

# B.S. Electrical Engineering

## Program Admissions Requirements

Including the university's General Education Requirements (a minimum of 36 credits--see the General Education Requirements (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>) in the Academic Information section of this catalog), the program of study for the Bachelor of Science in Electrical Engineering degree totals a minimum of 120 credits as follows:

### Required Courses for Electrical Engineering Major:

Code	Title	Credits
CHEM 1111	General Chemistry I (Partially Fulfills General Education Objective 5)	4
CHEM 1111L	General Chemistry I Lab (Partially Fulfills General Education Objective 5)	1
CS 1181	Computer Science and Programming I	3
ENGL 3307	Professional and Technical Writing	3
MATH 1170	Calculus I (Fulfills General Education Objective 3)	4
MATH 1175	Calculus II	4
MATH 2240	Linear Algebra	3
MATH 2275	Calculus III	4
MATH 3360	Differential Equations	3
PHYS 2211	Engineering Physics I (Partially Fulfills General Education Objective 5)	4
PHYS 2212	Engineering Physics II (Partially Fulfills General Education Objective 5)	4
EE 1101	Electrical Engineering and Society	1
EE 2240	Electrical Circuits I	3
EE 2240L	Electrical Circuits I Laboratory	1
EE 2274	Introduction to Digital Systems	3
EE 2274L	Introduction to Digital Systems Laboratory	1
EE 3325	Electromagnetics	3
EE 3329	Introduction to Electronics	3
EE 3301	Software Methodology and Tools for Electrical Engineering	3
EE 3340	Electrical Circuits II	3
EE 3340L	Electrical Circuits II Laboratory	1
EE 3345	Signals and Systems	3
EE 4416	Applied Engineering Methods	3
EE 4418	Communication Systems	3
EE 4426	Computer Architecture and Organization	3
EE 4427	Embedded Systems Engineering	2
EE 4427L	Embedded Systems Engineering Laboratory	1
EE 4429	Advanced Electronics	3
EE 4429L	Advanced Electronics Lab	1
EE 4472	Electrical Machines and Power	3
EE 4472L	Electrical Machines and Power Laboratory	1

EE 4473	Automatic Control Systems	3
EE 4475	Digital Signal Processing	3
EE 4495	Senior Seminar	3
EE 4496	Project Design	3
In Addition:		
EE Elective		3
Total Credits		97

### ELECTIVE SELECTIONS

Consult with your advisor when selecting electives, as there may be other new or special courses available.

**EE Electives:** The following courses are pre-approved: (Note that non-EE courses may have prerequisites that are not part of the EE program.)

Code	Title	Credits
EE 4432	Introduction to VLSI Systems	3
EE 4433	Mixed Signal Design and Synthesis	3
EE 4474	Advanced Circuit Theory	3
EE 4476	Semiconductor Processing and Fabrication	3
EE 4478	Semiconductor Devices	3
EE 4479	Advanced Semiconductor Devices	3
EE 4482	Principles of Power Electronics	3
EE 4491	Digital Control Systems	3
ME 4405 & ME 4406	Measurement Systems Design and Measurement Systems Laboratory	4
ME 4425	Mechatronics	3

ISU Degree Requirements (<http://coursecat.isu.edu/undergraduate/degree/requirements/>)

ISU General Education (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>)

Major Academic Plan (MAP) (<https://www.isu.edu/advising/maps/>)