EE-3302
EE Lab 4

Catalog Description:
Fourth laboratory course in electrical engineering. Covers electronics and its applications to communications Credits: 1.0 Lec-Rec-Lab: (0-0-2) Semesters Offered: Fall Spring Prerequisites: EE 3130(C) and EE 3150(C)

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

Prerequisites by Topic:
Familiarity with the operation of electronic devices such as diodes, op-amps, BJTs and MOSFETs.
Familiarity with the analysis of electronic circuits using diodes, op-amps, BJTs and MOSFETs.
Familiarity with the design and analysis of electronic systems using integrated circuits and discrete devices such as diodes, op-amps, BJTs and MOSFETs.
Familiarity with the ability to design experiments, implement, analyze and report results.

Course Objectives:
1. Familiarity with electromechanical energy conversion, single and three phase
2. Familiarity with digital and analog communications systems
Topics Covered:

1. Power Lab Safety and energy conversion basics
2. Advanced measurement equipment orientation
3. Balanced 3-phase circuits
4. AM, FM, PSK Mod/Demod schema
5. Photovoltaic energy conversion
6. Single and three phase transformers
7. A to D Conversion, Intro to Lab View
8. Induction motor performance

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

- EE: Objective: 1 via Outcome: b via topic(s): 1, 2, 3, 4, 5, 6, 7, 8
  Objective: 1 via Outcome: l via topic(s): 1, 2, 3, 4, 5, 6, 7, 8
  Objective: 4 via Outcome: g via topic(s): 1, 2, 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:
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