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Text Book: Electric Circuits (6th Ed.), by James W. Nilsson and Susan A. Riedel

Ref Books: 1- Engineering Circuit Analysis (6th ed.) by W.H. Hayt, J.E. Kemmerly, and S. Durbin
2- Electronic Devices and Circuit Theory (7th ed.) by R. Boylestad and L. Nashelsky

Chapter 7 - Response of First-Order RL and RC Circuits

- 7.1 The natural response of an RL circuit
- 7.2 The natural response of an RC circuit
- 7.3 The step response of RL and RC circuits
- 7.4 A general solution for step and natural responses
- 7.5 Sequential switching

Chapter 8 – Natural and Step Responses of RLC Circuits

- 8.1 Introduction to the natural response of a parallel RLC circuit
- 8.2 The forms of the natural response of a parallel RLC circuit
- 8.3 The step response of a parallel RLC circuit
- 8.4 The natural and step responses of a series RLC circuit

Chapter 11 - Balanced Three-Phase Circuits

- 11.1 Balanced three-phase voltages
- 11.2 Three phase voltage sources
- 11.3 Analysis of the Wye-Wye circuit
- 11.4 Analysis of the Wye-Delta circuit
- 11.5 Power calculations in balanced three-phase circuits

Chapters 6 and 9 –Mutual Inductance

- 6.1 The inductor
- 6.4 Mutual inductance
- 6.5 A close look at mutual inductance
- 9.11 The ideal transformer

Chapter 18 – Two-Port Circuits

- 18.1 The terminal equations
- 18.2 The two-port parameters
- 18.3 Analysis of the terminated two-port circuit

Chapter 13 – The Laplace Transform in Circuit Analysis

- 13.1 Circuit elements in the s domain
- 13.2 Circuit analysis in the s domain
- 13.4 The transfer function

Chapter 14 – Introduction to Frequency Selective Circuits

- 14.1 Some preliminaries
- 14.2 Low pass filters
- 14.3 High pass filters
- 14.6 Bode diagrams

Chapter 16 –Frequency Response (Ref#1)

- 16.1 Introduction
- 16.2 Parallel resonance
- 16.3 More about parallel resonance
- 14.6 Series resonance

Chapter 1, 2&14 – Introduction to Electronic Circuits (Ref#2)

- 14.3-4 The ideal operational amplifier and applications (pp.615-622)
- 1.2 The ideal diode
- 2.7 Half-wave Rectification
- 2.9 Clipping

Grading	Two midterm exams	46
	Quizzes & Homework	10
	Attendance	4
	Final Exam	40

Attendance A student absent for more than 25% of lectures will not be allowed to appear in the final exam. This policy will be strictly enforced without any exception.

EE202 Course Schedule:

Week#	Lec. #	Topics	Text	Ref 1	Ref 2
1	1	2.1 The natural response of the RL circuit	7.1		
	2	2.1 The natural response of the RL circuit	7.1		
	3	2.2 The natural response of the RC circuit	7.2		
2	4	2.3 The step response of RL and RC circuits	7.3		
	5	2.3 The step response of RL and RC circuits	7.3-4		
	6	2.4 General solution	7.4		
3	7	2.5 Sequential switching	7.5		
	8	3.1 Natural response of a parallel RLC circuit	8.1		
	9	3.2 The forms of the natural response	8.2		
4	10	3.2 The forms of the natural response	8.2		
	11	3.3 The step response of a parallel RLC circuit	8.3		
	12	3.4 Natural and step responses of series circuit	8.4		
5	13	1.1 Balanced three-phase voltage sources	6.1		
	14	1.2 Analysis of the Wye-Wye circuit	11.1-2		
	15	1.2 Analysis of the Wye-Wye circuit	11.3		
6	16	1.3 Analysis of the Wye-Delta circuit	11.3		
	17	1.4 Power in balanced three-phase circuit	11.4		
	18	4.1 A review of self-inductance	11.5		
Mid-Term Exam I					
7	19	4.2 The concept of mutual inductance	6.4		
	20	4.3 The concept of mutual inductance	6.4		
	21	4.4 Closer look at mutual inductance	6.5		
8	22	4.5 Polarity of mutually induced voltages	6.5		
	23	4.6 The ideal transformer	9.11		
	24	4.6 The ideal transformer	9.11		
9	25	5.1 The terminal equations	18.1		
	26	5.2 The two-port parameters	18.2		
	27	5.2 The two-port parameters	18.2		
10	28	5.3 Analysis of the terminated two-port circuit	18.3		
	29	6.1 Definition of Laplace transform and transfer function	12.1,13.1,13.4		
	30	6.2 Introduction to frequency response	14.1		
11	31	6.3 Low pass filters	14.2		
	32	6.4 High pass filters	14.3		
	33	6.4 Bode plots	14.6		
12	34	6.4 Introduction to resonance		16.1	
	35	6.5 Series resonance		16.2,16.3	
	36	6.5 Parallel resonance		16.4	
Mid-Term Exam II					
13	37	7.1 The ideal Operational Amplifier and its applications			14.3-4
	38	7.2 The ideal diode and half-wave rectification			1.2,2.7
	39	7.3 Clipping			2.9

Text Book = Nilsson 6th ed., Ref.1 = Hayt & Kemmerly 6th ed., Ref.2 = Boylestad & Nashelsky 7th ed.