

## **ECE 1304: Introduction to Electrical and Computer Engineering**

**Credit / Contact hours:** 3 / 3 per week

**Course coordinator:** Hamed Sari-Sarraf

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

**Catalog description:** Introduction to the electrical and computer engineering disciplines including familiarization with relevant design tools. Overview of the profession, contemporary issues, and ethics.

**Pre-requisite(s):** MATH 1451 (may be taken concurrently), 2.0 GPA

**Co-requisites (if any):** None

**Designation:** Required

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

1. Write Matlab programs to solve simple engineering problems
2. Solve problems in Matlab involving simple signal processing concepts
3. Analyze simple electric circuits
4. Analyze issues involving professional ethics in engineering

**ABET Student Outcomes addressed in course:** a, e, f, and k.

### **Topics covered**

Sequential Programming Structures in Matlab – 4 weeks

1-D and 2-D arrays in Matlab – 2 week

1-D and 2-D Signal Analysis with Matlab – 3 weeks

Electric Circuit analysis and Design – 4 weeks

Engineering Profession and Ethics – 1 week