



Philadelphia University
Faculty of Information Technology
Department of Computer Science
2015-2016

| Course Syllabus | |
|---|-------------------------------------|
| Course Title: Information and Computer Networks Security | Course code: 0750444 |
| Course level: 4 | Course prerequisite: 0761340 |
| Lecture time: | Credit hours: 3 |

Academic Staff Specifics

| Name | Rank | Office Number and Location | Office Hours | e-mail Address |
|------|------|----------------------------|--------------|----------------|
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Course description: This course is based on the textbook SECURITY+ GUIDE TO NETWORK SECURITY FUNDAMENTALS, Fourth Edition. It is not a course in cryptography. In addition to fundamentals, it takes an in-depth and comprehensive view of security by examining the attacks that are launched against networks and computer systems, the necessary defense mechanisms, and offers end-user practical tools and techniques to counter attacks. For a summary of the topics covered in each chapter, consult the textbook.

Textbooks and Supporting Material:

1. Mark Ciampa, Security+ Guide to Network Security Fundamentals, 4th Edition, Course Technology, 2012

Teaching methods: lectures, tutorials, lab work, discussion groups.

Learning Outcomes:

A. Knowledge and Understanding

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

B. Intellectual skills

B1. Analyse a wide range of problems and provide solutions through algorithms, structures, diagrams, and other appropriate methods.

C. Practical skills

C4. Use the scientific literature effectively and make discriminating use of Web resources.

Learning Outcomes Achievement:

- **Development:** A4 and B1 are assessed by examinations and quizzes;
- **Assessment:** B1 and C4 are assessed by assignments and lab work.

Assessment instruments:

Quizzes: 3

Lab works: 3

Exams: 3

| Allocation of Marks | |
|------------------------|------------|
| Assessment Instruments | Marks |
| First exam | 20 |
| Second exam | 20 |
| Final exam | 40 |
| Quizzes + Lab work | 10 + 10 |
| 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 and format.*

Documentation and academic honesty

- Practical works 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 |
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| (1) | Introduction to Security | |
| (2) | Malware and Social Engineering Attacks (1) | |
| (3) | Malware and Social Engineering Attacks (2) | |
| (4) | Application and Network Attacks (1) Quiz 1 | |
| (5) | Application and Network Attacks (2) | |
| (6) | Vulnerability Assessment and Mitigating Attack <i>Tutorial 1</i> | |
| (7) | Host, Application , and Data Security (1) First exam | |
| (8) | Host, Application , and Data Security (2) | |
| (9) | Network Security (1) | |
| (10) | Network Security (2) | |

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| (11) | Administering a Secure Network <i>Tutorial 2</i> | |
| (12) | Wireless Network Security Second Exam | |
| (13) | Access Control Fundamentals | |
| (14) | Authentication and Account Management Quiz 2 | |
| (15) | Basic Cryptography <i>Tutorial 3</i> | |
| (16) | Advanced Cryptography Final Exam | |

Expected workload: On average you 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 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.

References:

William Stallings, Wireless Communications & Networks, 2nd edition, Prentice-Hall Pearson, 2005

Web Links:

<http://www.philadelphia.edu.jo/academics/mbettaz>