

# BS in Electrical Engineering

## Program Requirements

A minimum total of 124 credit hours is required for the electrical engineering program and includes the 62 credit hours of major courses that must be completed with a minimum grade point average of 2.000. All courses that are prerequisites to other courses must be completed with a grade of C- or better. In addition to meeting the requirements of the WSU General Education Program (<http://catalog.wichita.edu/undergraduate/academic-information/general-education-program/>) and the requirements of the College of Engineering, students in the electrical engineering program must take the following courses:

Course	Title	Hours
<b>General Education (34-35 credit hours)</b>		
Select courses to meet General Education requirements <sup>1, 2</sup>		24
General Education courses that will also meet Program Requirements		
PHIL 385	Engineering Ethics	3
CHEM 211	General Chemistry I	5
MATH 242	Calculus I	5
<b>Mathematical/Natural Sciences</b>		
MATH 243	Calculus II <sup>3</sup>	5
MATH 344	Calculus III	3
MATH 511	Linear Algebra	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I <sup>3</sup>	4
PHYS 314	Physics for Scientists II <sup>3</sup>	4
IME 254	Engineering Probability and Statistics I	3
<b>Major Courses</b>		
ECE 115	ECE Freshman Seminar	0
ECE 194	Introduction to Digital Design	4
CS 211	Introduction to Programming	4
IME 255	Engineering Economy	3
ECE 282	Circuits I	4
ECE 284	Circuits II	3
ECE 285L	Programming with MATLAB for Electrical and Computer Engineers	1
ECE 383	Signals and Systems	3
ME 398	Thermodynamics I	3
ECE 463	Applied Engineering Electromagnetics	3
ECE 488	Electric Machines and Transformers	4
ECE 492	Electronic Circuits I	4
ECE 493 or ECE 688	Electronic Circuit II Power Electronics	4
ECE 586	Introduction to Communication Systems	4
ECE 585 & ECE 595	Senior Design Project I and Senior Design Project II	4
ECE 684 or ME 659	Introductory Control System Concepts Mechanical Control Systems	3
<b>Technical Electives</b>		
Select 11 credit hours which must be chosen with advisor's approval from a departmentally approved list. At least 9 of the 11 credit hours must be from the ECE department. Up to 2 credit hours of co-op can be used as nondepartmental technical electives.		11
<b>Total Credit Hours</b>		<b>124</b>

- <sup>1</sup> Required major courses may also count towards General Education requirements. Students will need to select additional electives to reach 124 credit hours required for graduation with assistance from an advisor.
- <sup>2</sup> See the requirements of the WSU General Education program (<http://catalog.wichita.edu/undergraduate/academic-information/general-education-program/>). Starting in fall 2024, first-year college students must take a First-Year Seminar (FYS) within their first two semesters at WSU. The FYS course should be completed in either fine arts or humanities or social/behavioral sciences.
- <sup>3</sup> May count as a general education course.

## Applied Learning

Students in the Bachelor of Science in electrical engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing the two capstone design experiences consisting of ECE 585 and ECE 595.