

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Republic of Iraq  
The Ministry Of Higher  
Education  
& Scientific Research



**University:** Baghdad  
**College:** Science for women  
**Department:** computer science  
**Stage:** Fourth stage  
**Lecturer name:** haider.M.abdulhadi  
**Qualification:** M.Sc. in Engineer  
**Place of work:** college of Science for women/ computer science

## Syllabus Form

Instructor Name	haider.M.abdulhadi				
E-mail	Haider.abdulhadi2@gmail.com				
Course Title	Data Communications				
Course Coordinator					
Course Objectives	To enable students to grasp essential aspects of data communications as applied to distributed systems.				
Course Description	The course starts with the ideas and the motivation behind having distributed system architectures and how to use the available communication links for data transportation. Amplitude, phase and frequency modulation schemes are covered. Data coding and error detection and correction and methods of digital signaling are discussed. A detail description of switching systems is presented with related protocol formats. An introduction to the ISO-OSI system is given.				
Textbook	1. Digital Communications, Glover, I., Grants, P., 2000. Signal Analysis, Papoulis, A., 1984.				
References	1. Data Network Handbook, Reed, K., 1998. Data communications, Computer Networks and OSI, Halsall, F., 1996.				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As(25%)	As(15%)	As(0%)	-	As(60%)
General Notes	Type here general notes regarding the course				

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### Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment Assignments	Notes
1		Introduction to distributed systems	Wave Propagation	
2		Properties of a communications system, transmission media	Signal Generation	
3		Properties of signals, digital transmission, multiplexing	Analogue and Digital Signaling	
4		Communication Network types and topologies	Modems	
5		Public telephone network	Amplitude Modulation	
6		Terminal network	Frequency Modulation	
7		Communications system theory	Phase Modulation	
8		Theoretical limits on channel capacity, queuing theory, error detection and correction	Noise	
9		Block Coding	Attenuation	
10		Cyclic Coding	Distortion	
11		Convolution Coding	Amplitude Shift Keying	

12		<b>Introduction to The ISO reference model</b>		
13		<b>Digital Coding: ON/OFF RZ, Bipolar RZ, Manchester Split, Manchester Differential and Polar RZ</b>	<b>Frequency Shift Keying</b>	
14		<b>Introduction to The ISO-OSI reference model with a Physical Layer Example</b>		
15		<b>Coding in the DATA LINK layer</b>	<b>Phase Shift Keying</b>	

**Instructor Signature:**

**Dean Signature:**