



Philadelphia University

Faculty of Engineering - Department of Computer Engineering
First Semester 2019/2020

Course Details:

Title:	Computer Networks (0630411)
Prerequisite:	Data Transmission and Communications (0630343)
Credit Hours:	3 credit hours (approximately 44 contact hours)
Textbook:	“Data and computer Communications”, 10 th edition By: W. Stallings, Pearson Education 2017
References:	“Data Communication and Networking”, Behrouz A. Forouzan, 5 th edition 2013 “Internetworking with TCP/IP”, Cromer Douglas E, 6 th ed. 2014.
Course Description:	This course introduce the basic concept of computer networks, the main components, standards, categories, Protocols implementation and their usage.
Website:	http://www.philadelphia.edu.jo/academics/srushdan/
Instructor:	Eng. Sultan M. Al-Rushdan Email: srushdan@philadelphia.edu.jo Office: Engineering building, room 6715, ext: 2149 Office hours: SUN, TUS, THR 09:10 – 10:00

Course Outlines:

Week	Topic
1	Introduction to Data Communications, Data Networks, and the Internet
2	Protocol Architecture, TCP/IP, and Internet-Based Applications
3	Data Transmission and Transmission Media
4	Signal Encoding Techniques
5	Error Detection and Correction
6 7	Data Link Control Protocols
8 9 10	Local Area Network Overview, Ethernet, Wireless LANs
11 12	The Internet Protocol, IPv4 and IPv6
13	Transport Protocols
14 15	Wan Technology and Protocols
16	final exam

Course Learning Outcomes with reference to ABET Student Outcomes:

Upon successful completion of this course, the student should:

1.	Define the general concepts, objectives and protocol standards of computer networks.	[a,c,e,h]
2.	Describe the functionality of each layer in TCP/IP network model.	[a,e,k]
3.	Understand the operations performed at Network Access layer	[a,c,e]
4.	Understand the addressing techniques used in IPv4 and IPv6 protocols.	[a,e,h,j]
5.	Understand the concept of reliable transmission of data used in transport layer and describe the operations and usage of TCP and UDP protocols.	[a,e,h,j]
6.	Understand how WAN technologies(Packet switching, frame relay and ATM) works and standards	[a,e,k]
7.	Define the general concepts, objectives and protocol standards of computer networks.	[a,e,h,j]

Assessment Guidance:

Evaluation of the student performance during the semester (total final mark) will be conducted according to the following activities:

Sub-Exams: The students will be subjected to two scheduled written exams, first exam and second exam during the semester.

Quizzes: (5) Quizzes of (10-15) minutes will be conducted during the semester.

Final Exam: The students will undergo a scheduled final exam at the end of the semester covering the whole materials taught in the course.

Grading policy:

First Exam	20% (15/11 – 23/11)
Second Exam	20% (20/12 – 31/12)
Quizzes	20%
Final Exam	40%(27/1 – 4/2)
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Total:	100%

Attendance Regulation:

The semester has in total 45 credit hours. Total absence hours from classes and tutorials must not exceed 15% of the total credit hours. Exceeding this limit without a medical or emergency excuse approved by the deanship will prohibit the student from sitting the final exam and a zero mark will be recorded for the course. If the excuse is approved by the deanship the student will be considered withdrawn from the course.