



# Course Specification

— (Bachelor)

**Course Title :** Information Security

**Course Code:** IT 420

**Program:** Information Technology

**Department:** Information Technology

**College:** Colleague of Computer and Information Sciences

**Institution:** Majmaah University

**Version:** 2

**Last Revision Date:** 11 September 2023



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## A. General information about the course:

### 1. Course Identification

1. Credit hours: 3 ( 3, 0, 1 )

#### 2. Course type

A.  University  College  Department  Track  Others  
B.  Required  Elective

3. Level/year at which this course is offered: ( Level 8/ Fourth year )

#### 4. Course general Description:

#### 5. Pre-requirements for this course (if any):

IT 324: Data Transmission and Computer Networks

#### 6. Pre-requirements for this course (if any):

Nil

#### 7. Course Main Objective(s):

##### Course Main Objectives

This course addresses aspects of information security. Topics include objectives of information security systems, Components of an Information System, The Security Systems Development Life Cycle, types of threats and attacks, Ethics and Information Security, overview of Risk Management, Risk Identification, Risk Assessment, Risk Control Strategies, Security Technology: Firewalls and VPNs, Intrusion Detection and Prevention Systems, and Other Security Tools , Cryptography, Cryptographic Tools, Protocols for Secure Communications, Attacks on Cryptosystems, Physical Security, and other security issues.

### 2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> <li>Traditional classroom</li> <li>E-learning</li> </ul>		
4	Distance learning		



### 3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	15
5.	Others (specify)	
<b>Total</b>		<b>60</b>

### B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and understanding</b>			
1.1				
1.2				
...				
<b>2.0</b>	<b>Skills</b>			
2.1	CLO1: understand & Design, security solutions to protect information	<b>k1</b>	Classroom Teaching	Exercises, Test, Mid Exam, Final Exam,
2.2	CLO2: Aware of the important of security, policies and procedures and knowledge of Computer Forensic	<b>S1</b>	Classroom Teaching	Exercises, Test, Mid Exam, Final Exam,
2.3	CLO3: Aware of the security threats and how to mitigate them	<b>S3</b>	Classroom Teaching	Lab Exercises, Test, Mid Exam, Final Exam,
2.4	CLO4: Understand the different types of cryptography and its applications	<b>k1</b>	Classroom Teaching	Final Exam
<b>3.0</b>	<b>Values, autonomy, and responsibility</b>			
3.1	CLO5: student and must be able to design secure network	V2	Classroom Teaching & Lab	Lab Exercises Final Exam
3.2				
...				



## C. Course Content

No	List of Topics	Contact Hours
1.	Introduction	4
2.	Introduction to Information Security	4
3	Threats and attacks	4
4	Legal and Ethical issues	4
5	Security Issues	4
6	Risk management	4
7	Security planning	4
8	Network Security I	4
9	Mid Revision & Mid	4
10	Network Security II	4
11	Scanning and Analysis Tools	4
12	Cryptology	4
13	Physical security	4
14	Security and Personal	4
15	Review	4
<b>Total</b>		<b>60</b>

## D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Tests	Week 5	10%
2.	Mid Term Exam	Week 9	20%
3.	Exercise	Every Week	10%
4.	Lab Based Assignments/ Mini Project Presentation	week 9	20%
5.	Final Exam	Week 11	40%
...			

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

## E. Learning Resources and Facilities

### 1. References and Learning Resources

<b>Essential References</b>	Principles of Information Security, Michael E. Whitman and Herbert J. Mattord, 5th ed., Thomson/Cengage Learning, 2016
<b>Supportive References</b>	
<b>Electronic Materials</b>	Web References and downloads:





Other Learning Materials	http://lms.mu.edu.sa
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## 2. Required Facilities and equipment

Items	Resources
<b>facilities</b> (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom
<b>Technology equipment</b> (projector, smart board, software)	PC or Laptop with Windows/Linux, Smart Board, Projector
<b>Other equipment</b> (depending on the nature of the specialty)	Internet Connection

## F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Classroom	Classroom
Effectiveness of Students assessment	Course instructor	Direct
Quality of learning resources	Students	Indirect
The extent to which CLOs have been achieved	Students	Indirect
Other		

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	

