



**Philadelphia University**  
**Faculty of Engineering**  
**Department of Communications & Electronics**  
**Second semester, 2008/2009**

**Course Syllabus**

<b>Course Title: Communication network</b>	<b>Course code:650536</b>
<b>Course Level: Level 5</b>	<b>Course prerequisite (s) and/or corequisite (s): Digital Communications</b>
<b>Lecture Time: 11:10-12:10</b>	<b>Credit hours: 3</b>

**Academic Staff**  
**Specifics**

<b>Name</b>	<b>Rank</b>	<b>Office Number and Location</b>	<b>Office Hours</b>	<b>E-mail Address</b>
<b>Dr. abdel-Rahman Al-Qawasmi</b>	<b>Assistant Prof.</b>	<b>802</b>	<b>10:10-11:10 S,T,&amp;T 9:45-11:15 M&amp;W</b>	<a href="mailto:gawasmi@philadelphia.edu.jo"><b><u>gawasmi@philadelphia.edu.jo</u></b></a>

**Course module description:**

This course aims to provide students with capabilities to

Understand the Computer Communication Networks

Know the different types of Switching Techniques and the principles of ATM

Be familiar with the TCP/IP Suite

Understand the Wireless Communication Technology (Satellite, Cellular and Bluetooth networking)

Understand the Wireless Computer Networking (Mobile IP, WAP and wireless LANs)

**Course module objectives:**

At completing this course the student should be able to:

Understand the different switching techniques (ATM( understand TCP/IP suite

Design cellular system communication using GSM standard (TDMA)

the principles of satellite sharing methods (FDMA)

Be familiar with WAP & IP

Understand the Wireless LANS Work and Standards

Understand the Bluetooth as principles & Standards. **Course/ module components**



## Assessment instruments

<u>Allocation of Marks</u>	
<b>Assessment Instruments</b>	<b>Mark</b>
First examination	15%
Second examination	15%
Final examination: 50 marks	50%
Reports, research projects, Quizzes, Home works, Projects	20%
Total	100%

*\* Make-up exams will be offered for valid reasons only with consent of the Dean. Make-up exams may be different from regular exams in content*

### Documentation and Academic Honesty

Submit your home work covered with a sheet containing your name, number, course title and number, and type and number of the home work (e.g. tutorial, assignment, and project).

Any completed homework must be handed in to classroom. After the deadline “zero” will be awarded. You must keep a duplicate copy of your work because it may be needed while the original is being marked.

You should hand in with your assignments:

- 1- A printed listing of your test programs (if any).
- 2- A brief report to explain your findings.
- 3- Your solution of questions.

For the research report, you are required to write a report similar to a research paper. It should include:

- **Abstract:** It describes the main synopsis of your paper.
- **Introduction:** It provides background information necessary to understand the research and getting readers interested in your subject. The introduction is where you put your problem in context and is likely where the bulk of your sources will appear.
- **Methods (Algorithms and Implementation):** Describe your methods here. Summarize the algorithms generally, highlight features relevant to your project, and refer readers to your references for further details.
- **Results and Discussion (Benchmarking and Analysis):** This section is the most important part of your paper. It is here that you demonstrate the work you have accomplished on this project and explain its significance. The quality of your analysis will impact your final grade more than any other component on the paper. You should therefore plan to spend the bulk of your project time not

just gathering data, but determining what it ultimately means and deciding how best to showcase these findings.

- **Conclusion:** The conclusion should give your reader the points to “take home” from your paper. It should state clearly what your results demonstrate about the problem you were tackling in the paper. It should also generalize your findings, putting them into a useful context that can be built upon. All generalizations should be supported by your data, however; the discussion should prove these points, so that when the reader gets to the conclusion, the statements are logical and seem self-evident.
- **Bibliography:** Refer to any reference that you used in your assignment. Citations in the body of the paper should refer to a bibliography at the end of the paper.

#### • **Protection by Copyright**

1. Coursework, laboratory exercises, reports, and essays submitted for assessment must be your own work, unless in the case of group projects a joint effort is expected and is indicated as such.
2. Use of quotations or data from the work of others is entirely acceptable, and is often very valuable provided that the source of the quotation or data is given. Failure to provide a source or put quotation marks around material that is taken from elsewhere gives the appearance that the comments are ostensibly your own. When quoting word-for-word from the work of another person quotation marks or indenting (setting the quotation in from the margin) must be used and the source of the quoted material must be acknowledged.
3. Sources of quotations used should be listed in full in a bibliography at the end of your piece of work.

#### • **Avoiding Plagiarism.**

1. Unacknowledged direct copying from the work of another person, or the close paraphrasing of somebody else's work, is called plagiarism and is a serious offence, equated with cheating in examinations. This applies to copying both from other students' work and from published sources such as books, reports or journal articles.
2. Paraphrasing, when the original statement is still identifiable and has no acknowledgement, is plagiarism. A close paraphrase of another person's work must have an acknowledgement to the source. It is not acceptable for you to put together unacknowledged passages from the same or from different sources linking these together with a few words or sentences of your own and changing a few words from the original text: this is regarded as over-dependence on other sources, which is a form of plagiarism.
3. Direct quotations from an earlier piece of your own work, if not attributed, suggest that your work is original, when in fact it is not. The direct copying of one's own writings qualifies as plagiarism if the fact that the work has been or is to be presented elsewhere is not acknowledged.
4. Plagiarism is a serious offence and will always result in imposition of a penalty. In deciding upon the penalty the Department will take into account factors such as the year of study, the extent and proportion of the work that has been plagiarized, and the apparent intent of the student. The penalties that can be imposed range from a minimum of a zero mark for the work (without allowing resubmission) through caution to disciplinary measures (such as suspension or expulsion).

## Course/module academic calendar

week	Basic and support material to be covered	Homework/reports and their due dates
(1)+(2)	Networks, switching techniques and TCP/IP	Homework every week
(3)+(4)	Spread Spectrum & Detection and correction codes	
(5)+(6)	Satellite Communications <b>First Exam</b>	
(7)+(8)	Cellular Networks	
(9)+(10)	Mobile IP + WAP <b>Second Exam</b>	
(11)+(12)	Wireless LANs	
(13)+(14)	Bluetooth	
(15)	Applications	

### Expected workload:

On average students need to spend 1.5 hours of study and preparation for each 50-minute 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.

### Course references

#### Books

- 1- Jim Geier, James T. Geier, " Wireless LANs: Implementing Interoperable Networks," Unknown , January 1999, 418 pages.
- 2- Charles Arehart, et al, " Professional WAP," Wrox Press Inc, July 2000, 813 pages
- 3- Jeffrey Wheat, et al, "Designing a Wireless Network," Syngress Media Inc, June 2001, 379 pages
- 4-Nathan J. Muller, " Bluetooth Demystified," McGraw-Hill, September 2000, 396 pages.