FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Signal Analysis

Information :

Course Code :	COM 362	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Electrical Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	MOHAMED MOUSA SAYED EMAM AHMED	6
Lecturer	AHMED SAEED ABDELSAMEA SAYED	8
Assistant Lecturer	Mostafa Mohamed Salaheldin Abdelkhalek	
Assistant Lecturer	Ahmed Essam Fahim Zahran	3
Teaching Assistant	Bassel Yasser Mohamed Kamel	

Area Of Study :

Develop studentsôknowledge about signals and systems.
Develop studentsôskills about using software tools in signal analysis
Share ideas and work in a team or a group.

Description :

Continuous and discrete time signals and systems, Continuous time convolution, Discrete time convolution, Fourier series representation of periodic signals: Fourier representation of continuous time periodic signals, Fourier series representation of discrete time periodic signals, The continuous-time Fourier transform: the Fourier transform for periodic signals, the properties of continuous-time Fourier transform, The discrete-time Fourier transform: representation of a periodic signals, the discrete Fourier transform for periodic signals, properties of the discrete-time Fourier transform.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Identify the application of mathematics in analog and discrete signals and systems description and classification.
2 -	Define the main properties of convolution integral and applications.
3 -	List the different types of analogue and discrete signals and systems.
4 -	Define Fourier series, transforms and their properties.
b.Intellectual Skills: :	
1 -	b1. Analyse the analogue and discrete signals in time and frequency domains.
2 -	b2. Analyse analogue systems in time and frequency domains, examples on electric systems.
c.Professional and Practical Skills: :	
1 -	c1. Use software tools (MATLAB) in signal analysis.

2 -	c2. Prepare technical report.
d.General and Transferable Skills: :	
1 -	d1. Communicate effectively with other people using visual, graphic, written and verbal means.
2 -	d2. Manage time to meet deadlines.
3 -	d3. Search for information related to signal and systems applications.
4 -	d4. Refer the relevant literatures in report writing

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Concepts and analysis of Continuous-time systems	19	12	7
Convolution integral and properties	10	6	4
Fourier series and Fourier transform	15	9	6
Discrete-time signals	15	9	6
Continuous-time signals	16	9	7

Teaching And Learning Methodologies :

Interactive Lecturing

Discussion

Problem Solving

Assignments/Research

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
2 Midterms	30.00		
Final Exam	40.00	16	to assess the comprehensive understanding of the scientific background of the course, to assess the ability of problem solving and of analysis and design of simple electronic circuits
In Class Quizzes	10.00		
Performance/assignments	20.00		

Course Notes :

No course notes are required

Recommended books :

Alan V. Oppenheim, ñSignals and Systemsò, 2nd Edition, 1997