



Course Syllabus

Course ID	0902406
Course Title	Network synthesis And Filters
Prerequisite	
Time & Date	SunTueThu 9:00qm – 10:00pm (Room ENG208)
Coordinator	-
Instructor	Assistant. Prof. Dr. Khaldon Ghaidan E-mail: khldn45@yahoo.com Telephone:
Office hours	2:00-4:00 mon,wed
Course Description	Theory of two-terminal and four-terminal networks. Basic network synthesis including reliability theory. Synthesis of two-elements two-port networks. Introduction to analog filters. Pre ; 0902312
Course Objectives	1.Ability to analyze and do operations on different types of systems and signals. 2. Understanding time-domain representation of linear time-invariant systems. Understanding the Fourier representation of signals and systems and ability to use it to analyze linear systems. Understanding the Z-transform of Discrete-time signals and systems and ability to use it to analyze Discrete-time linear systems 5.Basic understanding of concepts of Frequency response and Filters.
Course Outcomes	After successfully completing this course, the students should be able to: An ability to apply knowledge of mathematics, science, and engine An ability to design and conduct experiments, to analyze and inte data An ability to design a system, component, or process to meet desired needs An ability to function on multi-disciplinary teams (i) A recognition of the need for, and an ability to engage in life-long learning (j) A knowledge of contemporary issues (k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Course Topics	<p>1- Introduction to Linear Systems, Terminology & Classification</p> <p>2-Laplace Transform</p> <p>3.Continuous Time –Invariant Linear Systems</p> <p>4-The Z-Transform & Properties</p> <p>5-Discrete Time Systems 7 Hours</p> <p>6-Fourier Spectrum Analysis, Fourier Complex & Real Series, Fourier Transform, Discrete Fourier Transform, Discrete Fourier Transform, Fast Fourier Transform, Application Computers.</p>
Course Text Book	<p><i>1- Signals, Systems, and Transform, Charles L. Philips, Third Edition, Printice Hall , ISBN 0-13-11150-6</i></p>
Course References	<p>Linear Signals & Systems, Roberts & Gasbel, Third Edition</p>
Course delivery	<p>Lectures Tutorial Lab Homework Project Computer Internet Industrial Visit</p>
Course Assessment	<p>First.....20%</p> <p>Second.....20%</p> <p>Assignments10%</p> <p>Final exam 50%</p>
Updated	<p>Dr. Hashem 27/9/2009</p>

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO12
CO1											
CO2											
CO3											
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CO7											
CO8											

CO9											
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CO1											
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CO6											
CO7											
CO8											
CO9											

ABET a-k Engineering and Technology program outcome

- (a) An ability to apply knowledge of mathematics, science, and engineering
- (b) An ability to design and conduct experiments, to analyze and interpret data
- (c) An ability to design a system, component, or process to meet desired needs
- (d) An ability to function on multi-disciplinary teams
- (e) An ability to identify, formulate, and solve engineering problems
- (f) An understanding of professional and ethical responsibility
- (g) An ability to communicate effectively
- (h) The broad education necessary to understand the impact of engineering solutions in a global and societal context
- (i) A recognition of the need for, and an ability to engage in life-long learning
- (j) A knowledge of contemporary issues
- (k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Plagiarism

Deliberate plagiarism is a serious act of academic misconduct. Students may be suspended from the University if they are found to have plagiarized their course work. Whether inadvertent or deliberate, plagiarism includes the following:

- (a) word-for-word copying of sentences or whole paragraphs or presenting of substantial extracts from either paper-based or electronic sources the work or data of others that are published or unpublished (such as books, internal reports, and lecture notes or tapes) without clearly indicating their origin;
- (b) using very close paraphrasing of sentences or whole paragraphs without due acknowledgement in the form of reference to the original work;
- (c) submitting another student's work in whole or in part;
- (d) using of another person's ideas, work or research data without acknowledgement;
- (e) copying computer files, algorithms or computer code without clearly indicating their origin;
- (f) submitting work that has been written by someone else on the student's behalf; and
- (g) submitting work that has been derived, in whole or in part, from another student's work by a process of mechanical transformation (e.g., changing variable names in computer programs).