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