Jerash Private University
Faculty of Engineering
Department of Computer Science

جامعة جرش الأهلية
كلية الهندسة

EF_Syll-**0902409**

Course Syllabus

Course ID	0902409
Course Title	Communication Systems
Prerequisite	**0902401**
Time & Date	
Coordinator	-
Instructor	Head of Communication and electronics Department
Office hours	
Course Description	Line communication. Telephone and data transmission systems. Radio propagation system at HF, VHF, and UHF. Microwave transmission. Satellite systems. Earth station. Satellite link, VSAT, DBSAT, and other modern trends
Course Objectives	At completing this module the student should be able to: - Compare between continuous modulations systems according to noise immunity. - Describe the implications of practical sampling versus ideal sampling. - Explain the relation between pulse modulation systems. - Diagram a digital multiplexing system that accommodates both analogy and digital signals. - Find the optimum filter for pulse detection in white noise. - Analyse the performance of a pulse transmission system with noise.
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) Syllabus and Noise Review
	(2) Noise in DSB-SC, SSB
	(3) Noise in AM
	(4)
	      Noise in FM HW1(due date will assigned in the class)
	(5) Sampling Process Quiz
	(6)
	First examination
	      PAM,PPM HW2(due date will assigned in the class)
	(7)
	      TDM, quantization Quiz
	(8) Quantization noise, encoding
	(9)
	      PCM, noise in PCM HW3(due date will assigned in the class)
	(10)

	DPCM, delta mod. Quiz (11) Second examination error rate due to noise HW4(due date will assigned in the class)	
Course Text Book	1- "Modern Digital and Analog Communication Systems " B. Lathi, Holt Rinehart & Winston, 1989. 2- "Introduction to Communication Systems "F. Stremler, Addison Wisley Company, Inc., 1990. 3- "Analog and Digital Communication Systems " Martin Rodin, Prentice-Hall, 1991. Journals: 1- IEEE Transactions on Communications. 2- IEEE Transactions on Signal Processing. 3- IEEE Journal on Selected Areas in Communication: a Publication of the IEEE Communication Society 4- European Journal of Communication	
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).