

Engineering 37: Introduction to Circuit Analysis

Physical Sciences, Mathematics, and Engineering (PSME) Division

Winter 2019

Instructor: Dr. Henry Wang

Class Days/Time: MW: 6:30-8:45 PM

Location: S48

Office Hours: MW 6-6:30 PM

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Course Description

Pre-requisites

Math 1D and Physics 4B strongly recommended. Strong algebra skills.

Required Textbook

Principles of Electric Circuits – conventional current version by Thomas L. Floyd, 9th Edition. Prentice Hall, an imprint of Pearson. 2010

Materials

Scientific Calculator (TI-89 recommended)

Logistics

Attendance is mandatory

Arrive to class on time

Cell phones must be turned off

Circuit Analysis Course Schedule & Calendar

Note that the schedule below is subject to change

Week	Date	Topic [Readings]
1	1/7	Introduction
	1/9	Chapter 1: Quantities and Units [1-1 to 1-5]
2	1/14	Chapter 2: Voltage, Current, and Resistance [2-1 to 2-7]
	1/16	
3	1/21	Holiday
	1/23	Chapter 3: Ohm's Law [3-1 to 3-4]
4	1/28	
	1/30	Intel Museum visit
5	2/4	Chapter 4: Energy and Power [4-1 to 4-4]
	2/6	
6	2/11	Chapter 5: Series Circuits [5-1 to 5-8]
	2/13	
7	2/18	Holiday
	2/20	Chapter 6: Parallel Circuits [6-1 to 6-8]
8	2/25	
	2/27	Chapter 7: Series-Parallel Circuits
9	3/4	Chapter 8: Circuit Theorems and Conversions [8-5 to 8-8]
	3/6	
10	3/11	Chapter 9: Branch, Loop, and Node Analysis [9-1 to 9-4]
	3/13	
11	3/18	Review
	3/20	Final Exam

Grading: Homework 20%, midterm 15%, final exam 65%. These weights are approximate; we reserve the right to change them later.

Student Learning Outcome(s):

*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.