QF01/0407-4.0E	Study Plan for Bachelor program - Study Plan Development and Updating Procedures/ Cyber Security Department

Course Plan for Cyber Security (Bachelor Program) No.: (2024/2025)
Approved by Deans Council by decision (01/2024-2025) dated (25/09/2024)
(133) Credit Hours **Study system / hybrid program**
Type of specialty ☐ **Humanitarian** ☑ **Scientific / technical** ☐ **Medical Sciences**

Teaching style	Percentage of study plan hours / number	Model used (synchronous: asynchronous)
Complete e-learning courses	**20.3% Maximum / number(27) C h**	2:1 (For THER. SAT.)
Blended Learning courses (For Humanity)	40% - 60% Maximum / number( ) C h	2:1 (For SUN. TUE.) or (MON. WED.)
Blended learning courses (for scientific and medical)	**25% Maximum / number (34) C h**	2:1 (For SUN. TUE.) or (MON. WED.)
Traditional learning courses (for humanity)	20% Minimum / number ( ) C h	3:0 For all academic divisions
Traditional learning courses (for scientific and medical)	**54.9% Minimum / number (72) C h**	3:0 For all academic divisions

Important note: (The teaching patterns of the subjects are distributed at all academic levels in the program)

Program vision: Building specialized competencies in the field of Artificial Intelligence provided with the knowledge, skills and leadership, creative and entrepreneurial competencies necessary to compete in the global labor market, through creative application in the use of information technology and modern teaching and learning strategies.

Program mission and objectives:

1. Achieving the conformity of the learning outcomes in all areas of specialization with the seventh level descriptors (knowledge, skills and competencies) in the National Qualifications Framework.
2. Integrating modern information technology and employing it creatively in the teaching and learning processes in order to achieve more effective learning and take into account the needs of the learner.
3. Promote the principle of self-sustainable, lifelong learning, and highlight the creativity of the learner in light of global changes through the application of various teaching and learning strategies

Program learning outcomes (*(MK= Main Knowledge, MS= Main Skills, MC= Main Competences)*

Main knowledge	
MK1	Knowledge of a wide and in-depth range of foundations, theories, principles, and core concepts in the field of cybersecurity.
MK2	Knowledge and understanding of analyzing mathematical problems, designing algorithms, evaluating their effectiveness, and knowing various data structures, their uses, advantages, and disadvantages.
Basic skills	
MS1	The ability to critically assess and select cybersecurity techniques, methodologies, and tools to solve problems, mitigate risks, and perform tasks effectively.
MS2	The ability to carry out a wide range of tasks and procedures using cybersecurity tools in various complex operations; to be creative and innovative in this area.
General competencies	
MC1	The ability to manage cybersecurity-related tasks independently, work collaboratively and constructively, and possess leadership and entrepreneurial skills while performing a wide range of tasks responsibly.
MC2	The ability to make constructive decisions in situations that require self-reliance for work, learning, and innovation independently while adhering to professional ethics and standards.
Transferable skills	
MT1	The ability to work in teams, communicate effectively, and collaborate in a team spirit.

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Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	Prerequisite Co-requisite	Indicative	
Fully electronic learning	Blended learning	Traditional learning							Semester	year
1. Requirements (27) Credit Hours										
1.1 Mandatory requirement (21 credit hour)										
•			0420101	Military Sciences	3	3	0		1	1
•			0420151	National Education	3	3	0		2	1
•			0420271	Life skills	3	3	0		1	2
•			0420115	Communication skills in Arabic	3	3	0	Remedial Arabic Language	1	1
•			0420123	Communication skills in English	3	3	0	Remedial English Language	2	1
•			0420261	Entrepreneurship and innovation	3	3	0		2	2
•			0420241	Leadership and social responsibility	3	3	0		1	2
1.2 University elective requirements(06 credit hour)										
•			0420142	Human Civilization	3	3	0		1	1
•			0420253	Development and environment	3	3	0		1	2
•			0420172	Digital skills	3	3	0	Remedial computer skills	2	1
•			0420201	first aid	3	3	0		2	2
•			0420134	Sports and health	3	3	0		1	1
•			0420212	Islamic culture	3	3	0		1	2
•			0420155	Law in Our Lives	3	3	0		2	1
•			0420392	Fundamentals of Psychology	3	3	0		1	3
•			0420341	Fundamentals of the German Language	3	3	0		2	3

Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	PBL	Prerequisite Co-requisite	Indicative	
Fully electronic learning	Blended learning	Traditional learning								Semester	year
2. Faculty Requirements (21) Credit Hours											
		•	0130100	Fundamentals of Information Technology	3	3	0	1	Remedial Computer Skills (Synchronous)	**1**	**1**
		•	0135101	Technical English for IT Students	3	3	0	1	----------	**1**	**1**
		•	0133102	Emerging Topics in Information Technology	3	3	0	1	Fundamentals of Information Technology	**2**	**1**
		•	0130110	Discrete Mathematics	3	3	0	1	----------	**1**	**1**
		•	0130130	Computer Programming	3	2	2	1	Fundamentals of Information Technology + Technical English for IT Students	**2**	**1**

		•	0130231	Applied Programming	3	2	2	1	Computer Programming	**1**	**2**
	•		0131390	Entrepreneurship and Project Planning	3	0	6	-	Technical English for IT Students	**1**	**3**

Teaching style: Fully electronic	Teaching style: Blended learning	Teaching style: Traditional learning	Course No.	Course name	Credit hour	Theory Hours	Practical Hours	PBL	Prerequisite Co-requisite	Indicative: Semester	Indicative: year
3. Requirements for a major family (27) Credit Hours											
	•		0133103	Principles of Cybersecurity and Information Security	3	3	0	-	Fundamentals of Information Technology	2	1
		•	0133111	Computer Networks	3	3	0	-	Fundamentals of Information Technology	2	1
		•	0133232	Web Application Programming 1	3	2	2	1	Computer Programming	1	2
	•		0133212	Data Structures and Algorithms	3	2	2	1	Applied Programming	2	2
		•	0133220	Network Security	3	2	2	1	Computer Networks	1	2
		•	0133213	Infrastructure Security Using Linux	3	2	2	1	Applied Programming	2	2
		•	0133333	Programming for Cybersecurity	3	2	2	1	Infrastructure Security Using Linux	1	3
	•		0133314	Operating Systems	3	3	0	1	Computer Networks	1	3
		•	0133421	Software Security	3	2	2	1	Software Development Life Cycle	1	4

Teaching style: Fully electronic	Teaching style: Blended learning	Teaching style: Traditional learning	Course No.	Course name	Credit hour	Theory Hours	Practical Hours	PBL	Prerequisite Co-requisite	Indicative: Semester	Indicative: year
4. Major requirements (58) Credit Hours											
4.1 Mandatory requirements (43) credit hours											
	•		0133222	Cryptography Theory	3	3	0	-	Principles of Cybersecurity and Information Security	1	2
	•		0133204	Software Development Life Cycle	3	3	0	1	Emerging Topics in Information Technology	1	2
		•	0133205	Databases and Their Security	3	2	2	1	Applied Programming	2	2
		•	0133234	Web Application Programming 2	3	2	2	1	Web Application Programming 1	2	2
	•		0133223	Data Safety and Authentication	3	3	0	1	Cryptography Theory	2	2
		•	0133324	Network Monitoring and Documentation	3	2	2	1	Network Security	1	3

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Fully electronic	Blended learning	Traditional learning								Semester	year
	•		0133325	Data Analytics	3	2	2	1	Data Structures and Algorithms	1	3
		•	0133306	Ethical Hacking	3	2	2	1	Programming for Cybersecurity	2	3
		•	0133326	Secure Communication Protocols	3	2	2	1	Network Security	2	3
		•	0133427	Digital Forensics Investigations	3	2	2	1	Software Security	1	4
		•	0133407	Malware	3	2	2	1	Data Safety and Authentication	2	4
	•		0133491	Training	3	0	6	-	Completion of 90 Hours	1	4
	•		0133492	Graduation Project 1	2	0	4	-	Department Approval	1	4
	•		0133493	Graduation Project 2	2	0	4	-	Graduation Project 1	2	4
	•		0133494	Professional Practice Camp	3	0	6	-	Department Approval (90) + Entrepreneurship and Project Planning	2	4
4.2 electives requirements (9) credit hours											
		•	0133308	Cybersecurity Tools and Techniques	3	2	2	1	Programming for Cybersecurity	2	3
		•	0133328	Artificial Intelligence in Cybersecurity	3	2	2	1	Data Analytics	2	3
		•	0133315	Cloud Computing Security	3	2	2	1	Databases and Their Security	2	3
		•	0133495	Selected Topics in Cybersecurity 1	3	2	2	1	Department Approval	1	4
		•	0133496	Selected Topics in Cybersecurity 2	3	2	2	1	Department Approval	2	4
		•	0133409	Security Operations Center	3	2	2	1	Ethical Hacking	1	4
		•	0133429	Cybersecurity Governance and Risk Compliance	3	2	2	1	Data Analytics	2	4
		•	0133416	Operating System Security	3	2	2	1	Operating Systems	1	4
		•	0133417	Internet of Things Security	3	2	2	1	Secure Communication Protocols	2	4
4.3 supporting requirements (6) credit hours											
		•	0101112	Foundations of Mathematics	3	3	0	-	Remedial Computer Skills (Synchronous)	1	1
		•	0101274	Computerized Mathematical Applications	3	2	2	1	Foundations of Mathematics	2	2

The end of the study plan for the major students

Subjects taught in the major for students of other majors (university requirements, college requirements, major family requirements, and support requirements)

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Fully electronic	Blended learning	Traditional learning							
	•		0135102	Emerging Topics in Information Technology	**3**	**3**	**0**	1	Mandatory for: Computer Science, Data Science and Artificial Intelligence, Software Engineering