

Electrical Engineering Minor

For information, contact the Department of Electrical and Computer Engineering, 260 Garland Hall, 513-529-0740.

This minor is not open to students majoring in computer engineering, electrical engineering, robotics engineering, or engineering management with concentration in electronics and computing. This minor provides fundamentals of electrical and electronic engineering, which includes a variety of industrial applications involving electrical/electronic circuits and microprocessor systems. It combines a strong base in engineering science with project-based laboratory and design experience.

A minimum cumulative GPA of 2.00 is required for all courses in the minor. None of these courses may be taken on a credit/no-credit basis.

Program Requirements

(20 semester hours)

Code	Title	Credit Hours
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Students are responsible for meeting the prerequisites of all courses in the minor.

Required courses

ECE 205	Electric Circuit Analysis I	4
ECE 287	Digital Systems Design	4

Elective courses

Select at least four of the following (for a minimum of 12 hours):

CPB 328	Bioinstrumentation	
or MME 305	Measurements and Instrumentation	
ECE 289	Computer Organization	
ECE 291	Energy Systems Engineering	
ECE 301	Advanced Circuits and Fundamentals of Renewable Energy	
ECE 302	MATLAB and its engineering applications	
ECE 304	Electronics	
ECE 306	Signals and Systems	
ECE 314	Elements of Robotics	
ECE 317	Industrial Robotics	
ECE 325	Applied Electromagnetics	
ECE 345	Introduction to Probability, Statistics, and Random Processes	
ECE 388	Introduction to Smartphone Technologies	
ECE 395	Undergraduate Research Immersion Project	
ECE 411	Sensors and Data Fusion with Robotics Applications	
ECE 414	Design and Modeling of Robotic Systems	
ECE 425	Digital Signal Processing	

ECE 426	Biomedical Signal Analysis and Machine Learning	
ECE 427	Radar Signal Processing	
ECE 429	Digital Image Processing	
ECE 430	Electromagnetics in Wireless Sensing and Communications	
ECE/MME 436	Control of Dynamic Systems	
ECE 453	Communication Systems	
ECE 461	Network Performance Analysis	
ECE 484	Embedded Systems Design	
ECE 487	Computer Aided Design Tools for Computer Engineering	
ECE 491	Power Systems Engineering	
ECE 493	Power Electronics	
ECE 497	Electric Vehicle Technology	
Total Credit Hours		20