



Course Specification

— (Bachelor)

Course Title: Advanced Information Security
Course Code: CIT1406
Program: Bachelor in information technology
Department: Department of Information Technology
College: Computers and Information Technology
Institution: University of Tabuk
Version: 1.0
Last Revision Date: 27 July 2022



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A. General information about the course:

1. Course Identification

1. Credit hours:

3 CHrs. (Three-Credit Hours)

2. Course type

- A. University College Department Track Others
- B. Required Elective

3. Level/year at which this course is offered: (Level 8, Year 4)

4. Course general Description:

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

Computer and Information Security (CIT1402)

6. Co-requisites for this course (if any):

7. Course Main Objective(s):

Identify Common Cryptography Algorithms and How They Affect a Secure Computer Network.

Recognize Policies, Procedures, and IT Infrastructure Awareness.

Recognize the role that physical security plays in information security.

Outline common information security defenses and the methods by which they are used.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> ● Traditional classroom ● E-learning 		
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	
5.	Others (specify)	
Total		45

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

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Explain the formal security classification models, controls and risk assessment	K3	Lectures, Assignments, Discussion, Text Book & Reference	Quizzes, Midterm, Final Exams. Projects. Reports Homework's.
1.2	Assess the value of various physical infrastructure threats and human resource security	K2	Lectures, Assignments, Discussion, Text Book & Reference	Quizzes, Midterm, Final Exams. Projects. Reports Homework's.
1.3	Discuss the key standards in security auditing, legal and ethical aspect and intellectual property types	K3	Lectures, Assignments, Discussion, Text Book & Reference	Quizzes, Midterm, Final Exams. Projects. Reports Homework's.
2.0	Skills			
2.1	Utilize the appropriate classification models and controls	S2	Individual, Exercises, Discussions, Textbook and References	Midterm, Final Exams, Project, Reports
2.2	Conduct a correct security assessment plan for a specific case scenario	S2	Individual, Exercises, Discussions, Textbook and References	Midterm, Final Exams, Project, Reports
2.3	Analyze the requirements of security audit trail	S4	Individual, Exercises, Discussions,	Midterm, Final Exams, Project, Reports





Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
			Textbook and References	
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate the effectiveness of teamwork vs individual one	V2	Group Exercises, Discussions	Midterm, Final Exams, Project, Reports
3.2	Increase the security sense, proficient and mindset.	V2	Group Exercises, Discussions	Midterm, Final Exams, Project, Reports

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction	3
2.	Trusted Computing and Review of Security Principals (Part1)	3
3.	Trusted Computing and Review of Security Principals (Part2)	3
4.	Multilevel Security and Information Classification	3
5.	IT Security Management Principles (Part1)	3
6.	Risk Assessment methods	3
7.	Security Controls, Plans and Procedures (Part1)	3
8.	Security Controls, Plans and Procedures (Part2)	3
9.	Physical and Infrastructure Protection	3
10.	Social Engineering and Human Resource threats	3
11.	Security Auditing	3
12.	Cyber Crime and Intellectual Property	3
13.	Physical and Infrastructure Protection	3
14.	Symmetric Encryption and Message Confidentiality	3
15.	Public-Key Cryptography and Message Authentication	3
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Two Assignments	5,14	10%
2.	Two Quizzes	4,9	10%
3.	Midterm Exam 1	7-8	10%
4.	Midterm Exam 2	12-13	10%
4.	Project	15	20%
5.	Final Exam	16	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

Essential References	William Stallings and Lawrie Brown. 2017. Computer Security: Principles and Practice. 4th Edition. Pearson Publication.
Supportive References	
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Lecture room of each section to accommodate 25 students
Technology equipment (projector, smart board, software)	Projectors, data show, white board, etc. Computer for each student in the Lab
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of Teaching	Faculty, Program Leaders, and Advisory Board	Both Direct and Indirect
	Students	Indirect
Effectiveness of Students Assessment	Faculty, Program Leaders, Advisory Board, and Independent Opinion	Both Direct and Indirect
Quality of Learning Resources	Faculty, Students, and Advisory Board	Indirect
The Extent to which CLOs have been Achieved	Faculty, Program Leaders, Advisory Board, and Independent Opinion	Direct (as in section B) and Indirect/Surveys
	Students	Indirect
Other	-	-

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
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REFERENCE NO.

DATE

