ELECTRICAL ENGINEERING - MINOR

A student graduating with a bachelor's degree from CU Boulder may also earn a minor in electrical engineering. The minor is not available to students earning a Bachelor of Science in Electrical Engineering or Electrical & Computer Engineering.

The minor in electrical engineering provides training in electrical engineering beyond the training usually received by science, mathematics and applied mathematics majors. It can also broaden the training of students majoring in other engineering fields to provide more depth in electrical engineering. The goal is to teach students the fundamentals of electrical engineering and introduce them to at least one of its many advanced application areas. Such skills are important to students who expect to participate in real world situations that increasingly involve electrical engineering applications.

Requirements

Prerequisites

Prerequisites for the electrical engineering minor are two semesters of calculus and differential equations with linear algebra. A grade of C- or better is required in all prerequisite courses.

Students admitted to the electrical engineering minor must have a cumulative GPA of 2.700 or better. Students must still meet all prerequisites for the courses they choose.

Course Requirements

This minor requires a minimum of 18 credit hours.

A cumulative GPA of 2.000 or better is required for courses used to satisfy the requirements of this minor. Each individual course that is counted toward this minor must be passed with a grade of D- or better (note that a C- or better grade is required in all prerequisite courses).

Required Courses and Credits

Code	Title	Credit Hours
Required Courses		
ECEN 2250	Introduction to Circuits and Electronics	3
ECEN 2260	Circuits as Systems	3
ECEN 2270	Electronics Design Lab	3
Emphasis Areas		
Complete 9 credits, chosen from the following:		9
ECEN 2350	Digital Logic	
ECEN 2360	Programming Digital Systems	
ECEN 2370	Embedded Software Engineering	
ECEN 3250	Microelectronics	
ECEN 3300	Linear Systems	
ECEN 3400	Electromagnetic Fields and Waves	
ECEN 3320	Semiconductor Devices	
ECEN 3170	Electromagnetic Energy Conversion 1	
ECEN 3320	Semiconductor Devices	
ECEN 4517	Power Electronics and Photovoltaic Power Systems Laboratory	
ECEN 4797	Introduction to Power Electronics	
ECEN 4827	Analog IC Design	
ECEN 4138	Control Systems Analysis	
ECEN 4638	Control Systems Laboratory	
ECEN 4242	Communication Theory	
ECEN 4632	Introduction to Digital Filtering	
ECEN 4752	Communication Laboratory	
ECEN 3410	Electromagnetic Waves and Transmission	
ECEN 3753	Real-Time Operating Systems	
ECEN 4341	Bioelectromagnetics	
ECEN 4606	Undergraduate Optics Laboratory	
ECEN 4616	Optoelectronic System Design	
ECEN 4634	Microwave and RF Laboratory	
ECEN 4730	Practical Printed Circuit Board Design and Manufacture	
ECEN 4555	Principles of Energy Systems and Devices	
Total Credit Hours		**18**