ELECTRICAL ENGINEERING

2020/2021 Four-Year Academic Plan

University of Idaho
College of Engineering

Courses in italics are prerequisites **Courses in bold are co-requisites**

*A grade of C or better is required before registration is permitted in upper-division courses. **A passing grade in ECE 292 is also required.
See course catalog for complete degree requirements and additional information at uidaho.edu/registrar/classes/catalogs. Last updated 8/7/20

FIRST YEAR	FALL	
*CS 120	Computer Science I *MATH 143, CS 112 or sufficient test scores*	4
ENGL 102	College Writing and Rhetoric *English 101 or sufficient test scores*	3
*MATH 170	Calculus I *C or better in MATH 143 and 144 or sufficient test scores*	4
COMM 101, COMM150, or PHIL 102	Oral Communication Elective	2-3
ELECTIVE	Free Elective	1
	Total Credits	**14-15**

FIRST YEAR	SPRING	
ECE 101	Foundations of Electrical and Computer Engineering **MATH 143 or MATH 170**	2
*CHEM 111/ 111L	General Chemistry I *C or better in MATH 170 or sufficient test scores*	4
*MATH 175	Calculus II *MATH 170*	4
*PHYS 211/ 211L	Engineering Physics I with Lab **MATH 170**	4
+ ELECTIVE	Humanities/Social Science Elective	3
	Total Credits	**17**

SOPHOMORE	FALL	
*ECE 210/211	Electrical Circuits I with Lab *MATH 175,* **MATH 310, PHYS 212**	4
*MATH 310	Ordinary Differential Equations *MATH 175 (MATH 275 recommended)*	3
*PHYS 212/212L	Engineering Physics II with Lab *PHYS 211,* **MATH 175**	4
*ENGR 210	Engineering Statics *MATH 170*	3
+ AMST 301 or PHIL 103	American Studies **OR** Philosophy Elective	3
	Total Credits	**17**

SOPHOMORE	SPRING	
*ECE 212/213	Electrical Circuits II with Lab *ECE 210/211, MATH 310, PHYS 212/212L*	4
*ECE 240/241	Digital Logic with Logic Circuit Lab *PHYS 212/PHYS 212L*	4
**ECE 292	Sophomore Seminar (spring only)	P/F
*ENGR 220	Engineering Dynamics *ENGR 210*	3
*MATH 275	Calculus III *MATH 175*	3
+ ELECTIVE	Humanities/Social Science Elective	3
	Total Credits	**17**

JUNIOR	FALL	
ECE 310/311	Microelectronics I with Lab *ECE 212/213*	4
ECE 320,321	Energy Systems I with Lab *ECE 212/213, PHYS 212/212L, MATH 310*	4
ECE 330/331	Electromagnetic Theory with Lab *MATH 275, MATH 310 PHYS 212/212L*	4
ENGR 360	Engineering Economy *Junior standing*	2
	Total Credits	**14**

JUNIOR	SPRING	
ECE 340/341	Microcontrollers with Lab *ECE 212/213, ECE 240/241, and CS 112 or CS 120*	4
ECE 350/351	Signals and Systems I with Lab *ECE 212, MATH 310*	4
STAT 301	Probability & Statistics *MATH 175*	3
MATH 330	Linear Algebra *MATH 160 or MATH 170 (MATH 175 recommended)*	3
ELECTIVE	ENGR 320, 335, 350 or 428	3
	Total Credits	**17**

SENIOR	FALL	
ECE 480	Electrical Engineering Senior Design I *ECE 240/241, ECE 310/311, ECE 320/321, ECE 330/331, ECE 340/341, ECE 350/351 or permission,* **STAT 301**	3
ECE 491	Senior Seminar (fall only)	P/F
ENGL 317	Technical Writing *ENGL 102, Junior standing or permission*	3
† ELECTIVE	Technical Elective	3
† ELECTIVE	Technical Elective	3
+ ELECTIVE	American Diversity/International Elective	3
	Total Credits	**15**

SENIOR	SPRING	
ECE 481	Electrical Engineering Senior Design II *ECE 480, STAT 301 or permission*	3
† ELECTIVE	Technical Elective	3
† ELECTIVE	Technical Elective	3
† ELECTIVE	Technical Elective	3
† ELECTIVE	Technical Elective	3
	Total Credits	**15**

† **TECHNICAL ELECTIVES:** Eighteen credits required and satisfy three conditions: (1) Nine credits (minimum) from the following ECE courses: 410 (S) or 416 (F), 420 (S), 430 (every third semester), 440 (S) or 443 (F), 450 (F) & 460 (F). (2) Three credits (minimum) from upper-division ECE courses, (3) The remaining six credits from upper-division ECE, and approved engineering, math, physics, and computer science courses.

+ **HUMANITIES/SOCIAL SCIENCE ELECTIVES:** Must include AMST 301 or PHIL 103 and ECON 201, 202 or 272.

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ELECTRICAL ENGINEERING

MATCH YOUR INTERESTS

- Computers
- Renewable Energy
- Aerospace
- Computers and Hardware
- Satellites, Radar and Sonar
- Microchips and Microcircuits
- Power Systems
- Electromagnetics
- Automation and Control

Design and evaluate circuits and systems for computers, robots, cell phones and large-scale communication systems, including renewable energy, complex power distribution and satellites.

ABOUT YOUR DEGREE PATH

Electrical Engineering majors are prepared with a broad knowledge in at least three of the following areas: microelectronics, power, electromagnetic, digital systems and signals and systems.

Design new products and learn how to solve problems waiting to be discovered. Teamwork is important, but you will also be able to confidently take on individual challenges and develop individual interests through a selection of technical electives.

Our graduates go on to work at successful companies like Micron Technologies, Hewlett-Packard, Schweitzer Engineering Laboratories, Avista, ON Semiconductor, and POWER Engineers.

YOUR DEGREE IS ACCREDITED

Our undergraduate Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING
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