EE 2501: Digital Logic Design

4 Credit Hours

Prerequisite: EE 2301 or ENGR 1000

This course is a study of digital circuit fundamentals with an emphasis on combinational and sequential logic design, Boolean algebra and switching theory, logic simplification and implementation using standard digital IC's of various logic families and programmable logic devices. A significant emphasis is placed on the study of digital design principles with emphasis on the use of LSI, MSI, and SSI circuits in the application and design of complex digital systems with a detailed examination of CMOS and TTL at the transistor level. Laboratory exercises reinforce theoretical concepts presented in the lecture utilizing an industry standard micro controller.

EE 3398: Internship

1-4 Credit Hours

Prerequisite: Engineering standing, EE 2302, and (EE 2501 or EE 3401) and permission of the Instructor.

This course is a structured experience that is related to Electrical Engineering, 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.

EE 3401: Engineering Electronics

4 Credit Hours

Prerequisite: EE 2301

This course introduces the basic circuits used in analog signal processing systems. The primary focus will be on studying bias circuits and small signal models for diodes, BJTs and MOSFETs. In addition, functional circuits including diode rectifiers, logic circuits, and basic amplifier circuits using single transistors are discussed. A brief introduction to op-amps as signal processing blocks is included. Students put their analog circuit theory into practice in the laboratory.