Philadelphia University

Faculty of Engineering - Department of Communications and Electronics Engineering

Course Information

Title:	Computer and Communication network (0650522)
Prerequisite:	Digital Communications – (0650425)
Credit Hours:	3 credit hours (16 weeks per semester, approximately 44 contact hours)
Textbook:	"Computer networks", Tenenbaum, 5th Edition, 2011
References:	"Computer networks", L. Peterson and S. Davie, 4th edition, 2007 "Professional WAP", Charles Arehart, et al, Wrox Press Inc, 2000. "Designing a Wireless Network", Jeffrey Wheat, et al Syngress, 2001. "Wireless Communications & Networking", W. Stallings**,** Pearson Education, 2nd edition, 2005**.**
Catalog Description:	Understand the Computer Communication Networks; understand the OSI model. Know the different types of Switching Techniques and the principles of TCP/IP, ATM, IP V4 and V6. Understand queuing theories and delays in networks, birth death processes, markov chains, network of queues, stability. Understand different multi-access schemes routing algorithms in networks, and different flow control mechanisms.
Website:	http://www.philadelphia.edu.jo/academics/mmahmood/
Instructor:	Dr. Musaria K. Mahmood **Email**: musariaoja@yahoo.com **Office**: Engineering building, room 813, ext: 2447 **Office hours**: Sun, Tues, Thurs: 13:10-14:00.

Course Topics

Week	Topic
1, 2	Introduction OSI Layers architecture
3, 4	Data Link Layers, Framing, Error Detection Retransmission Algorithms
5, 6	Multiple Access schemes. Flow Control in Networks, Routing in Networks
7, 8	IPV4, IPV6, sub-netting
9, 10	TCP/IP
11, 12, 13	Queuing theory and models
14, 15	Network of Queues, priority Queues, stability
16	Review, and final exam

Course Learning Outcomes and Relation to ABET Student Outcomes:

Upon successful completion of this course, a student should be able to:

1.	Understand the principles of networking (LAN, WAN) and references models.	[j]
2.	Understand the principal of queuing theory and its application on communication networks.	[a, e]
3.	Knowledge on the structure of principal TCP/IP protocols.	[j]
4.	Design and analysis of different communication and computer networks	[c]
5.	Analyze communication networks based on addressing techniques (IPV4, and IPV6) and sub-netting.	[k]

Assessment Instruments:

Evaluation of students' performance (final grade) will be based on the following categories:

Exams: Two written exams will be given. Each will cover about 4-weeks of lectures

Quizzes: 10-minute quizzes will be given to the students during the semester. These quizzes will cover material discussed during the previous lecture(s).

Homework: Problem sets will be given to students. Homework should be solved individually and submitted before the due date.

Copying homework is forbidden, any student caught copying the homework or any part of the homework will receive zero mark for that homework

Participation: Questions will be asked during lecture and the student is assessed based on his/her response

Final Exam: The final exam will cover all the class material.

Grading policy:

First Exam	20%
Second Exam	20%
Homework, Quizzes and participation	20%
Final Exam	40%
Total:	100%

Attendance policy:

Absence from classes and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse, acceptable to and approved by the Dean of the relevant college/faculty, shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.