

Engineering 37: Introduction to Circuit Analysis

Section 37.61, Winter 2017

I. General Information:

Instructor: Taylor Kidd

Class Days/Time: Monday and Wednesday: 6:30 PM - 8:45 PM

Location: Lecture in S-48

Office Hours: Monday through Thursday: 9:00 AM to 9:30 AM

Monday and Wednesday: 6:00 PM to 6:30 PM

Email: kiddtaylor@fhda.edu

The information in this syllabus is subject to change with notice.

II. Course Description

Description: Introduction to the analysis of lumped, linear, bilateral circuits. Basic equations, elementary network differential equations; natural and forced response of simple circuits. Development of steady state sinusoidal circuit analysis for the network differential equations.

III. Course Objectives

- A. Identify basic concept and circuit elements.
- B. Analyze resistive circuits
- C. Apply nodal and loop Analysis
- D. Calculate capacitance and inductance
- E. Analyze first and second order transient circuits
- F. Examine AC steady-state analysis: current and voltage across elements

IV. Student Learning Outcome

At the end of this course, students will be able to:

The student will be able to analyze circuits containing resistive, capacitive, inductive passive elements, along with op-amps interconnected to voltage and current sources.

The student will be able to use circuit laws and network theorems to solve DC steady state circuits, RC, RL, and RLC DC circuit transients and sinusoidal AC steady state circuits.

V. Assignments

- A. Required reading in the textbook
- B. Solution of assigned problems

VI. Lab Topics

No lab associated with this course.

VII. Text

Fundamentals of Electric Circuits, Charles Alexander, Matthew Sadiku. MacGraw-Hill 5th Ed. 2013

VIII. Attendance

Attendance is mandatory. More than two unexcused absences is cause for being dropped from the class. Class activities can't be made up if the class is missed.

IX. Communication

Please discuss homework problems and course material during office hours.

X. Essential Student Material

Matrix capable calculator

Scientific calculator (TI 89 recommended)

XI. Grading:

Coursework will be weighted as follows:

What	Percent
Homework	10
Quizzes	5
Attendance	5
Tests (final)	40
Tests (#2)	20
Tests (#1)	20

Note: The above weighting is subject to change, with fair notice given in class. The final course grades will be graded on a curve: