ECE 3301: General Electrical Engineering

Credit / Contact hours: 3 / 3

Course coordinator: Mary Baker


Catalog description: Analysis of electric circuits. Introduction to electronic instrumentation and electromechanics. For non-majors only.

Pre-requisite(s) or co-requisites: MATH 1352 Designation: Non-major course

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

1. Analyze linear electric circuits to determine DC response.
2. Analyze linear electric circuits to determine AC response.
3. Analyze linear electric circuits to determine basic transient response.
4. Demonstrate basic knowledge of digital logic circuits.
5. Demonstrate basic knowledge of electronic instrumentation.
6. Demonstrate basic knowledge of electric machines.

ABET Student outcomes addressed: a, e, and k (This course is not taken by EE and CMPE students).

Topics covered:

Electric-circuit fundamentals – 3 hours
Resistive networks, DC analysis – 8 hours
Capacitance and inductance – 3 hours
AC analysis – 8 hours
Transient analysis – 3 hours
Transformers – 1 hour
Operational amplifiers – 3 hours
Digital logic circuits – 3 hours
Topics in electronic instrumentation – 3 hours
Introduction to electric machines – 3 hours
Tests and reviews – 4 hour