

Electric Circuits II
EELE 2302
Course Syllabus

“Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof.”

Galbraith's Law

Prerequisite:	Electric circuits I
Instructor	Dr. Hala J. El-Khozondar Office: E204 E-mail: hkhonzondar@iugaza.edu
Meetings	Room L501 on Sunday and Tuesday from 9:30-11:00
Teaching Assistant	Eng. Faysal Al Malfooh
Topics	Sinusoidal steady state analysis, power calculation in sinusoidal circuits, complex power, balanced three phase circuits, Laplace transform, circuit analysis using Laplace transform, low-pass filters, high-pass filters, band-pass filters, band-reject filters, Bode diagram, tow-port circuits.
Textbook	James W. Nilsson & Susan A. Riedel, Electric Circuits, 7 th ed.
References	<ul style="list-style-type: none">▪ William H. Hayt and Jack E. Kemmerly, Engineering Circuit Analysis, 3rd ed., 1993.▪ J. David Irwin, Basic Engineering Circuit Analysis, 3rd ed., 1990.▪ L. S. Bobrow, Elementary Linear Circuit Analysis, 2nd ed., 1987.▪ D. Bell, Fundamentals of Electric Circuits, 2nd ed., 1981.▪ Joseph A. Edminister, Electric Circuits , 2nd ed. , Schaum's outline Series, 1983.
Course Objectives	<ul style="list-style-type: none">▪ To know the single-phase sinusoidal circuit behavior▪ To know the average- & complex power in single-phase sinusoidal circuits▪ To be familiar with the balanced three-phase circuit analysis▪ To be familiar with the Laplace transform▪ To be able to solve circuits applying the Laplace transform▪ To be able to analyze the low-pass, high-pass, band-pass, and band-reject filter circuits▪ To recognize the parameters of the two-port networks
Intended Learning Outcomes	<ul style="list-style-type: none">▪ To analyze single-phase sinusoidal circuits▪ To calculate the average and complex power in single-phase sinusoidal circuits▪ To analyze balanced three-phase circuits applying single-phase equivalent circuit▪ To find the functional and operational Laplace transform of different

	<ul style="list-style-type: none"> functions ▪ To apply the Laplace transform in electric circuit analysis ▪ To obtain the response of various types of passive filter circuits ▪ To analyze two-port networks
Assessment	Midterm Exam (35%) Assignments (10%) Quizzes (10%) Final Exam (45%)
Homework Policy	Homework assignments will be given in a regular basis. Each assignment is to be returned within one week. <i>No delay will be accepted except with good excuse.</i>
Office Hours	Open-door policy, by appointment, or as posted

Course outline:

Teaching starts on Saturday: January 28, 2006 and ends on Monday: May, 15, 2006
(15 weeks)

Chapter number and Title	Number of Weeks (number of meetings)	Homework problems
Chapter 9 Sinusoidal Steady-State Analysis	2 (4 meeting)	2, 3,14, 19, 35, 39, 46, 52, 63, 71
Chapter 10 Sinusoidal Steady-State Power Calculation	2 (4 meeting)	8, 14, 33, 38, 44, 57, 61, 65
Chapter 11 Balanced Three Phase Circuits	2 (4 meetings)	3,5, 13, 16, 20, 26, 39
Midterm Tuesday, March 21 11:00-12:30		
Chapter 12 Introduction to Laplace Transform	4 (8 meetings)	1, 8, 11, 24, 27, 33, 35, 40, 50
Chapter 13 The Laplace Transform in Circuit Analysis	2 (4 meetings)	8, 12, 14,28, 31, 40, 54, 88
Chapter 14 Introduction to Frequency Selective Circuits	3 (6 meetings)	3, 6, 19, 20, 23, 25, 27, 31
Chapter18 Two-Port Circuits	2 (4 meetings)	2, 5,7, 8, 13, 15, 29, 37, 40
Final Thursday, May 25 12:00-3:00		