

# **IT 301** DATA COMMUNICATIONS AND COMPUTER **NETWORKS I** f565zh





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## Data Communication



#### COMPONENTS OF DATA COMMUNICATION SYSTEM







![](_page_6_Picture_0.jpeg)

# Networking

![](_page_7_Figure_0.jpeg)

![](_page_8_Figure_0.jpeg)

### OBJECTIVES

- Provide students with enhance specialist knowledge in the area of computer networking
- Principles of data communications; information transfer, computer networks and their applications.
- Describe a model for computer networks including a description of interfaces, protocols, layers, and layer functionality;
- in addition Network structures, architectures and protocols, Communication systems: transmission media (wire-wireless),
- Investigate the fundamental issues driving network design and Learn about dominant network technologies

### COURSE/STUDENT LEARNING OUTCOMES

Show clear understanding of the basic concepts of data communications including the key aspects of networking and their interrelationship, packet switching, circuit switching and cell switching as internal and external operations, physical structures, types, models, and internetworking.

Understanding the interaction between hardware and software elements.

- <sup>3</sup> Understanding different network types.
- <sup>4</sup> Understanding the layered architecture and protocols.
- <sup>5</sup> Learning the application of computer networks.

### **Text Books**

 Computer Networks and Internets, 5/e", By Douglas Comer, Prentice-Hall,

- Computer Networking, A Top-Down Approach, By Kurose & Ross
- Cisco Academic (Netacad)

## **COURSE EVALUATION CRITERIA**

![](_page_12_Picture_1.jpeg)

Method	Quantity	Percentage (%)
Quiz	2	10
Homework	2	10
Midterm Exam(s)	1	30
Term Paper	1	10
Final Exam	1	40
Total		100

Examinations: Essay Questions, True-False, Multiple Choices, Short Answers

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![](_page_14_Picture_9.jpeg)

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![](_page_15_Figure_0.jpeg)