

ECE 3302: Fundamentals of Electrical Engineering

Credit / Contact hours: 3 / 3

Course coordinator: Mary Baker

Textbook(s) and/or other required material: Alexander and Sadiku, Fundamentals of Electric Circuits, 4th Edition, McGraw Gill, 2009.

Catalog description: Principles of electric circuits. DC, transient, and sinusoidal steady-state analysis.

Pre-requisite(s) or co-requisites: MATH 1352.

Designation: Required

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 transient response.
3. Analyze linear electric circuits to determine sinusoidal steady-state response, including power and energy storage.

Student outcomes addressed: a, e, and k.

Topics covered:

Circuit concepts – 3 hours

Circuit analysis – 9 hours

Capacitance and inductance – 3 hours

Transient response – 9 hours

AC circuit analysis – 9 hours

AC power – 3 hours

Reviews and exams – 9 hours