EEO353: Electronics Laboratory II

Spring 2014

2013-2014 Catalog Description:

Electronics Laboratory II builds upon Electronics Laboratory I and covers optoelectronic devices, such as, ir LED and photo-transistor; advanced circuit concepts, such as, negative feedback and differential amplifier; and oscillator circuits. There are three design projects: multi-stage amplifier project, radio frequency project, and micro controller project. Students also practice how to communicate effectively through writing reports. (3 credits)

Course Designation: Required

Text Book: Laboratory Manual posted on Blackboard

Prerequisites: EEO352

Instructor: Pao-Lo Liu, (716) 645-1021, paololiu@buffalo.edu

Goals: Students learn more advanced concepts and applications of electronic circuits.

Objectives: After successfully completing the course, students will be ready to: 1) design application circuits meeting specific design goals, 2) ready to conduct design projects and deliver project presentations.

Topics Covered:

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<th>Activity 1</th>
<th>Negative Feedback and Push-Pull Amplifier</th>
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Class/laboratory Schedule: 4 hour laboratory per week
Student Outcomes and Assessment

✓ (a) an ability to apply knowledge of mathematics, science and engineering 10
✓ (b1) an ability to design and conduct experiments 20
✓ (b2) an ability to analyze and interpret data 10
✓ (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
✓ (d) an ability to function on multi-disciplinary teams
✓ (e) an ability to identify, formulate, and solve engineering problems
✓ (f) an understanding of professional and ethical responsibility 10
✓ (g) an ability to communicate effectively 20
❑ (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
❑ (i) a recognition of the need for, and an ability to engage in life-long learning
❑ (j) a knowledge of contemporary issues
❑ (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
❑ Any other outcomes and assessments?
❑ (l) an ability to communicate and/or collaborate effectively online

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