EE-2301
EE Lab 1

Catalog Description:

First laboratory course in electrical engineering. Covers aspects of digital systems and digital signal processing. Credits: 1.0  Lec-Rec-Lab: (0-0-2),  Semesters Offered: Fall Spring Summer, Pre-requisites: EE 2150(C) and EE 2170(C)

Textbooks(s) and/or Other Required Materials:

None

Prerequisites by Topic:

None

Course Objectives:

Familiarity with the spectral representation of analog and discrete sinusoids.

Familiarity with FIR and IIR filters.

Familiarity with combinational logic design.

Familiarity with sequential logic design

Familiarity with digital logic implementation technology and CAD tools.

Familiarity with VHDL logic design.
Topics Covered:

1. MATLAB
2. Max + II
3. Complex exponentials and sinusoidal signals
4. Finite Impulse Filters
5. Programmable Logic Device programming
6. VHDL
7. Combinatorial logic design
8. Sequential logic design

Relationship of Course to Program Objectives (See UPAC SOP, Tables 1 and 2):

- **EE:**
  - Objective: 1 via Outcome: b via topic(s): 7, 8
  - Objective: 1 via Outcome: I via topic(s): 3, 4, 5, 6, 7, 8
  - Objective: 4 via Outcome: g via topic(s): 3, 4, 5, 6, 7, 8

- **CpE:**
  - Objective: 2 via Outcome: n via topic(s): 1, 2, 3, 4, 5, 6, 7, 8

Contribution of Course to Meeting the Professional Component (See UPAC SOP, Tables 1 and 2):

N/A

Class/Laboratory Schedule (note: 1 hour = 50 minutes):

- Instructional Lab: 30 hours = (1 session/week @ 2 hours/session) for 15 weeks

Prepared by:

Glen Archer, Lecturer