

Department of Electrical Engineering

Course Catalog - Fall 2025

Department Overview:

The Electrical Engineering Department focuses on circuits, signals, systems, and embedded systems design. Students engage in laboratory courses involving hardware prototyping and control systems.

Course Listings

Course Code: EE 101

Course Title: Introduction to Electrical Engineering

Credits: 3

Description: Basic circuit concepts, circuit laws, and introductory lab experiments with breadboards and measurement tools.

Prerequisites: None

Instructor: Dr. Nikola Tesla

Schedule: Mon/Wed/Fri 9:00 AM - 9:50 AM (Lab Fri)

Course Code: EE 200

Course Title: Circuit Analysis I

Credits: 3

Description: DC circuits, network theorems, and transient analysis. Lab sessions on circuit simulation and measurement.

Prerequisites: EE 101 or PHY 101

Instructor: Prof. James Watt

Schedule: Tue/Thu 11:00 AM - 12:15 PM (Lab)

Course Code: EE 230

Course Title: Digital Logic Design

Credits: 3

Description: Boolean algebra, combinational and sequential circuits, and FPGA basics.

Prerequisites: EE 101 or CS 101

Instructor: Dr. Claude Shannon

Schedule: Mon/Wed 1:00 PM - 2:15 PM

Course Code: EE 260

Course Title: Signals and Systems

Credits: 3

Description: Continuous and discrete-time signals, Fourier analysis, and system properties.

Prerequisites: MATH 201

Instructor: Prof. Leon Brillouin

Schedule: Tue/Thu 2:30 PM - 3:45 PM

Course Code: EE 310

Course Title: Electronics I

Credits: 3

Description: Semiconductor devices, diode and transistor circuits, and amplifier design with lab projects.

Prerequisites: EE 200

Instructor: Dr. Karl Ferdinand Braun

Schedule: Wed/Fri 10:00 AM - 11:15 AM (Lab Fri)

Course Code: EE 330

Course Title: Microcontrollers and Embedded Systems

Credits: 3

Description: Embedded C programming, microcontroller peripherals, and real-time system design with hands-on projects.

Prerequisites: EE 230 and CS 101

Instructor: Prof. Steve Wozniak

Schedule: Mon 3:00 PM - 5:50 PM (Lab)

Course Code: EE 350

Course Title: Control Systems

Credits: 3

Description: Feedback control, stability analysis, and PID control design with simulation and lab experiments.

Prerequisites: EE 260

Instructor: Dr. Rudolf Kalman

Schedule: Tue/Thu 4:00 PM - 5:15 PM

Course Code: EE 410

Course Title: Communications Systems

Credits: 3

Description: Modulation, signal transmission, noise analysis, and basics of wireless systems.

Prerequisites: EE 260

Instructor: Prof. Claude E. Shannon

Schedule: Wed 2:00 PM - 4:50 PM (Seminar)

Course Code: EE 430

Course Title: Power Electronics

Credits: 3

Description: Power conversion, converters, inverters, and applications in renewable energy systems.

Prerequisites: EE 310

Instructor: Dr. M. Stanley Whittingham

Schedule: Thu 1:00 PM - 3:50 PM (Lab)

Course Code: EE 480

Course Title: Senior Design Project

Credits: 3

Description: Capstone team project focusing on design, prototyping, and demonstration of an electrical engineering system.

Prerequisites: Senior standing and EE core courses

Instructor: EE Faculty Team

Schedule: Fri 10:00 AM - 12:50 PM (Project Studio)