ECET 2111: Circuits II

3 Credit Hours

Prerequisite: ECET 1101 and ECET 1101L

Concurrent: MATH 2202 and ((PHYS 2211 and PHYS 2211L) or (PHYS 1111 and PHYS 1111L))

This course primarily extends the circuit analysis techniques learned in ECET 1101 to circuits containing all three types of passive circuit elements and sinusoidal sources. Several adjunct topics are then presented including analysis of complex networks, dependent sources, transformers, 3-phase circuit analysis, resonance, filters and Bode plots. Laboratory exercises reinforce theoretical concepts presented in the class and provide various opportunities to become proficient in working with standard instrumentation in electrical engineering technology.

ECET 3000: Electrical Principles

4 Credit Hours

Prerequisite: (PHYS 2212 and PHYS 2212L) or (PHYS 1112 and PHYS 1112L)

Covers basic circuit theory including the ac and dc characteristics of resistors, capacitors and inductors as used in elementary single and three-phase circuits. Characteristics of basic industrial electric motors and single and three-phase connections are studied. Basic factory automation is covered including sensors, relay control and programmable logic controllers. Laboratory exercises supplement the material discussed in class. This course cannot be used for credit by CpET or EET majors.

ECET 3398: Internship

4 Credit Hours

Prerequisite: Department Chair Approval.

This course is a structured experience that is related to Electrical and Computer Engineering Technology, in a supervised setting with an industry partner. The goal is for students to enhance their academic classroom skills with practical experiences in a real-world environment. Supervision of the Intern is shared by the working environment supervisor and a faculty advisor.

ECET 3400L: Data Communications Lab

1 Credit Hours

Prerequisite: ECET 2310, and either (PHYS 2212 and PHYS 2212L) or (PHYS 1112 and PHYS 1112L)

Concurrent: ECET 3400

Students simulate and measure the bandwidth properties of signals and the effect of noise on signal quality. Eye patterns and signal constellations are created and measured. Synchronous transmission techniques are examined.