


QFO-AP-FI-MO02	اسم الاجراء: Course Syllabus	جامعة فيلادلفيا
رقم الاصدار: 1 (Revision)	الجهة المصدرة: كلية تكنولوجيا المعلومات	
التاريخ: 2017/11/05	الجهة المدققة: عمادة التطوير والجودة	Philadelphia University
عدد صفحات النموذج:		

Course Title: Wireless and Mobile Networks, Advanced Computer Network	Course code: 0750445
Course Level: 4	Course prerequisite (s) and/or co-requisite (s): 731340
Lecture Time	Credit hours: 3

Academic Staff Specifics

Name	Rank	Office Number and Location	Office Hours	E-mail Address

Course Description:

This course provides an explanation and a deeper understanding of the wireless network concepts, architecture, protocols, and applications. It covers mainly wireless local area networks, wireless metropolitan area networks, wireless wide area networks, and wireless sensor networks.

Course objectives:

The aim of this course is to provide a deeper understanding of different classes of networks and to enhance the application design and development skills in wireless networks. Wi-Fi, WiMax and ad hoc network technologies along with concepts of wireless networks such as media access control and routing are covered by this course.

Course components:

Textbook:

- 1- Wireless and mobile networks, Sunilkumar S. Manvi and Mahabaleshwar S. Kakkasageri, Wiley, 2010
- 2- Mobile computing, V. Jeyasri Arokiamary, Pune: Technical Publications, 2014

Support material (s): books chapters, slides, and simulations animations.

Teaching methods: Lectures, discussion sessions, and laboratories.

Duration: 16 weeks, 48 hours in total. Lectures: 42 hours, discussion sessions: 6 hours, free labs.

Intended Learning Outcomes:

- A. Knowledge and Understanding

A3. Understand the principles of various current applications and research areas of the subject including Intelligent Systems, databases, software engineering, networks, and distributed systems.

A4. Know and understand a wide range of software and hardware used in development of computer system.

B. Intellectual Skills

B3. Identify a range of solutions and critically evaluate and justify proposed design solutions.

B4) Practice self-learning by using the e-courses.

C- Practical Skills

C2) Prepare and deliver coherent and structured verbal and written technical reports.

C3) Give technical presentations suitable for the time, place, and audience.

D- Transferable Skills and Personal Qualities.

D1) Display an integrated approach to the deployment of communication skills.

D2) Use IT skills and display mature computer literacy.

Learning Outcomes Achievement

- Development: A3, A4, B3 are developed through lectures
B4, C3, D2 are developed through tutorials and practical works
C2, D1 are developed through homework
- Assessment: B4, C2, C3 and D1, are assessed by assignments and labs work.
A3, A4, B3 and D2 assessed by examinations and quizzes.

Assessment instruments

Quizzes: 3

Labs work: 1

Examinations: 3

<u>Allocation of Marks</u>	
Assessment Instruments	Mark
First examination	20
Second examination	20
Final examination	40
Reports, research projects, Quizzes, Home works, Projects	20
Total	100

Documentation and academic honesty

- Practical work reports must be presented according to the style specified in the homework and practical work guide.
- Protection by copyright.
- Avoiding plagiarism
- Any stated plagiarism leads to an academic penalty.

Course/module academic calendar

week	Basic and support material to be covered	Homework/reports and their due dates
(1)	Fundamentals of Wireless Communications (1)	
(2)	Fundamentals of Wireless Communications (2)	
(3)	Basics of Wireless Network	
(4)	Wireless Local Area Networks (1)	
(5)	Wireless Local Area Networks (2)	
(6)	Wireless Local Area Networks (3)	
(7)	Wireless Metropolitan Area Networks (1)	
(8)	Wireless Metropolitan Area Networks (2)	
(9)	Wireless Wide Area Networks (1)	
(10)	Wireless Wide Area Networks (2)	
(11)	Wireless and Mobile Ad Hoc Networks (1)	
(12)	Wireless and Mobile Ad Hoc Networks (2)	
(13)	Wireless Sensor Networks (1)	
(14)	Wireless Sensor Networks (2)	
(15)	Applications of Wireless Ad Hoc Networks	
(16)	Final Examination	

Expected workload:

On average students need to spend 3 hours of study and preparation for each lecture/tutorial.

Attendance policy:

Absence from lectures 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.

Other references

1. Wireless communications and networks, William Stallings, 2nd edition, Pearson, 2005
2. Data and Computer Communications, William Stallings, 8 th edition, Pearson, 2007
3. <http://www.philadelphia.edu.jo/academics/mbettaz/>