QF01/0408-4.0E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Cyber Security Department

Study plan No.	**2024/2025**	**University Specialization**		**Cybersecurity**	
Course No.	**0133493**	**Course name**		Graduation Project 2	
Credit Hours	**2**	**Prerequisite Co-requisite**		Graduation Project 1	
Course type	☐ MANDATORY UNIVERSITY REQUIREMENT ☐ UNIVERSITY ELECTIVE REQUIREMENTS	☐ FACULTY MANDATORY REQUIREMENT ☐ Support course family requirements		☐ Mandatory requirements	☐ ✓ **Elective** ☐ **requirements**
Teaching style	☐ **Full online learning**	☐ Blended learning		☐ ✓Traditional learning	
Teaching model	☐ 2Synchronous: 1asynchronous	✓2 face to face: 1synchronous		☐ 3 Traditional	

Faculty member and study divisions information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail	
Dr. Ahmad Alkhatib	**Associate Professor**			**ahmad.alkhatib@zuj.edu.jo**	
Division number	**Time**	**Place**	**Number of students**	**Teaching style**	**Approved model**

Brief description

This course is the second of two courses dedicated to the graduation project. In this course, students implement the graduation project approved by the College during the previous semester in Graduation Project-1. The course focuses on developing students' essential skills in effective communication and building positive relationships. It also aims to help students master objective scientific research skills and practice the fundamental abilities required for successful collaboration and scientific inquiry.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc.)	• Guidelines and templates for graduation project preparations, Software engineering Departments • Guidelines for graduation project preparations, quality assurance forms			
Supportive learning resources (Books, databases, periodicals, software, applications, others)	• Schwalbe, K. (2019). Information technology project management. Cengage Learning. • Tilley, S., & Rosenblatt, H. J. (2024). Systems analysis and design. Cengage Learning.			
Supporting websites				
The physical environment for teaching	☐ ✓**Class room**	☐ ✓labs	☐ **Virtual educational platform**	☐ Others
Necessary equipment and software				
Supporting people with special needs				
For technical support	**E-learning and Open Educational Center. Computer Center**			

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Course learning outcomes (S= *Skills,* ***C****= Competences* ***K****= Knowledge,* ***MT****= Transferable Skills)*

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	**Examine** advanced cybersecurity tools, technologies, and techniques relevant to the implementation of secure systems.	**MK1**
K2	**Understand** system security evaluation methods, testing techniques, and performance metrics.	**MK2**
	Skills	
S1	**Design, implement, and test** a cybersecurity solution that addresses real-world security threats.	**MK4**
S2	**Evaluate** the effectiveness of the implemented cybersecurity solution and refine it based on testing results.	**MK1**
	Competences	
C1	**Manage and execute** the cybersecurity graduation project in accordance with professional and industry standards.	**MC1**
C2	**Demonstrate responsibility and accountability** in delivering a secure, reliable, and well-documented system.	**MC2**
	Transferable Skills	
MT1	**Communicate technical results**, system performance, and security findings effectively to diverse audiences.	**MT1**

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
First exam	0	0	0	0
Second / midterm exam	%30	%30	%30	%30
Participation / practical applications	0	0	0	0
Asynchronous interactive activities	%30	%30	%30	%30
final exam	%40	%40	%40	%40

Note: Asynchronous interactive activities include tasks such as projects, assignments, research, and group work performed through the virtual platform without direct teacher interaction.

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Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	Learning Style*	Reference **
1	Project implementation plan	Lecture, discussion	Approved proposal
2	System architecture design	Lecture, project-based learning	Design documents
3	Secure coding practices	Lecture, hands-on learning	Secure coding standards
4	User interface and usability	Lecture, hands-on learning	UI guidelines
5	Implementation phase I	Project-based learning	Development tools
6	Implementation phase II	Project-based learning	Development tools
7	Data handling and security controls	Lecture, hands-on learning	Security frameworks
8	Mid-project progress review	Presentation, feedback	Progress report
9	System integration	Project-based learning	Integration manuals
10	Security testing and validation	Lecture, hands-on learning	Testing standards
11	Performance evaluation	Lecture, case study	Evaluation metrics
12	Documentation writing	Guided learning	Documentation standards
13	System deployment	Project-based learning	Deployment guides
14	Final report preparation	Guided learning	Reporting guidelines
15	Project defense preparation	Presentation, discussion	Defense rubric
16	Final project defense	Presentation	Final report

*** Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.**

**** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.**

Schedule of asynchronous interactive activities (in the case of e-learning and blended learning)

Week	Task / activity	Reference	Expected results
1	•	•	
2	•	•	
3	•	•	
4	•	•	
5	•	•	
6	•	•	
7	•	•	
8	•	•	