

### Course Schedule and Assignments for ELC 3337 - Spring 2009

Date	Day	Lect.	Lecture Topics	Chapter	Pages	Problems
1/13	T	1	Introduction, Traveling Waves	1	18-26	1.7all, 1.8all, 1.10
1/15	R	2	Traveling Waves (Part 2), The Electromagnetic Spectrum	1	26-31	1.12all,
1/20	T	3	QUIZ 1, Complex Numbers, Phasors	1	31-34	1.22all
1/22	R	4	Transmission Lines, Lumped Element Model, Transmission Line Equations, Wave Propagation on a Transmission Line	2	41-53	2.1all, 2.3, 2.5
1/27	T	5	QUIZ 2, The Lossless Transmission Line	2	53-61	2.9, 2.12all, 2.13
1/29	R	6	Input Impedance of the Lossless Line, Special Cases	2	61-70	2.17, 2.23all, 2.26all, 2.29
2/3	T	7	QUIZ 3, Power Flow on a Lossless Transmission Line	2	70-72	2.31all, 2.34
2/5	R	8	The Smith Chart	2	72-88	2.35all, 2.36all, 2.38all, 2.39all
2/10	T	9	QUIZ 4, Impedance Matching Review of Vector Algebra, Coordinate Systems	2 3	88-92 109-127	2.45, 2.46, 2.47, 2.48, 2.49 3.5all, 3.22c, 3.23b, 3.31c
2/12	R	10	Gradient, Divergence, Curl, Laplacian Operations	3	130-140	3.32all, 3.41all, 3.45all
2/17	T	11	QUIZ 5, Gradient, Divergence, Curl, Laplacian (Part 2)	3	140-143	3.49all
2/19	R		EXAM 1, Chapters 1-3, Closed Book, Closed Notes, Formula Sheet Provided			
2/24	T	12	Maxwell's Equations, Charge and Current Distributions	4	151-154	4.1, 4.7
2/26	R	13	Coulomb's Law	4	155-160	4.11, 4.13all
3/3	T	14	QUIZ 6, Gauss's Law, Electric Scalar Potential, Properties of Materials, Conductors, Dielectrics	4	160-177	4.21all, 4.27all, 4.29all, 4.35, 4.37all
3/5	R	15	Electric Boundary Conditions, Capacitance, Electrostatic Potential Energy, Image Method	4	177-193	4.43, 4.44, 4.47, 4.49all 4.54all
3/10, 3/12			NO CLASS: Spring Break			
3/17	T	16	QUIZ 7, Magnetic Forces and Torques, Biot-Savart Law, Magnetic Force between Two Parallel Conductors, Maxwell's Magnetostatic Equations, Vector Magnetic Potential	5	209-228	5.3; 5.5all, 5.7, 5.8, 5.15, 5.18, 5.21all
3/19	R	17	Magnetic Properties of Materials, Magnetic Boundary Conditions, Inductance, Magnetic Energy	5	228-244	5.25a,b, 5.31, 5.33, 5.35, 5.37
3/24	T	18	QUIZ 8, Faraday's Law, Stationary Loop in a Time-Varying Magnetic Field, The Ideal Transformer	6	255-262	6.2, 6.3all, 6.5, 6.6all
3/26	R	19	EXAM 2, Chapters 4-5, Open Book, Open Notes			
3/31	T	20	Moving Conductor in a Static Magnetic Field, The Electromagnetic Generator, Moving Conductor in a Time-Varying Magnetic Field, Displacement Current	6	262-270	6.7, 6.11, 6.15
4/2	R	21	Boundary Conditions, Charge-Current Continuity, Free-Charge Dissipation Time-Harmonic Fields, Plane-Wave Propagation in Lossless Media	6 7	270-273 287-295	6.19 7.1all, 7.2, 7.3all, 7.4all
4/7	T	22	QUIZ 9, Wave Polarization, Plane-Wave Propagation in Lossy Media (Part 1)	7	295-306	7.7, 7.9
4/9	R	23	Plane-Wave Propagation in Lossy Media (Part 2)	7	306-308	7.15all, 7.21, 7.22
4/14	T	24	QUIZ 10, Current Flow in a Good Conductor, Electromagnetic Power Density	7	308-315	7.24all, 7.25, 7.27all
4/16	R	25	Wave Reflection and Transmission at Normal Incidence	8	321-331	8.1all, 8.4all, 8.5all, 8.10
4/21	T	26	QUIZ 11, Snell's Laws, Fiber Optics	8	331-336	8.17, 8.19
4/23	R		NO CLASS: Diadeloso			
4/28	T	27	Oblique Incidence, Wave Reflectivity and Transmissivity, Waveguides	8	336-351	8.26all, 8.27, 8.28, 8.30all, 8.33
4/30	R	28	QUIZ 12, Short Dipole, Antenna Radiation Characteristics	9	373-387	To Be Announced
5/8	F		FINAL EXAM (Friday, May 8, 9:00 – 11:00 a.m.)			