EE-2303
Introduction to EE Lab

Curricular Designation: CpE: required EE: required

Catalog Description: First laboratory course in Electrical Engineering. Introduces basic concepts of laboratory practice, measurements, instruments, modeling and simulation tools. Credits: 1.0 Lec-Rec-Lab: (0-0-3) Semesters Offered: Fall Spring Summer

Textbooks(s) and/or Other Required Materials:
None

Prerequisites by Topic:
None

Course Objectives:
Introduction to and practice of lab safety and lab procedures
Introduction to and practice of electronic measurement techniques and equipment, including oscilloscopes, arbitrary function generators and multimeters.
Introduction to and practice of circuit simulation and schematic capture techniques
Introduction to electronic components and practice of breadboard circuit construction techniques
Introduction to and practice of Matlab programming
Introduction to and practice of LabVIEW programming
Topics Covered:

1. Lab Safety Lab Procedures
2. Electronic Measurement Equipment
3. Circuit Measurement Techniques
4. Circuit Simulation using P-SPice
5. System Modeling using LabVIEW
6. Electronic Components
7. Circuit Construction Techniques
8. Matlab Programming
9. Current Topics in Electrical Engineering; Oral Presentation Assignment
10. Book Review; Writing Assignment

Relationship of Course to Program Objectives

**EE:**
- Outcome: a via topic(s) (2-10)
- Outcome: b via topic(s) (2-10)
- Outcome: g via topic(s): 9, 10
- Outcome: k via topic(s): (1-8)

**CpE:**
- Outcome: a via topic(s) (2-10)
- Outcome: b via topic(s) (2-10)
- Outcome: g via topic(s): 9, 10
- Outcome: k via topic(s): (1-8)

Contribution of Course to Meeting the Professional Component

**EE:** Engineering Topics

**CpE:** Engineering Topics

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

Instructional Lab: 45 hours = (1 session/week @ 3 hours/session) for 15 weeks

Prepared by:

Glen Archer, Lecturer, February 19, 2004