

University of Delaware
Department of Electrical and Computer Engineering

ELEG 205 Linear Circuit Theory (Tentative) Course Syllabus
Prof. Daniel S. Weile

Lecture	Date	Topic
1	Sept. 1	Intro. Units, circuit elements, current, voltage, and power. Simple circuits. Ohm's Law.
2	Sept. 3	Kirchoff's Laws.
3	Sept. 8	Parallel and serial combination of elements. Voltage and current division. Op-amps.
4	Sept. 10	Nodal analysis. Matrices.
5D	Sept. 14	Lab #1
6	Sept. 15	Matrices, determinants, and the (orderly) solution of linear equations. Mesh analysis.
7	Sept. 17	Linearity and superposition. Source transformations.
--	Sept. 21	Hour Exam #1
8	Sept. 22	Source transformations.
9	Sept. 24	Thévenin and Norton equivalents.
10D	Sept. 28	Inductors and capacitors.
11	Sept. 29	Storage element combination. Duality. RL circuits.
12	Oct. 1	RL and RC circuits.
13D	Oct. 5	Lab #2
14	Oct. 6	Unit step forcing function. Simple time-dependent sources.
15	Oct. 8	Forced and natural response of circuits. Complex Numbers.
16D	Oct. 12	Lab #3
17	Oct. 13	RLC circuits.
18	Oct. 15	RLC circuits.
--	Oct. 19	Hour Exam #2
19	Oct. 20	Sinusoidal forcing function.
20	Oct. 22	Phasors.
21D	Oct. 26	Lab #4
22	Oct. 27	Phasors.
23	Oct. 29	Sinusoidal steady state response. Phasor circuit analysis.
24D	Nov. 2	Phasor circuit analysis. Phasor diagrams.
--	Nov. 3	Power.
25	Nov. 5	Effective current and voltage. Complex power.
26D	Nov. 9	Frequency response.
27	Nov. 10	Bode Plots
28	Nov. 12	Lab #5
29D	Nov. 16	The complex frequency plane, and damped sinusoidal function.
30	Nov. 17	Network synthesis. Resonance.
31	Nov. 19	Resonance. Scaling.
--	Nov. 23	Hour Exam #3
32	Nov. 24	Mutual Inductance.

--	Nov. 27	NO CLASS—THANKSGIVING
33D	Nov. 30	Lab #6
34	Dec. 1	Transformers.
35	Dec. 3	Transformers. Fourier Series.
36D	Dec. 7	Fourier Series.
37	Dec. 8	Review
