

Data and Computer Communications

- **Course number and name:**
CC 331 – Data and Computer Communications

- **Credits and contact hours**
Credits Hours: 3Hrs
Contact Hours: In Lecture 2Hrs, In Tutorial 2Hrs, and In Lab 2Hrs

- **Instructor’s or course coordinator’s name**
Coordinator Name: Dr. Rowayda Sadek

- **Text book, title, author, and year**
 - William Stallings, “Data and Computer Communications”, Prentice Hall, latest edition.

- **Specific course information**
 - a. **Catalog description**
Concept of computer networks - Data and computer communications – Protocol architectures - Signal, medium, and encoding - Reliability and efficiency - Error detection and correction - Multiplexing techniques - Transmission media: guided and unguided media - Signal encoding techniques - Data link control protocols.
 - b. **prerequisites or co-requisites**
Prerequisites: EC320
 - c. **Type of the course (required, elective, or selected elective course) in the program**
Required Course

- **Specific goals for the course**
 - a. **Specific outcomes of instruction**

After the completion of this course the students will be able to:

	Course Learning Outcomes	SO
1	Understand the concept of computer communications and transmission media.	C
2	Understand the signal encoding techniques and multiplexing techniques.	A
3	Understand the reliability, efficiency, error detection and correction in computer networks.	E

Topics to be covered

- Introduction to data Communication and Networking Concepts
- Protocol Architecture
- Data Communication - Data transmission
- Guided and Wireless Transmission
- Signal Encoding Techniques
- Digital Data Communication techniques
- Types of Multiplexing
- Wide Area Networks – Circuit Switching and Packet Switching
- Wide Area Networks – ATM
- Wide Area Networks –Routing in Switched Networks and Congestion Control
- Local Area Networks- Overview
- Local Area Networks-High Speed LANs
- Local Area Networks- Wireless LANs