HPS - Human Performance Studies

Courses numbered 100 to 299 = lower-division; 300 to 499 = upper-division; 500 to 799 = undergraduate/graduate.

**HPS 101A. Basketball (1).**
An activity course that involves the playing of basketball as well as instruction on the skills, rules and strategies of play.

**HPS 101G. Cricket (1).**
An activity course that involves the playing of cricket as well as instruction on the skills, rules and strategies of play.

**HPS 101R. Rock Climbing (1).**
An activity course that provides students with an understanding of the equipment, safety procedures, and skills of rock climbing.

**HPS 101S. Advanced Pool/Billiards (1).**
Instruction in advanced shots and strategy, and more active participation than is available in the basic-level class.

**HPS 101V. Pool-Billiards (1).**
An activity course that involves playing pool-billiards as well as instruction on the rules, shots, and strategies of play.

**HPS 102A. Archery (1).**
An activity course that involves target shooting and instruction on skills, safety procedures, and equipment of archery.

**HPS 102C. Bowling (1).**
An activity course that involves bowling as well as instruction on skills, equipment, rules, and etiquette.

**HPS 102M. Horsemanship (1).**
An activity course that involves riding horses and instruction on equipment and proper riding technique.

**HPS 102O. Ice Skating (1).**
An activity course that involves ice skating and instruction on equipment, and proper technique.

**HPS 102R. Tennis (1).**
An activity course that involves the playing of tennis as well as instruction on the skills, rules, and strategies of play.

**HPS 103B. Tai Chi (1).**
An activity course that involves instruction and participation in a slow-moving form of Chinese meditation.

**HPS 103G. Jiu Jitsu (1).**
An activity course that involves instruction and participation in a grappling-style martial art that is similar to judo.

**HPS 103J. Tae-Kwon-Do (1).**
An activity course that involves instruction and participation in a fast-kicking style of martial arts.

**HPS 103O. Meditation (1).**
An activity course that involves instruction and participation in mental techniques that produce calmness and a sense of well-being.

**HPS 103T. Pilates (1).**
An activity course that involves instruction and participation in a form of physical fitness that emphasizes body alignment, controlled movements, and balance.

**HPS 103Y. Yoga (1).**
An activity course that involves participation and instruction in various physical yoga poses and meditation.

**HPS 106AB. Circuit Training (1).**
An activity course that involves participation and instruction in weight training on a circuit of weight machines.

**HPS 106AC. Cycle/Circuit (1).**
Instruction and active participation in a combination of stationary bike training and circuit weight training.

**HPS 106D. Core Fitness (1).**
An activity course that involves participation and instruction in exercises that concentrate on the core of the body.

**HPS 106E. Weight Training (1).**
An activity course that involves participation and instruction in lifting free weights and utilizing weight machines.

**HPS 106M. Running (1).**
An activity course that involves participation and instruction in running.

**HPS 106N. Step Aerobics (1).**
An activity course that involves participation and instruction in aerobic exercises done to music and utilizing steps of various height.

**HPS 106O. Zumba (1).**
An activity course that involves participation and instruction in aerobic dance routines set to fast-paced music.

**HPS 106Q. Exercise and Weight Control (2).**
Designed to help students realize the importance of healthy diet and exercise behaviors in permanent weight control. Behavior modification techniques are used to help students achieve a healthy lifestyle that will result in either a gradual reduction in body weight, and/or the maintenance of a health body weight.

**HPS 106R. Weight Trng For Women (1).**
This is a women-only activity class that involves participation and instruction in lifting free weights and utilizing weight machines.

**HPS 106Z. Cardio Kickboxing (1).**
An activity course that involves participation and instruction in kicking exercises set to music.

**HPS 107A. Swimming 1 (1).**
An activity course that involves participation and instruction in various swimming strokes.

**HPS 107E. Scuba (1).**
An activity course that involves participation and instruction in SCUBA diving.

**HPS 110. Varsity Athletics (1).**
An elective course for WSU students who are NCAA Division I athletes. Graded Cr/NCr.

**HPS 110D. Bowling (1).**
An elective course for members of the WSU bowling team. Graded Cr/NCr.

**HPS 110E. Crew (1).**
An elective course for members of the WSU crew team. Graded Cr/NCr.

**HPS 110T. Spirit Squad (1).**
An elective course for members of the WSU Spirit Squad. Graded Cr/NCr.

**HPS 111. Introduction to Physical Education (3).**
Introduction to the history, principles, philosophy and foundations of physical education with concomitant outgrowths for modern society.

**HPS 113. Introduction Exercise Science (3).**
An overview of the basic physiological, neurological and biomechanical processes associated with physical activity and human movement.

**HPS 114. Introduction to Athletic Training (3).**
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 114L. Intro Athletic Training Lab** (0).
A laboratory course for introductory techniques and applications for the beginning athletic training student. The student will learn demonstrate basic skills of emergency/immediate care, health history, modality application, and environmental conditions.

**HPS 117. Community First Aid and Community CPR** (2).
Community first aid and community cardiopulmonary resuscitation with certification by the American Red Cross.

**HPS 121. Professional Practicum** (2).
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).
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 131. Instrumentation in Athletic Training** (1).
Covers instrumentation use in the profession of athletic training consisting of, but not limited to: stethoscope, ophthalmoscope, goniometers, weight/height scale, percussion hammers, etc. Students learn, practice and become proficient in the use of athletic training instrumentation.

**HPS 150P. Stress Management** (1).
The purpose of this course is to teach students the basic principles, theories, and relaxation techniques to effectively manage personal stress. Students will gain a greater understanding of the mind-body relationship, learn to employ a holistic approach to stress and adopt effective cognitive techniques, coping skills, and relaxation techniques.

**HPS 152A. Personal Fitness** (3).
An activity course designed for older adults. Graded Cr/NCr.

**HPS 152B. Flex & Tone** (1).
An activity course designed for older adults that focuses on strength and balance training. Graded Cr/NCr.

**HPS 152C. Water Fitness** (1).
An activity course designed for older adults that involves exercising in a swimming pool. Graded Cr/NCr.

**HPS 152E. Yoga** (3).
An activity course designed for older adults that involves participation and instruction in various physical yoga poses and meditation. Graded Cr/NCr.

**HPS 180. Fitness Instructor Training** (2).
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.

Introduces basic skills and strategies of individual sports/activities. Prerequisite: K-12 physical education major.

**HPS 203. Adventure Sports** (2).
Introduces activities focusing on life adventures. Prerequisite: K-12 physical education major.

**HPS 204. Movement Concepts** (2).
Introduces fundamental motor patterns and movement education. Prerequisite: K-12 physical education major.

**HPS 205. Team Sports** (2).
Introduces basic skills and strategies of team sports. Prerequisite: K-12 physical education major.

**HPS 220. Athletic Training Practicum** (2).
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).
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** (3).
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).
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).
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).
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).
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).
Provides the skills and knowledge for teacher candidates to successfully teach secondary physical education grades 6-12. Instruction for teaching techniques, teaching progressions, 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 312. ISAM: Preteaching Internship: Physical Education-Secondary (1-3).
Through systematic observation in a secondary school (middle or high school), students observe and examine the nature of teaching and the role of teachers in secondary school 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 311.

HPS 313. Exercise & Sport Nutrition (3).
Study of the role of nutrition as a means to enhance performance in exercise and sport. Topics include principles of healthful nutrition, energy metabolism and nutrients, regulation of metabolism by macro and micro nutrients, weight control and analysis of the validity and safety of proposed nutritional ergogenic aids. In addition, regulatory (FDA and FTC) aspects of sports nutrition are reviewed.

HPS 317. CPR/AED/First Aid for the Professional Rescuer (2).
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).
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).
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).
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).
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).
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.

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).
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 331L. Care Prevent Athlete Injry Lab (0).
A laboratory course for the acute injury care, prevention, and recognition methods for the coach, athletic trainer, physical educator management athletic related injuries as well as basic athletic injury assessment. Laboratory to be taken concurrently with HPS 331 lecture. Prerequisite: HPS 229 or equivalent.

HPS 334. Assessment and Technology for PreK-12 Physical Education (3).
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).
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 350L. Upper Extremity Assmt Lab (0).
A laboratory course for the clinical orthopedic examination and diagnosis of injuries for the upper extremity. This course is designed to introduce the athletic training student to techniques in assessment and evaluating athletic related injuries in the upper extremity, head & facial, ear, eye region. Laboratory to be taken concurrently with HPS 350 lecture. Prerequisites: HPS 229 or equivalent, and HPS 331.

HPS 351. Lower Extremity Assessment (4).
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).
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 360. Adapted Physical Education (2).
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 402. Health Education for the Physical Educator (2). 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). 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). 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). 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). 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). 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). 2 Classroom hours; 2 Lab hours. The study of theories, applications and methods of various 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 450L. Therapeutic Modality Lab (0). A laboratory course for the application of various therapeutic modalities utilized in the profession of athletic training which consist of cryotherapy, electrotherapy, hydrotherapy, thermotherapy and mechanical therapy. Laboratory to be taken concurrently with HPS 450 lecture. Prerequisite: HPS 229 or equivalent, HPS 331.

HPS 451. Therapeutic Exercise (3). 2 Classroom hours; 2 Lab hours. The study of a comprehensive rehabilitation/reconditioning program involving techniques of flexibility, muscular strength, muscular endurance and cardiorespiratory training including anaerobic and aerobic principles. Prerequisites: HPS 229 or equivalent, HPS 331.

HPS 460. Motor Learning (3). Designed to examine the principles of motor learning by examining the physiological, psychological and neuromotor factors that affect the acquisition of motor skills. Prerequisite: HPS 229, or BIOL 223, or HS 290.

HPS 460L. Motor Learning Lab (0). A laboratory course designed to introduce students to psychomotor testing and the evaluation of human motor learning, control, and development. Laboratory to be taken concurrently with HPS 460 lecture. Prerequisites: HPS 229, BIO 223, or HS 290.

HPS 470. Fitness Practicum (2-3). 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). 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). 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, 472.

HPS 481. Cooperative Education (1-8). 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). 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 490L. Physiol of Exercise Lab (0). A laboratory course designed to provide students the opportunity to learn basic skills relevant to an exercise physiologist. The student learns these skills through observation as well as through hands-on opportunities to perform as the technician and/or the client during the structured weekly activities. Students will experience, first hand, the neuromuscular, metabolic, and cardiorespiratory responses to acute exercise. Laboratory to be taken concurrently with HPS 490 lecture. Prerequisites: HPS 229, BIO 223, or HS 290.

HPS 495. Internship in Exercise Science (8). 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,
HPS 510. Coaching Principles (3).
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).
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).
Prerequisite: departmental consent.

HPS 595. Human Performance Research (3).
Experiential learning course provides opportunities to engage in research activities conducted in the Human Performance Laboratory. Repeatable for a maximum of 6 credit hours. Prerequisite: departmental consent.

HPS 715. Body Composition and Weight Management (3).
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).
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).
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 750L. Motivation (3).
This course is designed to provide the skills and knowledge necessary to properly motivate individuals, groups and teams in a leadership role. Focus is placed on enhancing, creating or maintaining intrinsic motivation through the comprehension of motivation theory, primarily Self-Determination Theory, Achievement Goal Theory and The Progressive Motivation Cycle. In addition, techniques will be developed to apply concepts learned from theory and research to real situations. The knowledge and skills gained from this course will help students excel as leaders in sport, education, business or any chosen career.

HPS 750P. ACE Group Fitness Instructor Course (1).
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 (1-2).
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 750T. Human Performance Research - PTRM I (3).
Provides students with opportunities to engage in research activities in the Human Performance Laboratory.

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).
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 (1-3).
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).
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).
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).
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.