Course Syllabus

Course ID	0902403
Course Title	Digital signal processing
Prerequisite	**0902312**
Time & Date	
Coordinator	-
Instructor	Head of Communication and electronics Department
Office hours	
Course Description	Signal and systems in discrete time. Discrete and fast Fourier transforms. The Z operator. Design techniques for digital filters (FIR, IIR, recursive and non-recursive). Effect of finite word Effect of finite word length. Applications
Course Objectives	At completing this course the student should be able to: use Z-transform in solving deference equations. develop algorithms. convert discrete time signal(sequence) to frequency domain using fast Fourier transform(FFT).. design digital filters.
Course Outcomes	CO1. The communication process. CO2. communication in small groups , large groups CO3. communication in public . CO4. Writing reports CO5. Interview preparing . CO6. Data analysis .
Course Topics	(1) signals in discrete time (2) systems in discrete time (3) the z- transform arithmatic Quiz1 9-3-2008 (4) the inverse z- transform arithmatic (5) Difference equations (6) Finite impulse response(FIR) (7) infinite impulse response(IIR) (8) Midterm examination System transfer function Quiz1 13-4-2008 (9) Solution of difference equation (10) Frequency response of analog filter (11) Design of digital filters

	(12) Realization of digital filter (13) Discrete Fourier transform (14) Fast Fourier transform Quiz1 23-5-2008 (15) Applications (16) Final Examination
Course Text Book	•Books (title , author (s), publisher, year of publication) Title: Digital Signal Processing Author: John G. Proakis & Dimitris G. Manolakis Publisher: Prentice Hall, 4th edition, 2007
Course References	
Course delivery	Lectures Tutorial Lab Homework Project Computer Internet Industrial Visit
Course Assessment	Assignments & short reports…….. 10% 2 exams @ 20% each ……. 40% Final exam …….. 50%
Updated	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO12
CO1											
CO2											
CO3											
CO4											
CO5											
CO6											
CO7											
CO8											
CO9											

	a	b	C	D	e	f	g	h	i	j	K
CO1											
CO2											
CO3											
CO4											
CO5											
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).