

## EET — Electronics Engr Tech

### **EET 113 Electrical Circuits I** 3 - 3 - 4

This course studies direct and alternating currents, covering resistance and impedance in series, parallel, and series-parallel circuits using OHM's Law, Kirchoff's Laws, and basic circuit theorems. Circuits are analyzed using mathematics and verified using electrical instruments.

### **EET 114 Electrical Circuits II** 3 - 3 - 4

**Prerequisites:** EET 113

This course is a continuation in electrical circuits, including advanced network theorems. Circuits are analyzed using mathematics and verified using electrical instruments.

### **EET 131 Active Devices** 3 - 3 - 4

**Prerequisites:** EET 114

This course studies semiconductor theory & principles, diodes & diode circuits, transistors, transistor circuits, and other components. Circuits are modeled, constructed, & tested.

### **EET 145 Digital Circuits** 3 - 3 - 4

This course studies number systems, basic logic gates, Boolean algebra, logic optimization, flip-flops, counters and registers. Circuits are modeled, constructed, and tested.

### **EET 147 I. C. Circuits** 1 - 3 - 2

**Prerequisites:** EET 131

**Corequisites:** EET 220

This course covers constructing and troubleshooting a series of applicable circuits using integrated circuit chips and other components, including the use of data books and test equipment. Course is offered Fall semester only.

### **EET 210 Digital Integrated Circuits** 3 - 3 - 4

**Prerequisites:** EET 145

This course studies digital integrated circuits, including multiplexers, demultiplexers, buffers, decoders, encoders, converters, memory devices, and programmable logic devices. Circuits are modeled, constructed, and tested.

### **EET 218 Electrical Power Systems** 3 - 3 - 4

**Prerequisites:** EET 114

This course is a study of power generation, transmission, transformers, distribution, and motor controls.

### **EET 220 Analog Integrated Circuits** 2 - 3 - 3

**Prerequisites:** EET 131

This course includes analysis, application, and experiments involving such integrated circuits as op-amps, timers and IC regulators. Circuits are modeled, constructed, and tested.

### **EET 227 Electrical Machinery** 2 - 3 - 3

**Prerequisites:** EET 114

This course studies AC and DC electro-mechanical energy conversion devices, theory, applications and control. Devices are tested and verified using electrical instruments.

### **EET 231 Industrial Electronics** 3 - 3 - 4

**Prerequisites:** EET 227

This course is a survey of topics related to industrial application of electronic devices and circuits. The course covers switches, DC and AC motor controls, sensors and transducers, open and closed loop control circuits and voltage converting interfaces. Circuits are constructed and tested.

### **EET 235 Programmable Controllers** 2 - 3 - 3

**Prerequisites:** EET 145

This course is a study of relay logic, ladder diagrams, theory of operation, and applications. Loading ladder diagrams, debugging, and trouble-shooting techniques are applied to programmable controllers.

### **EET 236 PLC Systems Programming** 2 - 3 - 3

**Prerequisites:** EET 235

This course covers advanced topics in programmable logic controllers (PLC) systems and programming including timing, conversions, analog operations, PID control, auxiliary commands and functions, and PLC to PLC systems communications.

### **EET 243 Data Communications** 2 - 3 - 3

**Prerequisites:** EET 114 and EET 210

This course is a study of the techniques for sending and receiving information. Topics include media characteristics, modulation/demodulation, signal conversions, multiplexing and demultiplexing, protocols, industrial standards, networks, and error detection and correction. Circuits are modeled, constructed and tested.

### **EET 253 Microprocessors** 3 - 3 - 4

**Prerequisites:** EET 210

This course is a study of software and hardware interfacing techniques. Circuits are modeled, constructed, and tested.

### **EET 272 Electronics Senior Seminar** 0 - 3 - 1

**Prerequisites:** EET 147 and EET 220 and EET 231 and EET 235

This course includes various engineering topics, using field trips and discussions with practicing technical personnel. Proper use of test instruments is reinforced.

### **EET 273 Electronics Senior Project** 0 - 3 - 1

**Prerequisites:** EET 147 and EET 220 and EET 231 and EET 235

This course is a study of the construction and testing of an professor-approved project.

**EET 274 Selected Topics in Electrical/ 3-0-3**

**Prerequisites:** *EET 231 and EET 220 and EET 147*

This course is a study of current topics related to electrical electronics engineering technology. Technical aspects of practical applications are discussed.

**EET 275 Intro to Robotics Manuf Tech 2-3-3**

**Prerequisites:** *EET 113 and EET 145*

This course introduces required skills for robotics manufacturing technicians. Instruction includes integrated content from electrical, mechanical, photonic, and geospatial systems. Students will experience industry simulations and practical application of content.