

## **ECE 4333: Project Laboratory IV**

**Credit / Contact hours:** 3 / 3

**Course coordinator:** Brian Nutter

**Textbook(s) and/or other required material:**

**Electric Safety: Practice and Standards;** Mohamed A. El-Sharkawi; CRC Press; 2013; ISBN-10: 1466571497; ISBN-13: 978-1466571495

**Catalog description: Project Laboratory II (3:0:9).** Prerequisite: ECE 3333. For majors only or departmental consent. A laboratory course to accompany fourth-year courses in electrical or computer engineering. (Writing Intensive)

**Pre-requisite(s) or co-requisites:** ECE 3333. EE, EECS, and CMPE majors only.

**Designation:** Required

**Course learning outcomes:** Upon completion of this course, students should be able to do the following:

1. Identify, analyze and solve practical electrical or computer engineering problems by applying knowledge of mathematics, science and engineering with modern engineering tools
2. Design a system, component or process to meet desired needs within realistic constraints
3. Communicate effectively through oral presentations and group discussions
4. Communicate effectively through written reports and other documents
5. Design and conduct scientific and engineering experiments, and to analyze and interpret the resulting data
6. Function and communicate effectively, both individually and within multidisciplinary teams
7. Interact with other students, faculty and practicing professionals on professional and ethical responsibility issues
8. Recognize the need for, and ability to engage in, perpetual learning by working on projects, both individually and within multidisciplinary teams, for which they have no prior experience and developing ways to learn
9. Use basic statistical techniques to analyze data
10. Pass the basic Fundamentals of Engineering test

**ABET Student Outcomes addressed:** a, b, c, d, e, f, g, h, i, j, and k.

**Topics covered:**

Students, working alone or together in teams of two or more, are required to perform research on or design, construct and test a complex engineering system to meet given specifications. Each team is required to submit written and oral reports. Each student makes oral presentations, on an approximately weekly basis, as is indicated in the schedule. Written feedback is provided for all oral presentations and written reports concerning communication style, effectiveness and technical content.