**ELEN 4015: Advanced Electrical Engineering Laboratory**

**Class Schedule:** 3 Credit course, meeting the equivalent of 2-50 minute class periods per week and 1-2 hour 50 minute laboratory per week.

**Course Coordinator**: EECE Department Chair or Director of Undergraduate Studies

**Course Materials:** To be selected based on course topics

**Course Description:**

Project-based laboratory experience in the design, assembly and testing of advanced electronic and electrical systems. Course content is announced prior to each semester. Students may enroll in the course more than once as the content of the course changes. Possible topics for the advanced laboratory experience include (but are not limited to) advanced electromagnetic system design, optical and high frequency electronics, nonlinear control systems, motor control circuits and systems, power electronics, communications circuits, integrated microelectronic circuit design and fabrication (VLSI), advanced analog system design, advanced digital system design, microprocessor system-level design. Instruction and use of the appropriate test and measurement s tools for design, assembly and testing of systems.

**Prerequisites**: Consent of instructor

**Elective** course in the Electrical Engineering Program and the Computer Engineering program.

**Contribution to Professional Component**: Engineering Science (% determined by topic)

Engineering Design (% determined by topic)

**Course Goals:** Specific to topic being taught

**Course Objectives:**

*By the end of this course, you should....*

1. This list is to be developed for each section of ELEN 4015 / EECE 5015offered.

**Contribution to Program Objectives**: partial fulfillment of Criterion 3 objectives A and K

Other objectives may be met depending upon course topic.

**Course Topics:**

Particular topic(s) to be chosen at time of course offering.