

### Course Schedule and Assignments for ELC 4383 – Fall 2019

Date	Day	Lect.	Lecture Topics	Chapter	Pages	Problems
8/27	T	1	Syllabus, Preliminaries, Introduction to Microwave Engineering, The Lumped-Element Circuit Model for a Transmission Line	1 2	1-6 48-51	- 2.1,2.2
8/29	R	2	The Terminated Lossless Transmission Line (Part 1)	2	56-59	2.8, 2.12
8/30	F/M		NO LABS: Labor Day Holiday			
9/3	T	3	QUIZ 1, The Terminated Lossless Transmission Line (Part 2)	2	59-63	2.11
9/5	R	4	The Terminated Lossless Transmission Line (Part 3)	2	Examples	2.16, 2.18
9/6	F,M		LAB 1: Time and Frequency Domain Measurements			
9/10	T	6	QUIZ 2, Smith Chart (Part 1)	2	63-67	2.20
9/12	R	7	Smith Chart (Part 2), Quarter-Wave Transformer, Mismatches, Lossy T-Lines	2	67-85	2.21, 2.14, 2.29
9/13	F,M		LAB 2: Vector Network Analyzer Measurements			
9/17	T	8	QUIZ 3, Impedance and Admittance Matrices, The Scattering Matrix	4	174-181	4.7, 4.11, 4.28
9/19	R	9	The Scattering Matrix (Part 2)	4	181-184	-
9/20	F,M		LAB 3: Basic Operations Using Advanced Design System Software			
9/24	T	10	QUIZ 4, Scattering Matrix (Part 3)	4	184-188	4.12, 4.13, 4.15
9/26	R	11	The Transmission (ABCD) Matrix, T-Line Types	5	188-194	4.19
9/27	F,M		LAB 4, Part 1: Quarter-Wave Impedance Matching Network			
10/1	T	12	QUIZ 5, Matching with Lumped Elements (L Networks)	5	228-234	5.1, 5.2
10/3	R	13	Single-Stub Tuning	5	234-241	5.3, 5.6 (Use shunt stub.),5.7
10/4	F,M		LAB 4, Part 2: Quarter-Wave Impedance Matching Network			
10/8	T	14	QUIZ 6, The Quarter-Wave Transformer, The Theory of Small Reflections, Binomial Multisection Matching Transformers	5	246-256	5.13, 5.16, 5.18
10/10	R	15	Basic Properties of Dividers and Couplers	7	317-324	7.3, 7.4
10/11	F,M		LAB 5: Circuit Tuning and Electromagnetic Simulation			
10/15	T		MIDTERM EXAM – Chapters 2, 4, and 5			
10/17	R	16	The Quadrature Hybrid (Part 1)	7	343-345	-
10/18	F,M		LAB 6: Quadrature Hybrid Coupler			
10/22	T	17	QUIZ 7, The Quadrature Hybrid (Part 2)	7	345-347	-
10/24	R	18	Coupled-Line Directional Couplers	7	347-359	7.22, Old Quiz Questions
10/25	F,M		NO LABS: Fall Break			
10/29	T	19	QUIZ 8, The T-Junction Power Divider	7	324-328	7.6
10/31	R	20	The Wilkinson Power Divider	7	324-328	7.10
11/1	F,M		LAB 7: Microstrip Coupled-Line Coupler			
11/5	T	21	QUIZ 9, Filter Design by the Insertion Loss Method (Part 1);	8	399-402	-
11/7	R	22	Filter Design - Insertion Loss Method (Part 2), Filter Transformations	8	402-415	8.8 (no plot), 8.9 (no plot), 8.10
11/8	F,M		LAB 8: Lumped-Element Low-Pass Filter			
11/12	T	23	QUIZ 10, Stepped Impedance Low-Pass Filters, Coupled Line Filters	8	422-436	8.19
11/14	R	24	Series and Parallel Resonant Circuits, RF Diode Characteristics	6 11	272-278 524-540	6.1 11.1
11/15	F,M		LAB 9: Stepped-Impedance Low-Pass Filter			
11/19	T	25	QUIZ 11, Mixers	13	637-654	13.15, 13.17, 13.21
11/21	R	26	Superheterodyne Receiver	Handout	Handout	Handout
11/22	F,M		LAB 10: Mixer Measurements			
11/26	T	27	QUIZ 12, Diodes (Part 1)	Handout	Handout	Handout
11/28	R		NO CLASS: Thanksgiving Break			
12/3	T	28	QUIZ 13, Diodes (Part 2)	Handout	Handout	Handout
12/5	R	29	Final Exam Review			
12/12	R		FINAL EXAM: Cumulative, 4:30 p.m. – 6:30 p.m.			