

Week	Topics	Book	Lab
1	Voltage, Current, Batteries, Mechanical Switches, power, reference directions Resistance and Ohm's law, KCL, KVL Series, parallel resistors	Chap 1, 2	No lab first week.
2	Simple resistor circuits, nodal analysis Voltage/current dividers, Thevenin-Norton source transformations, superposition and linearity theorems	Chap 2	Lab 1: Ohm's law, DMM, resistive circuits.
3	More nodal analysis Some basic linear algebra (solving simultaneous equations), Nonlinear load, source load line, maximum power transfer	Chap 3	2: Verifying KCL, KVL, superposition, Thevenin. Sources, resistors, diode, lamp
4	Simple waveform concepts (square-waves, pulse, sinewaves), Average and RMS values, DC offset. Dependent sources, gain definitions, circuit analysis with controlled sources	Chap 4, 5	3: Intro to oscilloscope and function generator. Sinusoidal signals. Use of diode as a rectifier.
5	** Mid-Term ** In class 10/29. Lecture: Controlled sources, Introduction to op-amps	Chap 4	No Lab this week
6	More op-amps, gain concepts, differential amplifiers, comparator Capacitors & Inductors,	Chap 4, 6	4: Simple Op-amp gain stages, comparators
7	Veterans Day holiday, 11/12. No Mon. Lab 5. Capacitors & Inductors, 1 st -order transient circuits and time constants, step response,	Chap 6, 7	5: Additional op amp circuits/temp sensing, thermistor
8	Mon. Lab 5 meets this week. Second order circuits. AC circuit concepts, transient vs. steady-state analysis, phasors and complex numbers No class on 11/21.	Chap 7, 8 Appendix C	5: Additional op amp circuits/temp sensing, thermistor
9	Complex numbers. impedance/admittance, More steady-state AC analysis, resonance Emphasize nodal analysis	Chap 8	6: 1 st order RC and RL circuits
10	More steady-state AC analysis, filter concepts	Chap 8	TBD

Final Exam: Friday, 12/14 12 – 3.