The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Information Security
2	Course number	0807777
3	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	3
4	Prerequisites/corequisites	
5	Program title	Library and information science
6	Program code	70
7	Awarding institution	University of Jordan
8	Faculty	Faculty of educational sciences
9	Department	Library and information science
10	Level of course	Master
11	Year of study and semester (s)	
12	Final Qualification	MA in Library and information science
13	Other department (s) involved in teaching the course	
14	Language of Instruction	English
15	Date of production/revision	Nov 2016

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Dr. FatenHamad
Office hours: To be scheduled each semester
Office phone number: 24579 f.hamad@ju.edu.jo

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Dr. FatenHamad
Office hours: To be scheduled each semester
Office phone number: 24579 f.hamad@ju.edu.jo

18. Course Description:

Security in Information Society, Risk management, Information War, Security in Information Centers, Computer Security, Software Security, Network Security, Computer Viruses, Encryption and Controlling, National Information Security, Computer Crimes and Ethics, Case studies.

19. Course aims and outcomes:

A- Aims:

Information security is strongly related to data security, computers security, and networks security.This course focuses on information security strategies that are used in protecting information which is stored on computers as well as information traveling over computer networks. In this course students will learn aboutinformation security, security protocols, authentication protocols, data integrity, digital signatures, key management and distribution. They also will learn about technology and principles, access control mechanisms, cryptography algorithms, software security, physical security, security management and risk assessment and computer crimes and ethics.

Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to …

1. Understand and explain basic security concepts in the field of information security such as confidentiality, integrity, and availability.
2. Explain the importance of cryptographic algorithms.
3. Identify and explain symmetric algorithms for encryption-based security of information.
4. Identify and explain public-key based asymmetric algorithms for encryption-based security of information.
5. Describe the access control mechanism used for user authentication and authorization.
6. Describe securing Internet Protocol (IP) communications by using Internet Protocol Security (IPSec).
7. Understand the difference between software security and physical security and discuss ways to improve them of an enterprise.
8. Explain the malicious software issues and the use of security tools such as firewalls, intrusion prevention systems.
9. Describe the basic process of risk assessment in the context of IT security management.
10. Understand and explain examples of computer crimes and information use ethics.

20. Topic Outline and Schedule:

Material	ILOs	Evaluation method	Week
Introduction to Information Security: • Introduction to Data and Network Security • Confidentiality, Integrity, and Availability	1	Discussion	Week 1 & 2
Basic Cryptography Concepts: • Symmetric Encryption Algorithms • Public-Key Encryption • Cryptography in Practice	2, 3 and 4	Discussion	Week3, 4 & 5
Access Control Mechanisms: • Authentication • Access Control and Authorization • Role-Based Access Control • Role-Based Access Control and Role Graph Model	5	Discussion	Week 6 & 7
Mid term Exam			
Security Solutions: • Security Protocols and Solutions • Internet Protocol Security • Secure Sockets Layer • Pretty Good Privacy	6	Discussion	Week 9 &10
Firewalls, Intrusion Detection, and Intrusion Prevention: • Security Protocols and Solutions • Firewall • Host-Based IDS vs. Network-Based IDS • Network Attacks and Defense	8	Discussion	Week 11& 12
Physical Security	7	Discussion	Week 13
Malicious Software and Software Security: • Malicious Web • Internet Security Issues	8	Discussion	Week 14
Information Security Risk Assessment: Introduction: • Risk Management • Risk Assessment in Practice	9	Discussion	Week 15
Computer crimes and ethics	10	Discussion & cases analysis	Week 16

21. Teaching Methods and Assignments:

Lectures are given to students through power point slides.
Peer reviewed articles will be distributed to students in class to read and discuss
Real life examples are introduced to better understand the concept of information security.

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methodsand requirements:

One mid-term exam – 30%
One research paper on selected topics of information security – 30%
One final exam – 40%

23. Course Policies:

A- Attendance policies:

Attendance is registered every lectures and entered into the system

B- Absences from exams and handing in assignments on time:

Make up exam is set for students with valid excuse

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehaviors:

Any cheating cases are to be reported

E- Grading policy:

Following ideal answer in some questions, allowing flexibility in the analytical questions since they allow different perspective and thinking, taking into consideration logical thinking.

F- Available university services that support achievement in the course:

Having a data show to demonstrate lectures and internet connection to view **YouTube** demonstration videos and to use some **online tools**.

24. Required equipment:

Data show and Internet connection

25. References:

This course will be based on free and online material as following:

- Power point slides will be provided through e-learning system.
- Other reference materials will be provided through e-learning system.

26. Additional information:

Name of Course Coordinator: ----------Signature: ---------- Date: ----------

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File