# EET 204 - ELECTRICAL STUDIES II

## Course Description

A systems level approach to electronics and electrical devices will be used to analyze semiconductor applications including integrated circuits, power supplies, transistors, amplifiers, and digital logic families. Circuits will be bench tested, and integrated with others to meet system requirements. Design modifications, circuit improvements, component protection and application to other areas of engineering technology will be emphasized as designs are developed into working prototypes. Group 2 course.

## Credit Hours

3

## Contact Hours

4

## Lecture Hours

2

## Lab Hours

2

## Required Prerequisites

EET 103

## General Education Outcomes supported by this course

Quantitative Reasoning

## Course Learning Outcomes

**Knowledge:**

- Describe the function of a semiconducting device.
- Select components by computing electrical parameters.
- Summarize the operation of a power supply's subcircuits.

**Application:**

- Implement appropriate transistor-switching configurations to drive a specified load.
- Design digital logic control circuits based upon system requirements.

**Integration:**

- Build electronic circuits, comparing actual performance to expected values.
- Integrate subcircuits to create an electrical system with input and output stages.
- Evaluate improvements to semiconducting applications.

**Human Dimension:**

- Follow established best practices to safely work around electrical systems.

**Caring - Civic Learning:**

- Evaluate the effects created by electronic technology on society.

**Learning How to Learn:**

- Implement a developmental process to produce and refine a prototype design.
- Assess resources to facilitate circuit improvements.