The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Information Security
2	Course number	807313
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	Undergraduate programme
11	Year of study and semester (s)	Third year – Second Semester
12	Final Qualification	BA 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. Faten Hamad
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. Faten Hamad
Office hours: To be scheduled each semester
Office phone number: 24579 f.hamad@ju.edu.jo

18. Course Description:

Legal, ethical, and professional issues in information security. Security protocols, authentication protocols, data integrity, digital signatures, key management and distribution. Technical areas: Cryptology and network security; access control; external attack; operational and organizational security; software security; security management and risk assessment.

19. Course aims and outcomes:

A- Aims:

The pervasive use of computer-based applications such as information systems, databases, and the Internet demands that policies and protocols are needed to protect information. Information security is strongly related to data security, computers security, and networks security. This course focuses on the fundamentals of information security that are used in protecting both the information present in computer storage as well as information traveling over computer networks. In this course students will learn fundamentals of information 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, and security management and risk assessment.

B- **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 overall IT security management.

20. Topic Outline and Schedule:

Material	ILOS	Evaluation method	Week
Introduction to Information Security: • Confidentiality, Integrity, and Availability	1	Discussion	Week 1 & 2
Basic Cryptography Concepts: • Public-Key Encryption • Cryptography in Practice	2, 3 and 4	Discussion	Week3, 4 & 5
Access Control Mechanisms: • Authentication • Access Control and Authorization	5	Discussion	Week 6 & 7
Security Solutions: • Security Protocols and Solutions • Internet Protocol Security	6	Discussion	Week 8 & 9
Firewalls, Intrusion Detection, and Intrusion Prevention: • Security Protocols and Solutions • Firewall • Network Attacks and Defense	8	Discussion	Week 10 & 11
Physical Security	7	Discussion	Week 12
Malicious Software and Software Security: • Malicious Web • Internet Security Issues	8	Discussion	Week 13 & 14
Information Security Risk Assessment: Introduction	9	Discussion	Week 15

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.

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22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following <u>assessment</u> <u>methods</u> <u>and requirements</u>:

One mid-term exam – 25%
One assignment – 15%
One final exam – 50%
Participation and attendance – 10%

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 only

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.
☐ **Further readings:**
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