



Course Specifications

Course Title:	Enterprise Cybersecurity
Course Code:	IT 463
Program:	IT
Department:	IT
College:	College of Computer and Information Sciences
Institution:	Majmaah University



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A. Course Identification

1. Credit hours: 3(3,0,1)
2. Course type a. University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others <input type="checkbox"/> b. Required <input type="checkbox"/> Elective <input checked="" type="checkbox"/>
3. Level/year at which this course is offered: Level 10
4. Pre-requisites for this course (if any): IT 422 (Information Security)
5. Co-requisites for this course (if any): NIL

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	44	100%
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	33
2	Laboratory/Studio	
3	Tutorial	11
4	Others (specify)	
	Total	44

B. Course Objectives and Learning Outcomes

1. Course Description

Enterprise Cybersecurity course presents a comprehensive framework for managing all aspects of an enterprise cybersecurity program. It enables an enterprise to architect, design, implement, and operate a coherent cybersecurity program that is seamlessly coordinated with policy, programmatic, IT life cycle, and assessment. Topics include: Cybersecurity Challenge, Enterprise Cybersecurity Architecture, Implementing Enterprise Cybersecurity, Operating Enterprise Cybersecurity, Enterprise Cybersecurity and the Cloud, Enterprise Cybersecurity for Mobile, building an Effective Defense, responding to Incidents, Managing a Cybersecurity Crisis.

**2. Course Main Objective**

Analyze and resolve security issues in networks and computer systems to secure an IT infrastructure. Design, develop, test and evaluate secure software. Develop policies and procedures to manage enterprise security risks.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge and Understanding	
1.1		
1.2		
1.3		
2	Skills :	
2.1	CLO 1- Discover how enterprise cybersecurity is evolving and will continue to evolve.	S1
2.2	CLO 2. Know and apply the methodology of targeted attacks.	S1
2.3	CLO 3 Understand why cybersecurity capabilities are the foundation of effective cyber defenses.	S1
2.4	CLO 5. Understand the operational processes and supporting information systems of a successful enterprise cybersecurity	S1
3	Values:	
3.1	CLO4. Analyze a cybersecurity program's policy, people, budget, technology, and assessment.	V2
3.2		
3.3		
3...		

C. Course Content

No.	Topics	Teaching hours
1	Cybersecurity Challenges: Cyberattacks, Types of Cyberattacks, Cyber intrusion, Cybersecurity frameworks, process and challenges	3
2	Enterprise Cybersecurity Architecture System administration, Endpoint, server, and device security, Data protection Monitoring, vulnerability and patch management Disaster recovery and physical protection	6
3	Implementing Enterprise Cybersecurity IT system Life Cycle, Security policies and scopes Security controls and capabilities Security technologies and effectiveness	6



4	Operating Enterprise Cybersecurity IT Operational process and responsibilities, Vulnerability management and incident response process, Cybersecurity process	6
5	Enterprise Cybersecurity and the Cloud Cloud protection challenges Planning Enterprise security for the cloud	5
6	Enterprise Cybersecurity for Mobile Challenges with mobile devices Legal agreements for data protection Multi-factor authentication	5
7	Building an Effective Defense Enterprise attack sequence Business challenges to security Effective cyber defense	3
8	Responding to Incidents Incident response process	3
9	Managing a Cybersecurity Crisis Devastating cyberattacks Decision -making process Managing recovery process Cybersecurity and IT capabilities Cybersecurity Auditing Methodology Enterprise cybersecurity assessments	4
10	Revision	3
	Total	44

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge and Understanding		
1.1	CLO 1- Discover how enterprise cybersecurity is evolving and will continue to evolve.	Classroom Teaching	Test, Mid Exam, Final Exam
1.2	CLO 3 Understand why cybersecurity capabilities are the foundation of effective cyber defenses.	Classroom Teaching	Test, Mid Exam, Final Exam
1.3	CLO 5. Understand the operational processes and supporting information	Classroom Teaching	Test, Mid Exam, Final Exam



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	systems of a successful enterprise cybersecurity		
2.0	Skills		
2.1	CLO 2. Know the methodology of targeted attacks.	Classroom & Exercise Teaching	Mini Project, Lab Based Assignments, Lab Test, Mid Exam, Final Exam, Mini Project.
2.2			
...			
3.0	Values		
3.1	CLO4. Analyze a cybersecurity program's policy, people, budget, technology, and assessment.	Classroom Teaching, Project	Class Test, Mid Exam, Final Exam
3.2			
...			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Test(2)	Week 3 & Week 9	20%
2	Mid Term Exam	Week 6	20%
3	Assignment	Week 8 & Week 10	10%
4	Case Study	Week Week 9	5%
5	Final Exam	Week 12	40%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Each student is allotted to an academic advisor for guidance and counselling

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	Scott Donaldson , Stanley Siegel , Chris K. Williams, Abdul Aslam , Enterprise Cybersecurity: How to Build a Successful Cyberdefense Program Against Advanced Threats, Apress, 1st ed. Edition, 2018, ISBN-13: 978-1430260820
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Essential References Materials	1. Aaron Woody, Enterprise Security: A Data-Centric Approach to Securing the Enterprise, 2013, ISBN-13: 978-1849685962 2. Brian J Allen, Rachele Loyear , Enterprise Security Risk Management: Concepts and Applications, 2017, Rothstein Associates, Incorporated, ISBN-13: 978-1944480448
Electronic Materials	
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom
Technology Resources (AV, data show, Smart Board, software, etc.)	PC or Laptop with Windows/Linux, Smart Board, Projector
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Internet Connection

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Test/Quiz/Mid Term/ Final Exam assessment (Extent of achievement of course learning outcomes)	Course instructor	Direct
Course Survey in the middle of the semester and at the end of the semester (Effectiveness of teaching and assessment)	Students	Indirect
Extent of achievement of course learning outcomes	Students	Indirect
Final Exam Answer Scripts Verification	Peer faculty members	Review (Direct)

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

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

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
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Reference No.	
Date	