outcomes. Course is designed to be applicable to real world issues and should serve as a general survey course of interest for students in a variety of fields: sociology, communication, psychology, women’s studies, anthropology, social work, education, business and administration, criminal justice and many more.

SOC 399Y. Social Perspectives on Intimate Partner Violence 3 credit hours
Examines the social ecology of intimate partner violence including interpersonal, structural, and cultural perspectives. Focuses on the dynamics of violence (verbal, physical, sexual) within romantic relationships. Historical views, policy directions, health outcomes, gender dynamics, and prevention initiatives are explored through a combination of lecture, films, personal reflection and applied learning activities.

SOC 399Z. Sociology of Sexualities 3 credit hours
Encourages students to use a sociological perspective to view all areas of sexuality. A sociological perspective of sexuality examines how sexual desires, identities, relationships, and practices are socially and culturally constructed and enforced. Course works to dispel myths about sexuality and uncovers the complexity of sexuality. Investigates cultural variation in sexual practices and understandings of sexuality and explores how cultural values and beliefs about sexuality shape individual desires, relationships and well-being. Explores how sexuality influences and is influenced by other identities, including race and ethnicity, gender, socioeconomic status, age, and religion. Finally, identifies how “normative” sexual identities are enforced in schools, families, workplaces and in the media.

SOC 405. Sociology of Aging 3 credit hours
General education advanced further study course. Cross-listed as AGE 405. Analyzes the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: SOC 111.

SOC 481. Cooperative Education in Sociology 1-4 credit hours
Provides the student with practical experience, under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty sponsor are necessary. Graded Cr/NCr. Prerequisite: instructor's consent.
Course includes diversity content. Prerequisite: SOC 111.

SOC 539. Juvenile Delinquency 3 credit hours
General education advanced further study course. The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: SOC 111.

SOC 540. Criminology 3 credit hours
The extent and nature of criminal behavior and societal reactions to it. Course includes diversity content. Prerequisite: SOC 111.

SOC 543. Aging & Public Policy 3 credit hours
Cross-listed as AGE 543. Seminar-style course explores the impact of an aging population on social institutions, covers the history of American aging policies, the organization and financing of health care for the elderly, and discusses policy analysis as an evaluation tool for comparing public approaches to responding to the needs of an increasingly diverse aging population. Considers the process of policy formation, identifies key players and interest groups, and contrasts political ideologies regarding federal, state and private responsibilities for older people. The course emphasizes Social Security, the Older Americans Act, Medicare and Medicaid as policy examples. Also looks at the potential contributions of the older population to society (volunteer services, provision of family care, etc.) as affecting and affected by policy. Course includes diversity content. Prerequisite: SOC 111 or AGE 100 or junior standing.

SOC 545. Sociological Theory 3 credit hours
A comprehensive survey of classical sociological theory. Emphasis on theories relevant to the development of sociology. Prerequisite: 9 hours of sociology.

SOC 559. Successful Aging: Theory, Research & Practice 3 credit hours
Cross-listed as AGE 559, PSY 559, and SCWK 559. Reviews current interventions which promote successful aging. Theoretical bases of this work in biomedical and life span/developmental psychology are featured. Intended for students in the College of Health Professions, Liberal Arts & Sciences and Engineering. Course includes diversity content. Prerequisite: AGE 100, or PSY 111, or SCWK 201, or SOC 111.

SOC 600. Selected Topics in Sociology 3 credit hours
Study in a specialized area of sociology emphasizing student research projects. Includes deviant behavior, political sociology and the family. Repeatable for a maximum of 6 hours credit. Prerequisites: SOC 111, instructor's consent, and substantive area course.

SOC 651. Directed Research 1-3 credit hours
Gives the student further research skills in an area of special interest. All students are under the direction of a member of the graduate faculty who guides them in developing research skills. Prerequisites: SOC 512 or equivalent and instructor's consent.
SOC 670. Independent Reading  1-3 credit hours
For the advanced student capable of doing independent work in an area of special interest. Prerequisites: 15 hours of sociology and instructor's consent.

SOC 750. Sociology Workshop  1-3 credit hours
Provides specialized instruction using a variable format in a sociologically relevant subject.

SOC 781. Cooperative Education  1-4 credit hours
Provides practical experience, under academic supervision, that complements the student's academic program. Consultation with, and approval by, an appropriate faculty advisor are necessary. With advisor approval, up to 4 hours of cooperative education may count toward graduate degree requirements. Graded Cr/NCr.

Spanish (SPAN)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

SPAN 111. Elementary Spanish I  5 credit hours
Students develop listening, speaking, reading and writing skills in the target language, and gain awareness of both the structure of the Spanish language and of how language is used to create meaning within a range of social contexts. Requires work within the classroom, daily computer-based assignments, and reading and writing activities to be completed at home. Intended for students with no previous instruction in Spanish. Anyone with previous instruction must take the placement exam and will be admitted to 111 only if the placement score does not qualify the student for SPAN 112.

SPAN 112. Elementary Spanish II  5 credit hours
Students develop listening, speaking, reading and writing skills in the target language, and gain awareness of both the structure of the Spanish language and of how language is used to create meaning within a range of social contexts. Requires work within the classroom, daily computer-based assignments, and reading and writing activities to be completed at home. Prerequisite: SPAN 111 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 150. Workshop in Spanish  2-4 credit hours
Repeatable for credit.

SPAN 210. Intermediate Spanish  5 credit hours
General education introductory course. Students develop listening, speaking, reading and writing skills in the target language, and gain awareness of both the structure of the Spanish language and of how language is used to create meaning within a range of social contexts. Requires work within the classroom, daily computer-based assignments, and reading and writing activities to be completed at home. Prerequisite: SPAN 112 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 215. Spanish Study Abroad  1-3 credit hours
Transfer of credit for a Spanish-speaking university or study abroad program in (a) grammar, (b) conversation, (c) reading. Course includes diversity content. Not repeatable for credit. Graded Cr/NCr.

SPAN 220. Intermediate Spanish Grammar and Composition  3 credit hours
Review of all major tenses in Spanish and the three moods (indicative, subjunctive, imperative); in-depth exploration of structural elements of the language including pronouns, adjectives, adverbs, prepositions and comparisons; special emphasis on written Spanish through composition writing. As grammar review, this course differs in approach and pace from SPAN 111-210. Prerequisite: SPAN 210 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 220H. Intermediate Spanish Grammar and Composition - Honors  3 credit hours
Review of all major tenses in Spanish and the three moods (indicative, subjunctive, imperative); in-depth exploration of structural elements of the language including pronouns, adjectives, adverbs, prepositions and comparisons; special emphasis on written Spanish through composition writing. As grammar review, this course differs in approach and pace from SPAN 111-210. Honors section. Prerequisite: SPAN 210 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 221. Spanish Grammar and Composition for Heritage Speakers  3 credit hours
Focuses on writing skills, spelling and selected grammar points. For students who grew up speaking Spanish at home but have not studied the language formally, and students who have had extensive experience in an immersion context. Course contains diversity content. Prerequisites: self-identification and qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 223. Selected Spanish Readings  3 credit hours
General education advanced further study course. Intensive reading of Latin-American and Spanish literary works. Also includes outside readings and reports. Course satisfies the LAS literature requirement. Prerequisite: SPAN 210, or three units of high school Spanish, or departmental consent.

SPAN 223H. Selected Spanish Readings - Honors  3 credit hours
General education advanced further study course. Intensive reading of Latin-American and Spanish literary works. Also includes outside readings and reports. Course satisfies the LAS literature requirement. Honors section. Prerequisite: SPAN 210, or three units of high school Spanish, or departmental consent.

SPAN 300. Intermediate Spanish Readings  3 credit hours
General education advanced further study course. Intensive reading and analysis of Spanish literary works of all periods. Course satisfies the LAS literature requirement. Prerequisite: SPAN 223 or departmental consent.

SPAN 300H. Intermediate Spanish Readings - Honors  3 credit hours
General education advanced further study course. Intensive reading and analysis of Spanish literary works of all periods. Course satisfies the LAS literature requirement. Honors section. Prerequisite: SPAN 223 or departmental consent.

SPAN 325. Intermediate Spanish Conversation  3 credit hours
Develops aural and oral proficiency through listening, vocabulary building, culturally appropriate communication strategies and pronunciation practice in an immersion environment. Prerequisite: SPAN 210 or qualifying score on departmental placement exam (score remains valid one year from date of exam).

SPAN 398. Travel Seminar in Spanish  1-4 credit hours
An interdisciplinary travel seminar that allows a student to gain credit for the study of one of the following: culture, art, literature, architecture, politics, society, science and economics, while visiting historic places of interest. Prerequisite: departmental consent.

SPAN 481. Cooperative Education: Spanish  1-4 credit hours
Provides a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs formulated in consultation with, and approved by, appropriate
faculty sponsors. Repeatable for credit. Graded Cr/NCr. Prerequisite: SPAN 220 or departmental consent.

SPAN 481N. Internship 1-4 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

SPAN 505. Spanish Phonetics 3 credit hours
Cross-listed as LING 505C. Includes articulatory phonetics, phonemics, sound/symbol correspondences, dialectal and stylistic variations. Required for future Spanish teachers. Prerequisite: any 200-level course or departmental consent.

SPAN 515A. Major Topics in Spanish 1-4 credit hours
Repeatable for credit. Prerequisite: departmental consent.

SPAN 515G. Spanish in the U.S. 3 credit hours
Exploration of the structural and social aspects of Spanish in the United States. Examines the history and social context of the use of Spanish in the U.S. and addresses the various Spanish-speaking communities that currently exist here. Studies the Spanish language as it is spoken in the U.S., including phenomena that result from the contact between Spanish and English and dialectal variation. Investigates the social factors that affect language structure and use, and the role of language in the social interactions of U.S. Spanish-speakers. Covers Spanish in education, in the media and in other aspects of public life in the U.S. Taught in Spanish. Prerequisite: SPAN 526 or instructor's consent.

SPAN 520. Literature in Film 3 credit hours
Spanish or Latin American literature and its representation in film. Repeatable for credit. Prerequisite: SPAN 300.

SPAN 525. Advanced Spanish Conversation 3 credit hours
Provides students the opportunity to further develop aural and oral proficiency through listening, vocabulary building, culturally appropriate communication strategies, skits, presentations and pronunciation practice in an immersion environment. Prerequisite: SPAN 325 or departmental consent.

SPAN 526. Advanced Spanish Grammar and Composition 3 credit hours
Prerequisite: SPAN 220 or 221 or departmental consent.

SPAN 531. Survey of Spanish Literature 3 credit hours
Main currents of Spanish literature from 1700 to the present. Prerequisite: SPAN 300 or departmental consent.

SPAN 532. Survey of Spanish Literature 3 credit hours
Spanish literature from the beginning to 1700. Prerequisite: SPAN 300 or departmental consent.

SPAN 534. Contemporary Spanish Theatre 2-3 credit hours
Prerequisite: SPAN 300 or departmental consent.

SPAN 536. Contemporary Spanish Novel 3 credit hours
Prerequisite: SPAN 300 or departmental consent.

SPAN 540. Contemporary Spanish Literature in English Translation 3 credit hours
Content may vary from semester to semester, including Spanish and/or Latin-American literature. No knowledge of a foreign language is necessary. May be used to satisfy the general education literature requirement and may count toward a Spanish major or minor if readings and papers are done in Spanish and prerequisite of SPAN 300 is met. Repeatable for credit.

SPAN 546. Spanish Language Learning 3 credit hours
Introduction to language learning from an applied linguistics perspective: the processes of first and second language acquisition, elements of Spanish grammar that are often difficult for English speakers, and social aspects of language learning. Appropriate for advanced undergraduate students and graduate students. Taught in Spanish. Course includes diversity content. Prerequisite: SPAN 526.

SPAN 547. Spanish in the U.S. 3 credit hours
Exploration of the structural and social aspects of Spanish in the United States. Examines the history and social context of the use of Spanish in the U.S. as well as dialectical and contact phenomena in U.S. Spanish. Also covers Spanish in education, in the media and in other aspects of public life in the U.S. Appropriate for advanced undergraduate students and graduate students. Taught in Spanish. Course includes diversity content. Prerequisite: SPAN 526 or departmental consent.

SPAN 552. Business Spanish 3 credit hours
Provides the opportunity to learn and practice commercial correspondence, business vocabulary, translation and interpretation of business texts. Prerequisite: SPAN 526.

SPAN 555. Principles of Translation and Interpreting 3 credit hours
For students wishing to learn skills and techniques of translation and interpreting in addition to developing vocabulary in different domains of professional Spanish. Course combines readings, discussions and applied practice/hands-on activities. Prerequisite with concurrency: SPAN 526 or departmental consent.

SPAN 558. Advanced Translation and Interpreting 3 credit hours
Further study of translation and interpreting of different types of texts for the professional world. Prerequisites: SPAN 526, 557; or departmental consent.

SPAN 620. Survey of Latin-American Literature 3 credit hours
Survey of Latin-American literature from pre-Columbian times through the building of new nations, and to the rise of Modernismo at the turn of the 20th century. Prerequisite: SPAN 300 or departmental consent.

SPAN 621. Survey of Contemporary Latin-American Literature 2-3 credit hours
Provides students with a chronological and thematic approach to the main currents of Latin-American literature in the 20th and 21st centuries. Provides a critical presentation of major realist, naturalist, avant-garde, boom and postboom authors. Prerequisite: SPAN 300 or departmental consent.

SPAN 622. Special Studies in Spanish 1-4 credit hours
Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: instructor's consent.

SPAN 623. Seminar In Spanish 2-3 credit hours
Seminar in Spanish literature, language or civilization. Repeatable for credit. Prerequisite: SPAN 300.

SPAN 623B. Seminar in Spanish and Latin-American Literature 1-5 credit hours
Studies a selection of Latin-American cultural productions (literature and film) to answer two questions: How do criticism, fatality and heroism interrelate with Latin American culture? What can this threefold relationship tell us about the cultural development of Latin America? Latin-American cultural productions are centered in representing a dichotomy; on the one hand, romantic and erotic instincts related to sexual appetites and, on the other, thematic digressional, and chaotic energies — pathological desire — that constantly challenge the utopic integration of Latin-American nations.
SPAN 623. Seminar in Spanish-American Culture  1-5 credit hours
Special studies in Spanish and Latin-American culture and civilization. For graduate/undergraduate credit. Given on a rotating basis. Repeatable for credit. Prerequisite: departmental consent.

SPAN 624. Seminar in Latin-American Literature or Culture  3 credit hours
May focus on a literary genre, historic or artistic period, main historic figure or author, region or topic, including transnational or transatlantic phenomena. Repeatable for credit. Prerequisite: SPAN 300 or departmental consent.

SPAN 625. Contemporary Latin-American Novel  3 credit hours
Prerequisite: SPAN 300 or departmental consent.

SPAN 626. Spanish Civilization  3 credit hours
Intensive study of Spanish culture, including historical and geographical factors in its development and its contributions to world civilization. Pre- or corequisite: SPAN 300 or departmental consent.

SPAN 627. Latin-American Civilization  3 credit hours
Intensive study of Latin-American culture, including the historical and geographical factors of its development and its contributions to world civilization. Pre- or corequisite: SPAN 300 or departmental consent.

SPAN 631. Latin-American Short Story  3 credit hours
Study of the main writers in contemporary Latin-American literature. Prerequisite: SPAN 300 or departmental consent.

SPAN 635. Introduction to Romance Linguistics  1-3 credit hours
Cross-listed as FREN 635 and LING 635. Provides a contrastive examination of the phonology, morphology and syntax of the major contemporary Romance languages (French, Spanish, Italian, Portuguese, Catalan and Romanian). Introduces students to the sound and writing system and basic grammar of Latin, and contrasts the phonological and grammatical systems of the contemporary Romance languages (French and Spanish in particular) with those of Latin. It compares specific features of the modern Romance languages synchronically (i.e., apart from Latin) as well. Students are advised to have a solid grounding in at least one Romance language (preferably French or Spanish) and a familiarity with at least one other (French, Spanish, Latin, Italian or Portuguese). Prerequisite: departmental or instructor's consent.

SPAN 640. Mexico: Its People and Culture  3 credit hours
Study of the cultural development of Mexico, exploring the legacy of ancient cultures and the Spanish encounter in areas such as literature, the arts, music and film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 650. South America: Its People and Cultures  3 credit hours
Study of the cultural development of South America, exploring the legacy of Indian cultures and the Spanish encounter in areas such as literature, the arts, music and the film industry. Prerequisite: SPAN 300 or departmental consent.

SPAN 726. Spanish Grammar and Stylistics  3 credit hours
Intensive study of advanced grammar and stylistic usage. Prerequisite: SPAN 526.

SPAN 750. Workshop in Spanish  2-4 credit hours
Repeatable for credit.

SPAN 750B. Pedagogy  1 credit hour
Presentation and practice with the PACE model: a story-based approach to meaning and form in foreign language instruction.

Sport Management (SMGT)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

SMGT 112. Introduction to Sport Management  3 credit hours
Introduction to the discipline of sport management and its vast array of career opportunities. Successful management is required in all segments of the sport industry whether professional or amateur, private or public, school-related or club, community or national, and at all levels of competition.

SMGT 210. Practicum in Sport Management  3 credit hours
Integrates coursework with planned and supervised professional experiences for a total of at least 160 hours. Prerequisite: SMGT 112.

SMGT 300. Technology in Sport Management  3 credit hours
Students gain a greater appreciation for the applications of current technology in the area of sport management, including but not limited to: the fundamentals of computers and their use, the application of commercial software to the sport management setting, the ethical issues sport managers face in using computers to conduct research and work with various social media platforms in sport settings.

SMGT 426. Sport Public Relations  3 credit hours
Focuses on the application of public relations principles in a sport-related setting. Significant attention to media relations with specific topics including media guides and publications, handling statistics and crisis management. Prerequisite: SMGT 112.

SMGT 428. Sport Finance  3 credit hours
Introduces the sport management student to financial challenges, financial statements, financial planning and related issues within sport organizations. Prerequisite: SMGT 112.

SMGT 444. Human Resource in Management in Sport  3 credit hours
Introduction to the administration of sport in public schools, institutions of higher education, community recreation, and commercial and professional sport organizations. Students learn about the various components of sport administration, and how to apply managerial decision making and leadership theories in an environment of complexity and diversity. Prerequisite: SMGT 112 (or concurrent enrollment).

SMGT 446. Preinternship Seminar  1 credit hour
Provides focused preparation for students regarding internship activities, policies, procedures and experiences. The internship experience is the cumulative learning experience within sport management. Assists students in understanding how to successfully complete and maximize their internship experience. Prerequisites: SMGT 112 and admission to College of Education.

SMGT 447A. Internship Sport Management  3-12 credit hours
Culminating activity for students in sport management. Students spend the equivalent of full-time employment in an appropriate agency for a total of at least 640 hours. Prerequisites: SMGT 446, 90 hours of accumulated course credit, 2.000 GPA overall, advisor's consent.

SMGT 447B. Internship in Sport Management  3-12 credit hours
Second internship experience for students in sport management; takes place in a different setting than SMGT 447A. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 640 hours. Prerequisites: SMGT 447A, 2.000 GPA overall and for major, senior standing in College of Education, advisor's consent.
SMGT 461. Legal Aspects of Sport and Physical Activity I 3 credit hours
Provides students with the knowledge, understanding and application of how the following legal issues influence the sport industry. Specific content addressed includes: the legal system, statutory law, risk management, tort law (negligence and intentional torts), contracts and employment-related issues within the sport industry. A primary objective is to enhance the decision-making and problem-solving ability of each individual student as it pertains to legal issues in sport and physical activity. Prerequisite: SMGT 112.

SMGT 465. Psychology of Sport and Physical Activity 3 credit hours
Explores the observations, descriptions and explanations of various psychological and physiological factors that influence diverse aspects of sport and physical activity.

SMGT 466. Marketing Sport and Physical Activity 3 credit hours
Introduces concepts and tools used to market sport and physical activity. Emphasizes marketing strategies that are applicable to the sport administrator, teacher/coach and exercise professional. Prerequisite: SMGT 112.

SMGT 475. Sport and Physical Activity in American Culture 3 credit hours
A basic understanding of the developments, trends and social processes that explain the widely popular sporting experiences in society today.

SMGT 481. Cooperative Education 1-8 credit hours
Allows students to participate in the cooperative education program. Graded Cr/NCr. Prerequisites: 2.000 GPA and admission to College of Education.

SMGT 511. Selling in the Sport Industry 3 credit hours
Examines both the theory and the practical application of sales and promotions in the sports industry. Students learn a process for sales and use that process in a real-life sales exercise. Students are introduced to methods of sales management. The class conducts sales projects for local sports organizations for practical experience and application of theory.

SMGT 520. Sport Tournament and Event Management 3 credit hours
Examines the processes, methods and practices involved in sport event management, including sport tournaments, sports team events and individual sporting events. Students completing this class should feel prepared to initiate and execute a sport event on their own. Prerequisite: SMGT 112 or graduate standing.

SMGT 525. Sport Facility Management 3 credit hours
Focuses on various aspects of facility management, such as mission development, funding and budget, site selection/planning/design, floor surfaces, risk management, equipment purchase and maintenance, and personnel management. Prerequisite: SMGT 112 or graduate standing.

SMGT 540. Business Analytics in Sport 3 credit hours
Integrates the knowledge base of sport and business as it applies in the practical setting. Prerequisites: 2.000 GPA, junior, senior or graduate standing.

SMGT 545. Sport Governance & Policy 3 credit hours
Discusses the fundamental aspects of management and administration within any sport-related organization. Students are exposed to key industry concepts such as strategic management, ethics and event planning activities, in addition to governance and policy related topics such as scholastic, intercollegiate and amateur sport.

SMGT 547B. Internship in Sport Administration 6-12 credit hours
Second internship experience for students in sport administration; takes place in a different setting than KSS 547A. Students spend the equivalent of full-time employment in the appropriate agency for a total of at least 640 hours. Prerequisites: KSS 547A, 2.500 GPA overall and for major, senior standing in College of Education, advisor's approval.

SMGT 552. Study Abroad in Global Sport Industry 3 credit hours
Introduces students to global sport management principles and provides firsthand experience in international sport events or organizations through a study abroad opportunity. Addresses ethics, marketing, sponsorship, event management, business and financial topics as well as challenges and issues in the global sport industry. Course includes diversity content. Prerequisites: 2.000 GPA, sophomore, junior or senior standing.

SMGT 590. Independent Study 1-3 credit hours
Prerequisite: departmental consent.

SMGT 711. Structuring and Scheduling Sports Tournaments 3 credit hours
The structural design, scheduling processes, and mathematics of sport tournaments, elimination, placement and round robin formats.

SMGT 777. Legal Issues in the Profession II 3 credit hours
Provides students with the knowledge, understanding and application of how the following legal issues influence the sport industry. Specific content includes: agency law, collective bargaining, labor and antitrust law, criminal law, intellectual property rights, product liability and sport governance. In addition to the above content knowledge and application, case studies and class discussions focus on the enhancement of problem-solving skills and prudent managerial decision making.

SMGT 781. Cooperative Education Field Study 1-3 credit hours
Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. May be repeated for credit. A maximum of 3 hours (for nonthesis option) or 6 hours (for thesis option) may count toward the graduate degree. Graded Cr/NCr.

Statistics (STAT)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

STAT 370. Elementary Statistics 3 credit hours
General education introductory course. Surveys elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Prerequisite: MATH 111 with a C or better or equivalent. Students cannot receive credit for both STAT 171 and STAT 370.

STAT 460. Elementary Probability and Mathematical Statistics 3 credit hours
General education advanced further study course. Covers elementary probability concepts, some useful discrete and continuous distributions and mathematical aspects of statistical inference including maximum likelihood estimation, confidence intervals, hypothesis testing and regression. Prerequisite: MATH 243 with a C or better.
STAT 570. Special Topics in Statistics 3 credit hours
Covers topics of interest not otherwise available. Prerequisite: departmental consent.

STAT 571. Statistical Methods I 3 credit hours
*General education advanced further study course.* Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance, and topics in design of experiments. Prerequisite: MATH 243 with a grade point of 2.000 or better, or departmental consent.

STAT 572. Statistical Methods II 3 credit hours
*General education advanced further study course.* Includes probability models, points and interval estimates, statistical tests of hypotheses, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance, and topics in design of experiments. Prerequisite: MATH 243 with a grade point of 2.000 or better, or departmental consent.

STAT 574. Elementary Survey Sampling 3 credit hours
Reviews basic statistical concepts. Covers simple, random, stratified, cluster and systematic sampling, along with a selection of sample size, ratio, estimation and costs. Applications studied include problems from social and natural sciences, business and other disciplines. Prerequisite: any elementary course in statistics, such as STAT 370, SOC 501 or PSY 301 with a grade point of 2.000 or better.

STAT 576. Applied Nonparametric Statistical Methods 3 credit hours
*General education advanced further study course.* Studies assumptions and needs for nonparametric tests, rank tests, and other nonparametric inferential techniques. Applications involve problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary statistics course such as STAT 370, SOC 501 or PSY 301 with a grade point of 2.000 or better.

STAT 701. Matrix Theory 3 credit hours
Studies matrix theory as a tool for studying linear models, analysis of variance, regression analysis, time series, and multivariate analysis. Topics include Eigenvalues and Eigenvectors, matrix factorization and matrix norms, generalized inverses, partitioned matrices, Kronecker product, vec operator, and matrix derivatives, with applications to statistics in each topic and special emphasis on quadratic forms in normal variates. Although some background in statistics is desirable, it is not necessary. Prerequisite: MATH 511 with a grade point of 2.000 or better.

STAT 761. Probability 3 credit hours
A study of axioms of probability, discrete and continuous random variables, expectation, examples of distribution functions, moment generating functions, and sequences of random variables. Prerequisite: MATH 344 with a grade point of 2.000 or better.

STAT 762. Applied Stochastic Processes 3 credit hours
Studies random variables, expectation, limit theorems, Markov chains, and stochastic processes. Prerequisite: STAT 761 or 771 with a grade point of 2.000 or better or departmental consent.

STAT 763. Applied Regression Analysis 3 credit hours
Studies linear, polynomial and multiple regression. Includes applications to business and economics, behavioral and biological sciences, and engineering. Uses computer packages for doing problems. Prerequisites: STAT 571, MATH 344 and 511 with a grade point of 2.000 or better in each, or departmental consent.

STAT 764. Analysis of Variance 3 credit hours
An introduction to experimental design and analysis of data under linear statistical models. Studies single-factor designs, factorial experiments with more than one factor, analysis of covariance, randomized block designs, nested designs, and Latin square designs. Uses computer packages for doing problems. Prerequisites: STAT 571, MATH 344 and 511 with a grade point of 2.000 or better in each, or departmental consent.

STAT 771. Theory of Statistics I 3 credit hours
An examination of stochastic dependence distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, non-parametric tests, and analysis of variance and covariance. Prerequisite: MATH 545 or 547 with a grade point of 2.000 or better, or departmental consent.

STAT 772. Theory of Statistics II 3 credit hours
An examination of stochastic dependence distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, non-parametric tests, and analysis of variance and covariance. Prerequisite: MATH 545 or 547 with a grade point of 2.000 or better, or departmental consent.

STAT 774. Statistical Computing I 3 credit hours
Trains students to use modern statistical software for statistical modeling and writing of technical reports. Examines many of the advanced features of most commercial statistical packages. Students perform complete statistical analyses of real data sets. Prerequisites: STAT 763 and 764, or departmental consent.

STAT 775. Applied Statistical Methods I 3 credit hours
Covers selected topics from time series analysis including basic characteristics of time series, autocorrelation, stationarity, spectral analysis, linear filtering, ARIMA models, Box-Jenkins forecasting and model identification, classification, and pattern recognition. Prerequisite: STAT 763 with a grade point of 2.000 or better, or departmental consent.

STAT 776. Applied Statistical Methods II 3 credit hours
Covers selected topics from multivariate analysis including statistical theory associated with the multivariate normal, Wishart and other related distributions, partial and multiple correlation, principal component analysis, factor analysis, classification and discriminant analysis, cluster analysis, James-Stein estimates, multivariate probability inequalities, majorization and Schur functions. Prerequisite: STAT 764 with a grade point of 2.000 or better, or departmental consent.

**Theatre (THEA)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

THEA 143. The Art of the Theater 3 credit hours
*General education introductory course.* An introduction to the theatre as an art form emphasizing critical appreciation from the viewpoint of the audience.

THEA 180. Theater Practicum 1 credit hour
Practical training in the organization and presentation of plays in the university theatre program. May be organized in the following areas: design and construction of scenery, costumes or properties; the design and execution of stage lighting or makeup; the organization and practice of theatre management; and performance. May be repeated for credit.

THEA 180E. Performing Arts Seminar 1 credit hour
Cross-listed as DANC 180E. An interdisciplinary introduction to the School of Performing Arts. Students study performance, design and production of theatre, music theatre, and dance. SPA freshmen interact and collaborate with each other for greater understanding of performing arts. Students crew one show on the season calendar.
Students also break out into individual program areas for department specific modules when appropriate. Repeatable for credit.

THEA 218. Stage Movement 3 credit hours
Masked characterization, clowning, playing with time and space to create telling theatrical moments. Stage Movement gives the student performer the chance to explore and develop the creative physical spark that launches them into unique theatrical creations.

THEA 221. Oral Interpretation 3 credit hours
General education advanced further study course. Cross-listed as COMM 221. Designed to enhance speaking skills through the performance of original stories and excerpts from literature. Main focus is to aid the student in becoming a compelling storyteller. Class works on the development of an expressive voice and also the development of performance skills such as learning to gesture and express oneself through facial expression. These verbal skills aid the student in becoming a better communicator.

THEA 222. Improving Voice and Diction 3 credit hours
Cross-listed as COMM 222. For students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. Performance oriented, however, the anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction.

THEA 228. Script Analysis 3 credit hours
Develops students' abilities to analyze scripts in television, theatre and film from the point of view of those who face the task of producing them. Focuses on studying and testing practical methods of analysis. Collective analysis and individual projects are part of the coursework.

THEA 241. Improvisation and Theatre Games 3 credit hours
General education advanced further study course. For the beginning student in theatre. Through exercises, analyses and readings, the course contributes to the training of the student actor's imagination, his or her sense of stage presence, and ability to explore basic components of playtexts.

THEA 242. Stagecraft 3 credit hours
Lab arr. Study in making, painting and using scenery for the stage. Practical work on university Main Stage and Second Stage productions. Includes a two-hour lab.

THEA 253. Costuming for the Stage and Film 3 credit hours
Lab arr. Introduces principles of costume design and construction. Touches on all aspects of the design process from conception of ideas to final product on stage or in a film. Includes approaches to rendering the costume design, basic pattern-making, fabric selection and dying. Practical experience with university theatre Main Stage and Second Stage productions. Includes a two-hour lab.

THEA 254. Stage Makeup 2 credit hours
Study and practice of the basic application of stage makeup. Also includes character analysis, anatomy, materials and special makeup techniques and problems.

THEA 260. History of Musical Theatre 3 credit hours
General education introductory course. A survey of the development of musical theatre in America from the late 1880s to present day. Explores the collaboration of composers, directors, choreographers and performers that make this a uniquely American art form.

THEA 272. Stage Management 3 credit hours
Introduces students to the practice of stage management. Students study basic functions and aspects of stage management in preproduction, rehearsal and performance phases. Focuses on practical exercises, specific skills, communication strategies and problem-solving techniques in stage management with emphasis on organization, documentation and dissemination of information. Prerequisites: THEA 244, and sophomore standing or instructor's consent.

THEA 285. Period Styles 3 credit hours
Study of the architecture, interior decor, furnishings and costume of the major historic periods, with an emphasis on application to scenic lighting, properties and costume design.

THEA 300. Drafting for the Theatre 3 credit hours
The fundamentals of drafting for the theatre. Includes drafting equipment, geometry, lettering, symbols, drawings (orthographic, isometric, oblique, sectional) and standard drawings used in theatre floor plans, sections, elevations, working drawings, perspective. Prerequisites: THEA 244, ARTF 145.

THEA 326. Expressive Voice for Stage 3 credit hours
Develops the individual's ability to express thought and emotion on the stage through the effective use of the voice. Uses exercises, drills, and poetic and dramatic readings to improve the quality, flexibility and effectiveness of the speaking voice. Prerequisite: THEA/COMM 222.

THEA 330. Musical Theatre Laboratory 2 credit hours
Cross-listed as MUSP 330. An interdisciplinary course with opportunities for student performers to refine techniques by performing scenes from a variety of musical genres including opera, book musicals and rock musicals. Advanced students gain experience in directing and choreographing under faculty guidance and supervision. Prerequisites: junior or senior musical theatre, dance and voice majors only, and/or permission of the instructors.

THEA 331. Dialect for the Stage 3 credit hours
Familiarizes the student with certain regional American and foreign dialects. Intended to be a practical guide for the student actor who is called upon to reproduce a particular dialect for performance. Prerequisite: THEA/COMM 222.

THEA 342. Advanced Acting 3 credit hours
Continued development of methods established in THEA 243 with additional emphasis on contemporary vocal and movement techniques. Prerequisites: THEA 243 and sophomore standing.

THEA 344. Scene Design I 3 credit hours
Fundamentals of scene design. Emphasizes strong work in perspective rendering, drafting techniques and scale, and playscript and spatial analysis.

THEA 345. Stage Lighting 3 credit hours
Lab arr. Light design and its relation to the production process and other design elements. Emphasizes working knowledge of lighting equipment towards creative implementation. Includes practical work on university theatre Main Stage and Second Stage productions.

THEA 350. Workshops in Theatre 1-4 credit hours
Theatre majors only. Repeatable for credit.

THEA 350P. Production Assistant - Theatre 0 credit hours
Participation course for exceptional theatre students to spend a semester in an appropriate theatrical production setting assisting a faculty member or guest artist. Meets in conjunction with scheduled course times. Course includes diversity content. Theatre majors only. Repeatable. Prerequisite: junior standing and/or departmental consent.
THEA 350R. Rehearsal Assistant - Theatre   0 credit hours
Participation course for exceptional theatre students to spend a semester in an appropriate theatrical rehearsal setting assisting a faculty member or guest artist. Meets in conjunction with scheduled rehearsal times. Course includes diversity content. Theatre majors only. Repeatable. Prerequisite: junior standing and/or departmental consent.

THEA 350T. Teaching Assistant - Theatre   0 credit hours
Participation course for exceptional theatre students to spend a semester in an appropriate theatre course setting assisting a faculty member to hone their teaching skills. Meets in conjunction with assigned course. Course includes diversity content. Theatre majors only. Repeatable. Prerequisite: junior standing or departmental consent.

THEA 357. Costume Design I  3 credit hours
Fundamentals of costume design. Emphasizes the elements and principles of design; figure drawing; and spatial, script and character analysis. Prerequisites: ARTF 145, THEA 253 or instructor’s consent.

THEA 359. Directing I  3 credit hours
Lab. Basic theories and principles of stage directing and problems of producing the play with practical experience gained by use of the project methods. Prerequisites: THEA 243, 244, 272 or departmental consent.

THEA 365. Stage Combat  3 credit hours
Focuses on the most primitive mechanism of survival, physical confrontation, and initiates the student performer into the secrets of creating theatrically safe and dramatically effective fights. Through this introductory exploration of the stage fighting styles of unarmed, swordplay and film fighting, students learn to elevate physical conflict into artistic storytelling. Prior movement course recommended but not required.

THEA 370. Professional Practices for the Performing Artist  3 credit hours
For all performing arts majors. Focuses on business practices in performing arts. Discussions and assignments focus on resumes, websites, reels, marketing, business plans, unions, contracts, portfolios, interviews, taxes, etc. Individual concentration areas are also covered in break-out sessions throughout the course.

THEA 375. Directed Projects in Theater  1-4 credit hours
Independent research or practical and creative projects in the various areas of theatre including performance, design, technical theatre, management and dramatic literature. Repeatable for credit. Prerequisite: departmental consent.

THEA 380. Theater Practicum  1 credit hour
Cross-listed as DANC 360. Practical training in the organization, presentation and technical aspects of production. May be organized in the following areas: design and construction of scenery, costumes, or properties; the design, execution and cuing of stage lighting; stage makeup and sound; design and construction of costumes for dancers; the organization and practice of theatre management; and performance. May be repeated once for credit.

THEA 380E. Musical Theatre Performance  1 credit hour
Cross-listed as DANC 320, THEA 180E. See THEA 180E.

THEA 385. Theatre as a Mirror of Today's America  3 credit hours
General education advanced issues and perspectives course. Explores how contemporary drama reflects the issues and perspectives of different cultures and groups within America, including African-Americans, Asian-Americans, Hispanic-Americans, feminists, gays and lesbians. Examines how today's theatre portrays these groups, how it views their lives in this country and how it reflects their differences, fears, concerns and similarities. Focuses on issues arising because of diversity of culture, nationalities, race, gender, ethnicity, class, age, religion and politics. Course includes diversity content.

THEA 390. Acting for the Camera  3 credit hours
Instruction and practice in the basics of acting for the camera. Assists students in making the transition from the theatre to work in film, TV or the Internet. Introduces students to on-camera performance and addresses the technical requirements of TV and film acting such as playing to the camera, shooting a story out of sequence, different film shots, and other production considerations. Includes on-camera scene work, including audition techniques. Through exercises and scene study, this course familiarizes students with on-camera acting techniques and expands each performer’s range of emotional, physical and vocal expressiveness appropriate for the camera. Prerequisite: Acting I.

THEA 413. Pre Student Teaching Secondary Speech and Theater  2 credit hours
Allows students to spend an extended period of time in an appropriate classroom setting working with a cooperating teacher to plan, implement, and assess instruction aligned with state and/or district standards. Graded S/U. Prerequisites: CI 311, 320, and 321; CESP 334 and 433; and an appropriate ISAM course.

THEA 450. Contemporary Theatre and Drama: Topics  3 credit hours
General education advanced further study course. Investigates the major developments and directions in theatre and drama since WWII. Includes studies in directing, acting, theatre architecture, design and production methods, as well as dramatic literature. Prerequisite: junior standing (60 hours) or above.

THEA 451. Portfolio Review  1 credit hour
Senior level. Helps the technical theatre and design student prepare a formal portfolio in one or a combination of the design areas, a resume and a presentation as an application suitable for either graduate school or future employment. Prerequisite: must be taken in graduating year.

THEA 452. Instructional Strategies, Assessment and Management (ISAM): Secondary Speech & Theatre  3 credit hours
Addresses concepts and skills related to classroom instruction, management, and assessment or adaptations for specific students for secondary education. Prerequisites: THEA 218, 241, 385, or 559.

THEA 453. Student Teaching Seminar: Secondary Speech and Theatre  1 credit hour
Allows secondary students to spend a semester in an appropriate classroom setting working with a cooperating teacher. The student and cooperating teacher, with the approval of the university supervisor, devise a plan for the student teacher to assume full responsibility for the classroom for a designated period of time during the semester. Prerequisites: an appropriate ISAM course, prestudent teaching, CESP 433. Corequisite: appropriate student teaching seminar.

THEA 454. Senior Jury  1 credit hour
For the graduating student in the performance track of the BFA in performing arts-theatre program. Requires a performance of material in recital circumstances. Prerequisite: senior standing.

THEA 455. Student Teaching Secondary Speech and Theatre  11 credit hours
Allows secondary students to spend a semester in an appropriate classroom setting working with a cooperating teacher. The student and cooperating teacher, with the approval of the university supervisor, devise a plan for the student teacher to assume full responsibility for the classroom for a designated period of time during the semester. Prerequisites: an appropriate ISAM course, pre student teaching, CESP 433. Corequisite: appropriate student teaching seminar.
THEA 480. Theatre Internship  3-15 credit hours
Advanced theatre production work as arranged by students in direction, acting, scenery and lighting, costume design and construction, or theatre management with a professional theatre company. Prerequisite: junior standing or departmental consent. Graduate students must take THEA 780. Maximum of 15 credits of internship activity applicable toward graduation.

THEA 481. Cooperative Education  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a professional environment. Repeatable for credit. Graded Cr/NCr. Prerequisite: departmental approval.

THEA 481I. Noncredit Internship  0 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Prerequisite: departmental consent.

THEA 510. Design Project  1 credit hour
Advanced work in the problems of stage lighting design, costume design or scenic design. With the permission and supervision of the appropriate faculty member, the student designs for specific productions for either Main Stage or Experimental Theatre. Repeatable twice for credit if taken in different design areas. Prerequisite: instructor's consent.

THEA 516. Scriptwriting I  3 credit hours
General education advanced further study course. Cross-listed as ENGL 517. The writing of scripts for performance in theatre, film, television and the Internet. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite: instructor's consent.

THEA 517. Scriptwriting II  3 credit hours
General education advanced further study course. Cross-listed as ENGL 518. The writing of scripts for performance in theatre, film, television and the Internet. Emphasizes both verbal and visual aspects of scriptwriting. If possible, the scripts are given in-class readings by actors. Prerequisite: instructor's consent.

THEA 530. Musical Theatre Scene Study  2 credit hours
An interdisciplinary practicum course with opportunities for student performers to refine interdisciplinary techniques by performing scenes from a variety of musical theatre genres including operetta, book musicals and rock musicals. Advanced students may explore opportunities to gain experience in directing and choreographing under faculty guidance and supervision. Prerequisites: junior or senior musical theatre, dance or voice majors only; and/or permission of the instructors.

THEA 544. Advanced Stagecraft  3 credit hours
Lab. arr. Explores advanced construction techniques for the fabrication of stage scenery and stage properties. Such operations may include welding, vacuum forming, carpentry and working with a variety of new materials. Students complete a research project and presentation/demonstration of research findings. Independent projects relating to materials and techniques studied are pursued in arranged labs. Prerequisite: THEA 244.

THEA 546. Scene Painting  3 credit hours
Presented with a lecture demonstration-studio arrangement. Explores various theatre painting materials and techniques enabling the student to develop skill as a scenic artist. Prerequisite: THEA 244.

THEA 555. Senior Project  1 credit hour
Cross-listed as MUSP 555. An interdisciplinary course to showcase the talents of graduating seniors to professional producers, agents and casting directors. Students develop and produce a variety show demonstrating their talents in singing, dancing, acting, directing and choreography. For majors only. Prerequisite: instructor's consent.

THEA 559. Directing II  3 credit hours
Lab. arr. Staging and rehearsal techniques emphasizing the problems of the period and stylized play. Prerequisites: THEA 359 or departmental consent and junior standing.

THEA 590. Theatre: Special Topics  1-3 credit hours
Designed to expand and strengthen the experience of the student academically and professionally. Study of developments in theatre that go beyond, or are related to, courses already offered gives students a much richer preparation for their field of study. Topics include new technology, new materials, contemporary explorations in performance, and in-depth study of production methods.

THEA 610. Directing the Musical  3 credit hours
An interdisciplinary course using interdepartmental expertise (theatre, dance, music) to teach the student how to produce a musical. Prerequisite: instructor's consent.

THEA 621. Advanced Oral Interpretation  3 credit hours
Intensive study and analysis of various forms of literature, the techniques of effective oral communication and the building of the individual or group concert recital. Arranged workshops and festivals. Prerequisites: THEA 221Q and junior standing.

THEA 622. Academic Theatre Practicum  2 credit hours
The investigation and exploration of the theatrical act in the classroom situation within the university community. Reinforces researching, writing, directing and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit.

THEA 623. Theatre History I  3 credit hours
General education advanced further study course. The history of theatrical activity as a social institution and an art form from its beginnings to the 17th century. Includes representative plays, methods of staging and theatrical architecture of various periods.

THEA 624. Theatre History II  3 credit hours
General education advanced further study course. History of theatrical activity as a social institution and an art form from the 17th century to the present. Includes representative plays, methods of staging and theatrical architecture of various periods.

THEA 630. Music Theatre and Opera Audition  3 credit hours
Cross-listed as MUSP 790E. A practicum course which develops techniques and audition repertory singers need to gain professional employment and/or successfully compete for placement in advanced training programs. Also covers the business skills necessary to a professional career, and brings students into contact with professional guest artists who can provide additional insight and contacts. Prerequisite: instructor's consent.

THEA 643. Styles In Acting  3 credit hours
Training in, and development of, the special techniques required for period or stylized plays with special emphasis on Greek, Shakespearean and Restoration styles. Prerequisites: THEA 243, 342, junior standing.

THEA 647. Scene Design II  3 credit hours
Continuation of THEA 344 with more advanced work in designing settings for the stage and including studies in scenographic techniques and exercises in model building. Students design settings for a production having a single set, a production requiring a simultaneous setting and a production using multiple settings. Requires no laboratory work in theatre production. Prerequisites: THEA 244, 344.
THEA 649. Stage Lighting II and Theatre Sound  3 credit hours
Continues the study and application of the theories and techniques of THEA 345, emphasizing advanced concepts of design, and provides an introduction to theatre sound production. Prerequisite: THEA 345.

THEA 651. Scene Study  3 credit hours
The synthesis of all previous acting courses. Studies scenes in depth as preparation for performance. Course goal is the presentation of fully realized characterizations in those scenes studied, integrating the elements of the actor's craft learned in the prerequisite courses. Prerequisites: THEA 643 and junior standing.

THEA 653. History of Costume  3 credit hours
Lab. arr. Historical survey and individual research of dress from ancient Egypt to present day emphasizing social, political, economic and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite: THEA 253 or departmental consent.

THEA 675. Directed Study  1-4 credit hours
Cross-listed as COMM 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent.

THEA 780. Theatre Internship  3-15 credit hours
Advanced theatre production work as arranged by students in directing, acting, scenery and lighting; costume design and construction; or theatre management with a professional theatre company. Work is evaluated by graduate faculty. Total of internship activity applicable toward graduation is 15 hours. Prerequisite: junior standing or departmental consent.

Women's Studies (WOMS)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WOMS 150. Workshop  2 credit hours
Topics vary by semester. Past topics have included assertion training (introductory and advanced) and rape information and prevention. Course includes diversity content.

WOMS 150A. Women and Compassion Fatigue  1 credit hour
High turnover rates in fields associated with caregiving are often associated with “burnout” or compassion fatigue. Course examines factors that contribute to compassion fatigue, how to recognize it, the ways in which it may interfere with effectiveness, and strategies to combat it. Course includes diversity content.

WOMS 150C. Assertion Training for Women  1-3 credit hours
Workshop; teaches women to develop assertion skills. Considers some of the changing roles and values of women in our society today and how these create a need for women to be assertive in their professional and personal choices. Examines barriers that exist to assertive behavior and ways to overcome them. Course includes diversity content. Graded Cr/NCr.

WOMS 150N. Introduction to Domestic Violence  1 credit hour
Introductory course examines historical, personal, social and legal perspectives of domestic violence and intimate partner violence. Explores cultural images and messages related to intimate relationships in the media, and analyzes how those messages influence beliefs about relationships. Looks at the consequences of domestic violence, how the community responds to it, and what resources exist to provide assistance. Course includes diversity content.

WOMS 150O. Sexual Assault Issues  1 credit hour
Introductory course explores cultural myths and stereotypes about rape, law enforcement and legal system issues pertaining to sexual assault and abuse; community resources providing help; and other related issues. These topics are explored through course readings, lecture, class discussion, films and guest discussions. Course includes diversity content.

WOMS 180. Special Topics  1-3 credit hours
Topics vary by semester. Course includes diversity content.

WOMS 180B. Violence Against Women in America  3 credit hours
Course includes diversity content.

WOMS 180D. Introduction to Women's Studies  3 credit hours
Students analyze the varieties of women's experience in contemporary American society, consider how gender relations may be changing, and investigate the historical social, political, economic, and cultural forces that shape lives relative to gender. Feminist thinking within and across academic disciplines frames the exploration of these topics. Students explore relations of inequality organized along lines of race, ethnicity, nationality, class, sexuality, ability, appearance, age, and other categories of difference, in addition to gender. Course includes diversity content.

WOMS 190. Diverse Women in Popular Culture  3 credit hours
General education introductory course. Examines how women of various races, classes and ethnicities are represented in a wide variety of popular media. Encourages the critical analysis of why and how these popular representations are politically and socially significant in shaping society's perceptions of women. Also explores women's popular genres. Course includes diversity content.

WOMS 287. Women in Society: Social Issues  3 credit hours
General education introductory course. Examines women's efforts to claim their identities from historical, legal and social perspectives. Includes recent laws relating to women, contemporary issues (such as rape, day care, working women, the future of marriage), agencies for change, theories of social change, and the relationship of women's rights to human rights. Course includes diversity content.

WOMS 306. Introduction to Gender Studies  3 credit hours
General education advanced further study course. Cross-listed as SOC 306. Serves as an introduction to the sociology of gender. Explores how gender is socially constructed through culture, everyday interactions, the media, and institutions such as the family, education, and work. Considers the consequences of gender for relationships, sexuality, economic opportunity, and well-being, with a goal of connecting theory and research on gender to personal experiences. Examines how gender intersects with other forms of social inequality, including race, social class, and sexual orientation. Course includes diversity content.

WOMS 316. Men and Masculinities  3 credit hours
General education advanced issues and perspectives course. Cross-listed as SOC 316. Presents the sociological perspectives on contemporary masculinities. Students are exposed to developmental changes in masculinity across the life course and such topics as: masculine socialization, race/ethnicity variations, work, relationships, sexualities, media, family and the men's movement. Course includes diversity content.

WOMS 325. Women in the Political System  3 credit hours
Cross-listed as POLS 325. Examines the political process of policy making, using policies of current interest concerning women. Explores the association of societal gender role expectations with existing and proposed public policies that pertain to women's lives. Course includes diversity content. Prerequisite: 6 hours of social science or instructor's consent.

WOMS 330. Women's Personal Narrative  3 credit hours
Cross-listed as ENGL 336. Explores the literary genre of the journal as practiced by both historical and modern women. Examines works by both well-known diarists and little-known notebook keepers. In-class
writing and out-of-class assignments; students are encouraged to do
daily work in a journal of their own. Course includes diversity content.
Prerequisites: ENGL 101, 102.

WOMS 334. Islam 3 credit hours
Cross-listed as REL 334. Introduction to Islam, one of the major world
religions. Looks at how Islamic practices and beliefs affect the lives
of people around the world. Specific attention is paid to the gendered
dimensions of life, what it means to be a Muslim man or woman.
Students have an opportunity to interview women and men from the
Muslim community in Wichita. Course includes diversity content.

WOMS 338. Philosophy of Feminism 3 credit hours
General education advanced further study course. Cross-listed as
PHIL 338. Explores philosophical issues raised by the feminist
movement emphasizing conceptual and ethical questions. Course
includes diversity content.

WOMS 340. Human Sexuality 3 credit hours
Cross-listed as SCWK 340. Provides a forum for information and
discussion on topics relating to physical, psycho-social and cultural
components of human sexuality. Includes female and male sexual
attributes and roles, sexual problems, alternate lifestyles, birth control,
values, sexuality and cultural components of sexuality. Course includes
diversity content.

WOMS 345. Gender, Alcohol and Addictions 3 credit hours
Provides information about women's dependencies and their
relationship to constructions of gender. Examines dependencies on
substances and processes (alcohol, street and prescription drugs, eating
disorders, and dysfunctional relationships) in their social and personal
context. Examines theories of treatment and recovery in relation to
feminist theory and women's roles in codependency. Course includes
diversity content.

WOMS 361. Women and Work 3 credit hours
General education advanced further study course. Examines the image
and reality of women's employment from minimum wage work to
 corporate board rooms, as well as women's unpaid work. It explores the
impact of cultural values, societal arrangements and public policy on
occupations, wages and family life. Course includes diversity content.

WOMS 370. Women in World Religions 3 credit hours
Cross-listed as REL 370. Examines past and present roles and statuses
of women in various religious traditions of the world, e.g., Judaism,
Christianity, Islam, Hinduism, Buddhism, Confucianism and Taoism.
Examines the portrayal of women's roles in various religious and
philosophical texts, and the redefinition of women's roles in the modern
age within the contexts of these belief systems. Course includes
diversity content.

WOMS 380. Special Topics 1-3 credit hours
Focuses on intermediate topics of interest to women's studies. Course
includes diversity content.

WOMS 380A. Women & Eating Disorders 1 credit hour
Course includes diversity content.

WOMS 380AA. Women and Diversity 3 credit hours
Course includes diversity content.

WOMS 380AB. Black Women in America 3 credit hours
Course includes diversity content.

WOMS 380AC. Women in the Middle East 3 credit hours
Course includes diversity content.

WOMS 380AD. Black Women in America II 3 credit hours
Course continues and advances the study of questions, issues, themes of
WOMS 380AB, Black Women in America. Course includes diversity
content.

WOMS 380AE. Intro to Black Women's Studies 3 credit hours
Examines the portrayal of women's roles in various religions. Looks at how Islamic practices and beliefs affect the lives
of people around the world. Specific attention is paid to the gendered
dimensions of life, what it means to be a Muslim man or woman.
Students have an opportunity to interview women and men from the
Muslim community in Wichita. Course includes diversity content.

WOMS 380AF. Diversity, Human Rights and the Law 3 credit hours
Examines the role of gender in shaping public policies, primarily in the
United States. Looks at the historical context and processes shaping
public policy in a number of areas, such as education, family, work,
crime and health. Examines the nature of contemporary policy in
these areas, the role of female activists in shaping these policies, and
the impact of these policies on the lives of women. Course includes
diversity content.

WOMS 380G. Women in Music: Blues - Present 3 credit hours
Course includes diversity content.

WOMS 380J. Hip Hop and Feminism 1-3 credit hours
Course includes diversity content.

WOMS 380Q. Women and Animal Rights 3 credit hours
Course includes diversity content.

WOMS 380S. Black Women Writers 3 credit hours
Course includes diversity content.

WOMS 380Z. Domestic Violence 3 credit hours
Course includes diversity content.

WOMS 381. Special Topics 1-3 credit hours
Course includes diversity content.

WOMS 381A. Women in Other Cultures 3 credit hours
Course includes diversity content.

WOMS 381B. Sex, Work and Culture 3 credit hours
Course includes diversity content.

WOMS 381C. Writing by Women 3 credit hours
Course includes diversity content.

WOMS 381D. Women and Social Action 3 credit hours
Course includes diversity content.

WOMS 381F. Women and Sexuality 3 credit hours
Course includes diversity content.

WOMS 382. Feminism and Girl Culture 3 credit hours
Addresses issues of girl culture as a part of Third Wave feminism in
an engagement with earlier forms of feminism. The media both shape and reflect the culture we live in. Current representations of female
empowerment are quite different from the sparse stereotypes of the
1970s. Examines and analyzes to what extent these representations
that are a part of girl culture can be deemed feminist and thus a
challenge to patriarchal conceptions of girls (or childhood). Emphasizes
critical analysis and should enable critique of visual culture as well as
questioning the culture in ways not previously done. Topics include:
Wonder Woman (sheroes), girl talk (Sex in the City), tough girls (Buffy
the Vampire Slayer), video game virxens, and feminist girl-zines (Bitch
Magazine). Course includes diversity content.

WOMS 383. Issues & Perspective on African Women &
Globalism 3 credit hours
General education advanced issues and perspectives course. Cross-
listed as WOMS 513, ETHS 381AC. For those whose primary notions
of Africa derive from little or unconfirmed information. Uses research, writing and other expressions by African women to present women dealing with their postcolonial and globalized national contexts. When possible, a teleconference with an author is arranged for a more global learning experience. Learning through local African communities, dramatic/artistic expressions and group projects is encouraged. Aims to help students develop critical and independent thinking about Africa, African women and their global engagement. Course includes diversity content.

WOMS 384. Paul  3 credit hours
Cross-listed as REL 384. Introduces students to the life, world and writings of the apostle Paul. His journey through the ancient Mediterranean world speaking to women and men about his understanding of the gospel is appreciated and used to examine the development of the early church. Highlights issues in Paul's letters such as women and gender, the socio-historical situation of the early church, and the question of authorship. Course includes diversity content.

WOMS 385. Lesbian, Gay, Bisexual, Transgender Studies  3 credit hours
General education advanced further study course. Cross-listed as SCWK 385. Focuses on Lesbian, gay, bisexual, transgender people, their history and culture, considering sexualities and genders as identities, social statuses, categories of knowledge, and as lenses to help us frame how we understand our world. Course examines a broad range of contemporary gay, lesbian, bisexual, transgender issues in various contexts including mass media, literary, sociological, political, racial, socioeconomic, biomedical and sexual. Students have the opportunity to develop critical thinking skills and practical academic skills vital to university success. Course includes books, articles, films, guest speakers. Course includes diversity content.

WOMS 386. Women and Sports  3 credit hours
Examines the relationship of gender to definitions of athleticism as well as how women have negotiated the contradiction between the cultural equation of masculinity and athleticism. Special attention is given to Title IX and its role in increasing opportunities and opportunities for U.S. women to play sports as well as the impact it has had on the development of intercollegiate women's athletics. Also considers the impact of homophobia on women's sports, the sexualization of women athletes, and new questions raised for sex-segregated sports by the fluidity of biological sex and transgendered athletes. Course includes diversity content.

WOMS 387. Women in Society: Cultural Images  3 credit hours
General education advanced further study course. Examines the impact of cultural images and ideas in women's lives. Emphasis is on the intersection of gender and race in the shaping of social experience and political interest. Major topics include ideology as vehicle through which women come to belong to and negotiate society; privilege, intellectual origins of ideas about gender and race, and differences in status among women that impact their lives, their relations with men and with each other. Course includes diversity content.

WOMS 390. Motherhood  3 credit hours
Course includes diversity content.

WOMS 391. Women's Global Issues  3 credit hours
General education advanced further study course. Explores women's issues from a global perspective in relation to policies approved by the International Women's Decade conferences of the United Nations. Emphasizes understanding the impact of nationalism, race, class and cultural values in creating obstacles to women's full participation in society. Explores strategies for achieving full human rights for women. Course includes diversity content. Prerequisites: one course in women's studies and one course in history or political science.

WOMS 420. Women and the Bible  3 credit hours
Cross-listed as REL 420. Examines the roles and statuses of women in biblical narrative, poetry and law, as well as the position of women in various Near Eastern societies. Attention may be given to the ways in which later theologians, novelists and artists have re-fashioned and re-evaluated the biblical portrayal of women in their works. Course includes diversity content.

WOMS 480. Special Topics  1-3 credit hours
Provides an introduction to the exploration of various women's studies' themes. Course includes diversity content.

WOMS 480A. Hollywood Melodrama  3 credit hours
Course includes diversity content.

WOMS 481. Cooperative Education  1-4 credit hours
Provides a field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Course includes diversity content. Graded Cr/NCr.

WOMS 481N. Internship  1-3 credit hours
Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. Graded Cr/NCr. Prerequisite: departmental consent.

WOMS 482. Latinas in Culture and Society  3 credit hours
Examines what it means to be a Latina and a feminist in U.S. culture, confronting racism and sexism as well as being empowered through Latina identity. The exploration of Latina identity results in creative transformation and a new understanding of the relationship of self to community. Materials drawn from Chicana feminist studies in prose, poetry, criticism and film, and from presentations by guest speakers. Course includes diversity content.

WOMS 508. Women and the Environment  3 credit hours
On completion of this course, students should be able to appreciate and understand: environmental challenges at a local, regional and global scale; gender and environment; the role of women in the environment; case studies of women's leadership and contribution to environmental custodianship; critical analysis and military-industrial discourse in relation to gender; relationships between environment and interactions with different types of global, illicit trade. Course includes diversity content.

WOMS 510. Hollywood Melodrama: The Woman's Film  3 credit hours
Melodrama, as a "woman's genre," is important to the development of feminist film criticism, which interrogates the contradictory meanings of motherhood and family within this culture. Through readings and films, this course provides a stylistic, literary and cultural/historical background for this 19th-century form with a specific focus on the woman's film and the family melodrama which highlight woman's position within the home. Uses textual analysis and some psychoanalytic criticism to explore and critique the fantasies and desires expressed in the visual excesses of film melodrama. Course includes diversity content.

WOMS 511. Women in Early America, 1600-1830  3 credit hours
General education advanced further study course. Course includes diversity content.
WOMS 513. Issues and Perspectives on African Women and Globalism 3 credit hours

*General education advanced issues and perspectives course.* Cross-listed as WOMS 383, ETHS 381AC. For those whose primary notions of Africa derive from little or unconfirmed information. Uses research, writing and other expressions by African women to present women dealing with their postcolonial and globalized national contexts. When possible, a teleconference with an author is arranged for a more global learning experience. Learning through local African communities, dramatic/artistic expressions and group projects is encouraged. Aims to help students develop critical and independent thinking about Africa, African women and their global engagement. *Course includes diversity content.*

WOMS 514. Women in the Middle East 3 credit hours

Examines Arab women of the Middle East. Focuses on women in the region historically designated as the fertile plains—Egypt, Lebanon, Syria, Jordan and the Palestinian Territories. Covers the impact of Western colonialism and global geopolitics on women's lives; women's activism in relation to nationalism and women's rights; Western racial stereotypes of Arab women and men and their role in foreign intervention in the 20th and 21st centuries. Provides case study in the relationship of nationalism and women's rights as framed by Arab women's studies. *Course includes diversity content.*

WOMS 516. Sociology of Gender Roles 3 credit hours

*General education advanced further study course.* Cross-listed as SOC 516. Analyzes the institutional sources of male and female roles, the source of changes in these roles, the consequent ambiguities and conflicts. *Course includes diversity content.* Prerequisite: SOC 111.

WOMS 523. Feminist Film Criticism 3 credit hours

Applies critical methods of analysis from the field of feminist film studies (such as psychoanalysis, ideology critique, close textual analysis, narrative and genre criticism) to the representation of women in film. Emphasizes the historical development of feminist film theory and criticism as it relates to classical Hollywood narrative, film genres and avant-garde film. *Course includes diversity content.* Prerequisite: 3 hours of upper-level humanities or 3 hours of upper-level women's studies.

WOMS 530. The American Woman in History 3 credit hours

Cross-listed as HIST 530. *Course includes diversity content.*

WOMS 532. Women in Ethnic America 3 credit hours

Cross-listed as HIST 532. An in-depth, thematic understanding of the historical experiences of women of color across space and time in U.S. history. Employing a female-centered framework of analysis, course probes the intersections of race, class, gender and sexuality in women's lives. *Course includes diversity content.*

WOMS 533. Women and the Law 3 credit hours

Introduces the legal aspects of women's rights, including the equal rights amendment to the U.S. Constitution, right to choose a name, sex discrimination in employment, education, and credit; welfare and criminal justice. Also considers women in the field of law, such as lawyers and legislators. *Course includes diversity content.*

WOMS 534. Psychology of Women 3 credit hours

*General education advanced issues and perspectives course.* Cross-listed as PSY 534. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. *Course includes diversity content.* Prerequisite: PSY 111.

WOMS 536. Writing by Women 3 credit hours

Cross-listed as ENGL 536. Explores various themes in critical approaches to literature composed by women writers, especially those whose works have been underrepresented in the literary canon. Genres and time periods covered, critical theories explored, and specific authors studied vary in different semesters. *Course includes diversity content.*

WOMS 537. Contemporary Women's Drama 3 credit hours

Examines contemporary plays by and about women to discover and explore the insights of the various playwrights into the lives and roles of women. In addition to reading and analyzing plays, students write plays of their own. *Course includes diversity content.*

WOMS 541. Women, Children and Poverty 3 credit hours

*General education advanced issues and perspectives course.* Cross-listed as SCWK 541. Addresses the problem of poverty among women in the U.S. today, and examines existing and proposed public policies designed to alleviate the problem. Explores theoretical models of poverty policy analysis and the role of values in their formulation and implementation. Discusses issues of age, race and family; special attention is given to poverty among Kansas families. *Course includes diversity content.* Prerequisite: 6 hours of social sciences.

WOMS 542. Women in Other Cultures 3 credit hours

Cross-listed as ANTH 542. Deals with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Compares and contrasts societies in order to see how different kinds of roles for women are related to different kinds of societies. *Course includes diversity content.*

WOMS 543. Women & Health 3 credit hours

Cross-listed as NURS 543. Examines the historical development of the women's health movement, focuses on current issues relevant to women and health care, and explores the roles of women in the health care system and as consumers of health care. Examines self-care practices of women and studies ways to promote positive health practices. Open to non-nursing majors. *Course includes diversity content.*

WOMS 570. Directed Readings 1-3 credit hours

For students who wish to pursue special reading or research projects not covered in coursework. Prerequisite: instructor's consent. *Course includes diversity content.*

WOMS 571. Contemporary Issues and Perspectives: LGBTQ 3 credit hours

*General education advanced issues and perspectives course.* Cross-listed as SCWK 571. Explores contemporary issues within the lesbian, gay, bisexual, transgender and queer communities. Explores personal attitudes regarding the social context for LGBTQ persons as well as other issues which have emerged as matters of concern and celebration with LGBTQ individuals and communities. Empowerment principles are employed and used to highlight a positive and affirming framework of the LGBTQ community. Students acquire basic skills in understanding issues of diversity and other contemporary conditions of life and culture. *Course includes diversity content.*

WOMS 579. Asian Women in Modern History 3 credit hours

Cross-listed as HIST 579 and ETHS 579. Examines women’s historical and contemporary experiences in Asian America and eight major countries in modern Asia. Covers topics on Asian women’s activism in relation to nationalism and women’s rights. Investigates Asian women’s roles and statuses in the family and society and their educational attainment and contributions to the export-oriented industrialization of the Asia-Pacific region. Examines the intra-regional migration of female guest workers among various countries in Asia. Traces the ways in which the changes in immigration laws during the 20th century affect patterns of Asian women’s migration to the United States. Introduces writing that integrates Asian women’s lives and Asian American experiences into the discourses on ethnicity, national origin, class,
gender and sexual orientation in the United States and the Asia-Pacific region. Course includes diversity content.

WOMS 580. Special Topics  1-3 credit hours
Focuses on advanced topics of interest to women's studies. Course includes diversity content.

WOMS 580AB. Women and Reform in America, 1830-Present  3 credit hours
Focuses on women, gender, and reform in U.S. history from 1830 to 2000 by examining the lives, experiences, and interactions with social, political, and economic systems of women. Students read articles, books, and primary documents that examine women’s experiences from the emergence of a domestic economy in the 1830s to 21st century popular culture with specific focus on topics such as the Cult of True Womanhood, slavery, Civil War and Reconstruction, Progressivism, suffrage, WWII, postwar feminism, and popular culture. In the end, students should walk away with an understanding of women in early U.S. history and of the major historical debates concerning women’s and gender history. Course includes diversity content.

WOMS 580G. Women in China and the Chinese Diaspora  3 credit hours
Course includes diversity content.

WOMS 580J. Domestic Violence  3 credit hours
Cross-listed as SCWK 590, CJ 381V and CJ 783F. Deals with the roots of domestic violence embedded in family roles, legal systems, religious beliefs, and the psychology of women, children and men. Also covers the consequences and prevention of family abuse. Includes discussion of literature and films. Course includes diversity content.

WOMS 580N. Gender, Race, Knowledge  3 credit hours
General education advanced issues and perspectives course. Course includes diversity content.

WOMS 580T. Women & Aging  3 credit hours
Course includes diversity content.

WOMS 580X. Sex, Work and Culture  3 credit hours
Course includes diversity content.

WOMS 580Z. Femme Fatale and Fighting FToy in Film  3 credit hours
Course includes diversity content.

WOMS 585. The Femme Fatale In Film Noir  3 credit hours
From the 1970s to the present, feminism has exerted a profound influence on theories of cinema. By focusing on film noir as a genre expressed visually and thematically, this course explores various filmic representations of women, and how and why these representations are politically, socially and theoretically significant. We apply various critical methods of analysis (psychoanalysis, ideology critique, close textual analysis, narrative, style/genre) to approach women's representation, in particular, the femme fatale (dark lady, evil seductress) within the classic film noir era which occurred between 1944 and 1958. Course includes diversity content.

WOMS 586. Gender, Race, Knowledge  3 credit hours
General education advanced issues and perspectives course. Examines construction of objects that lie at the boundary between popular and academic or “official” knowledge (understanding of objects, people, events and activities). Examines those objects within gender and race frameworks in women's studies. Thematically organized, problem focused and methodologically interdisciplinary. Past topics include "America, Post 9/11," "A Genealogy of the Middle East," science, modernity and anthropology. Course includes diversity content.

WOMS 587. Theories of Feminism  3 credit hours
Because feminism is not a single ideological stance or perspective, course examines a variety of ideas underlying feminist cultural critiques and visions for social change. Discusses the contribution of women’s studies to various academic disciplines. Course includes diversity content. Prerequisites: WOMS 287, 387, or 6 hours of women's studies courses, or instructor's consent.

WOMS 588. Gender, Race and the West/East Divide  3 credit hours
General education advanced issues and perspectives course. Examines critically the role of gender and race in the making of a supposed essential divide between the West and the East. Students are introduced to Edward Said's concept of Orientalism and the field of critique that targets how Europe and the U.S. craft an identity the West via its other, called variously, the Orient, Islam, the Muslim world, and the Arab world. Questions explored include: What is Orientalism? What is the relationship between colonialism/imperialism and the representation of the Orient or the East? How, for whom, and for what purposes do gender and race matter in this construct of a divide between West and East? These questions are examined across genres and media — i.e., in travel accounts, film, literature, policy making and news reportage. Course includes diversity content.

WOMS 591. Sexual Assault Issues  1 credit hour
Cross-listed as SCWK 591. Explores the cultural myths and stereotypes about sexual assault, the legal system methods of self-protection, community resources providing help for victims, and other related issues. Primary focus is on education to not only prevent, but eradicate sexual assault. Course includes diversity content.

WOMS 701. Selected Topics in Women's Studies  3 credit hours
Repeatable for credit up to 6 hours. Prerequisite: departmental consent. Course includes diversity content.

WOMS 701A. Map Intersections of Gender  3 credit hours
Course includes diversity content.

WOMS 701B. Women and the Environment  3 credit hours
Course includes diversity content.

WOMS 701C. Writing by Women  3 credit hours
Course includes diversity content.

WOMS 701D. Women in Africa  3 credit hours
Course includes diversity content.

WOMS 701E. Feminism and Girl Culture  3 credit hours
Course includes diversity content.

WSU General - Business (WSUB)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WSUB 102A. First-Year Seminar: Solutions by Design: An Introduction to Design Thinking  3 credit hours
General education introductory course. Immerses students into the design thinking experience by introducing them to the basic elements of design thinking, then guiding them through the process while addressing a real-world challenge. Students cycle through observation, brainstorming, synthesizing, prototyping, and implementation. Course explores using the design thinking philosophy to assist students in solving problems. Students from all disciplines are encouraged to enroll. Course includes diversity content.
WSU General - Education (WSUD)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WSU 101. Introduction to the University - Education  3 credit hours
Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations, academic majors, careers and life planning; study skills and test taking, teaching and learning styles, respecting diversity of thought and culture, critical thinking, leadership, university policies and procedures, managing time and money, health and wellness, and the benefits of engagement in student organizations. Encourages and supports students as they adjust to college life and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

WSU 102A. First-Year Seminar: Superheroes Go to School  3 credit hours
General education introductory course. Designed for freshmen/first-year students. Includes examinations of common superhero attributes and narratives, specifically in school or educational settings. Content is applied to projects related to personal development, synergistic collaboration, service outreach, and strategic preparation for ongoing learning and growth. Course includes diversity content.

WSU 102B. First-Year Seminar: Race and Ethnicity in Modern America  3 credit hours
General education introductory course. Examines race as a fundamental part of American life and society. Discusses race as a result of how people divide and categorize themselves and others based on physical differences, which then take on nonphysical meanings (intelligence, worth, morality). Students are asked to think and talk about how the concept of race has played a role in their own lives and formative years, as well as to reflect on scholarship on race and current debates/dilemmas. Course includes diversity content.

WSU General - Engineering (WSUE)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WSU 102. First-Year Seminar: Engineering  3 credit hours
General education introductory course.

WSU 102A. First-Year Seminar: Introduction to Technology and Innovation  3 credit hours
General education introductory course. Uses instruction and hands-on projects to guide first-year freshmen through the design thinking process to develop innovative and creative problem-solving skills. The design thinking process is a methodology for innovation that combines creative and analytical approaches and requires collaboration across disciplines and diverse backgrounds. It focuses on empathy as a way to understand the user and design to meet their needs. Students work in multi-disciplinary teams throughout the course. In the final project, students apply design thinking to build a working prototype that addresses a specific identified need in the community, third-world country, or society at large. Course includes diversity content. Repeatable for credit.

WSU General - Fine Arts (WSUF)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WSUF 101. Introduction to the University - Fine Arts  3 credit hours
Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services, and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations; academic majors, careers and life planning; study skills and test taking; teaching and learning styles; respecting diversity of thought and culture; critical thinking; leadership; university policies and procedures; managing time and money; health and wellness; and the benefits of engagement in student organizations. Encourages and supports students as they adjust to college life, and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

WSUF 102A. First-Year Seminar: Music Really Does Make You Smarter  3 credit hours
General education introductory course. Provides students with an opportunity to articulate a current music advocacy philosophy while developing leadership skills for a variety of music activities and scenarios.

WSUF 102B. First-Year Seminar: Music As My Key To Success  3 credit hours
General education introductory course. Combines performance in one of WSU’s music ensembles (Symphony Orchestra, Symphonic Wind Ensemble, Concert Band, Jazz Arts, Concert Chorale, A Capella Choir, Madrigal Singers or Women’s Glee Club) with classroom components that help leverage the student’s music experiences into future success in their chosen field. Freshmen explore best practicing and studying techniques, focus and time management, the connections between history and art, teamwork, stage presence, and developing a personal brand.

WSU General - Health Professions (WSUH)
Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WSUH 101. Introduction to the University  3 credit hours
Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations, academic majors, careers and life planning; study skills and test taking, teaching and learning styles, respecting diversity of thought and culture, critical thinking, leadership, university policies and procedures, managing time and money, health and wellness, and the benefits of engagement in student organizations. Encourages and supports students as they
adj ust to college life and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

**WSU General - Honors (WSUN)**

WSUN 102A. First-Year Seminar: Election 2016  3 credit hours

*General education introductory course.* Examines the presidential election of 2016 as an example of democracy and citizen engagement. Studies the election from the perspective of political science scholarship, and from the perspective of citizen involvement. Students learn how the contemporary presidential election process functions, why it matters, and consider what the results of 2016 mean for the United States and the broader world. Topic is the foundation for engagement with the learning environment of Wichita State University, the community in which we live, and the journey toward graduation and personal development.

**WSU General - Liberal Arts (WSUA)**

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

WSUA 101. Introduction to the University - LAS  3 credit hours

Designed especially for first-year students in their first semester at WSU, this course prepares students to succeed in college. Helps students form connections with each other, with faculty, with campus services and with the institution as a whole. It assists students in developing intellectually, emotionally and socially. It provides information and training about: college expectations, academic majors, careers and life planning; study skills and test taking, teaching and learning styles, respecting diversity of thought and culture, critical thinking, leadership, university policies and procedures, managing time and money, health and wellness, and the benefits of engagement in student organizations. Encourages and supports students as they adjust to college life and promotes reflective learning. In addition to other course projects, students create an individualized graduation plan through a collaborative process that involves academic advisers, the course instructor and peer mentors assigned to the course. Students who successfully complete this course have greater academic success and an improved rate of graduation compared to students who do not take this class.

WSUA 102A. First-Year Seminar: Energy Science and The Environment  3 credit hours

*General education introductory course.* Discusses the science of energy, its impact on the environment and long-term climate change on our planet. Studies some basic science using simple calculations that are no more difficult than balancing a checking account, but are simple ways to track energy usage, potential change in saving money and reducing the impact on the environment. Studies long-term change from across the ages on the environment, what results can be expected from using these past experiences to predict future outcomes in 10, 50 or 100 years. Critical questions such as whether energy usage can alter the course of humans’ present impact on the environment, and that other options could be pursued to reduce past adverse impacts on the environment. *Course includes diversity content.*

WSUA 102B. First-Year Seminar: Solving Global Problems  3 credit hours

*General education introductory course.* Students investigate three problems of global concern involving security, the global economy, and environment. Interactive activities in the course teach students to search for solutions to the problems and to consider how governments and other organizations form policies on these problems. Repeatable for credit.

WSUA 102C. First-Year Seminar: Powerful Narratives: Storytelling and Social Justice in the Hispanic World  3 credit hours

*General education introductory course.* Fictional texts can generate awareness and empathy about contemporary problems. Course analyzes oppressive situations portrayed in literature, media and the arts from Colonial times to present. Includes texts from at least 10 Hispanic countries to give the reader a variety of cultural information. *Course includes diversity content.*

WSUA 102D. First-Year Seminar: Cross Cultural Communication  3 credit hours

*General education introductory course.* Teaches students to appreciate the cultural diversity located on the Wichita State campus. Students meet people from other cultures to help the students understand the world perspective of those other cultures. In addition, students learn speaking and writing skills to improve their own communication with people from other cultures. *Course includes diversity content.*

WSUA 102E. First-Year Seminar: World Cultures in Popular Media  3 credit hours

*General education introductory course.* Examines ways in which various cultures are depicted in popular media and how stereotypical depictions may contrast with reality in areas such as East Asia, Africa, the Middle East, Latin America and Europe. *Course includes diversity content.*
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