

QF01/0407-4.0E	Study Plan for Bachelor program - Study Plan Development and Updating Procedures/ Computer Science Department
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Course Plan for Computer Science (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)	34.5% Maximum / number (46) 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)	45.1% Minimum / number (60) 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 Computer Science 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 professional ethics, social responsibility, and the regulations governing them.
MK2	Understanding various programming techniques, the stages of software development, and the fundamental principles of security.
Basic skills	
MS1	Skill in applying mathematical concepts to analyze and design algorithms and verify their correctness
MS2	Skill in using different programming languages and applying them to develop software and computer applications.
General competencies	
MC1	The ability to analyze, design, and develop effective and reliable computer programs that meet user requirements and adhere to professional ethics.
MC2	The ability to keep up with continuous advancements in computer science, innovate, and work independently or as part of a team.
Transferable skills	
MT1	The ability to work collaboratively, communicate effectively, and demonstrate teamwork spirit.

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Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	Prerequisite Co-requisite	Indicative	
Traditional learning	Blended learning	Fully electronic							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	Prerequisite Co-requisite	Indicative	
Traditional learning	Blended learning	Fully electronic							Semester	year
2. Faculty Requirements (21) Credit Hours										
			0130100	Fundamentals of Information Technology	3	3	0	Remedial Computer Skills (Synchronous)	1	1
			0135101	Technical English for IT Students	3	3	0	-----	1	1
			0133102	Emerging Topics in Information Technology	3	3	0	Fundamentals of Information Technology	2	1
			0130110	Discrete Mathematics	3	3	0	-----	1	1
			0130130	Computer Programming	3	2	2	Fundamentals of Information Technology + Technical English for IT Students	2	1
			0130231	Applied Programming	3	2	2	Computer Programming	1	2

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	•		0131390	Entrepreneurship and Project Planning	3	0	6	Technical English for IT Students	1	3
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Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	Prerequisite Co-requisite	Indicative	
Traditional learning	Blended learning	Fully electronic							Semester	year
3. Requirements for a major family (27) Credit Hours										
	•		0130111	Digital Logic Design	3	3	0	Discrete Mathematics	2	1
	•		0130212	Computer Organization and Architecture	3	3	0	Digital Logic Design	1	2
		•	0130221	Data Structures	3	2	2	Applied Programming	2	2
		•	0130232	Visual Programming	3	2	2	Applied Programming	2	2
		•	0130233	Internet Applications Programming 1	3	2	2	Computer Programming	1	2
		•	0130234	Internet Applications Programming 2	3	2	2	Internet Applications Programming 1	2	2
		•	0130322	Algorithms	3	2	2	Data Structures	1	3
	•		0130323	Compiler Design and Programming Languages	3	3	0	Computation Theory	1	3
	•		0130313	Operating Systems	3	3	0	Computer Organization and Architecture	1	3

Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	Prerequisite Co-requisite	Indicative	
Traditional learning	Blended learning	Fully electronic							Semester	year
4. Major requirements (58) Credit Hours										
4.1 Mandatory requirements (43) credit hours										
	•		0130103	Software Engineering	3	3	0	Fundamentals of Information Technology	2	2
		•	0130204	Databases 1	3	2	2	Computer Programming	2	2
	•		0130214	Computer Networks	3	3	0	Fundamentals of Information Technology	2	2
	•		0130220	Computation Theory	3	3	0	Discrete Mathematics	1	3
	•		0130305	Systems Analysis and Design	3	3	0	Databases 1	2	3
		•	0130335	Data Science and Artificial Intelligence Programming	3	2	2	Applied Programming	2	3
	•		0130315	Data and Information Security	3	3	0	Computer Networks	2	3
		•	0130306	Databases 2	3	2	2	Databases 1	1	3
		•	0130436	Mobile Application Programming	3	2	2	Visual Programming	1	4
	•		0130424	Cloud Computing and Distributed Systems	3	3	0	Operating Systems	1	4
		•	0130437	Game Programming	3	2	2	Visual Programming	2	4
	•		0130491	Field Training	3	0	6	Completion of 90 Credit Hours	1	4

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electronic	Fully Blended learning	Traditional learning							Semester	Year
	•		0130492	Graduation Project 1	2	0	4	Department Approval	1	4
	•		0130493	Graduation Project 2	2	0	4	Graduation Project 1	2	4
	•		0130494	Professional Practices Camp	3	0	6	Department Approval (90) + Entrepreneurship and Project Planning	2	4
4.2 electives requirements (9) credit hours										
	•		0130316	Operations Research	3	3	0	Computerized Mathematical Applications	2	3
	•		0130307	Human-Computer Interaction	3	2	2	Internet Applications 1	2	3
		•	0130338	Image and Digital Media Processing	3	2	2	Visual Programming	2	3
	•		0130308	Intelligent Systems	3	3	0	Recent Topics in Information Technology	2	3
	•		0130317	Data Communication and Security	3	3	0	Computer Networks	2	3
	•		0130418	Embedded Systems	3	3	0	Operating Systems	1	4
	•		0130409	Management of Administrative and Business Systems	3	3	0	Databases 2	1	4
		•	0130439	Special Programming Language	3	2	2	Visual Programming	2	4
	•		0130495	Advanced Topics in Computer Science	3	2	2	Department Approval	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	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)

Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	The type of requirement and the recipient
electronic	Fully Blended learning	Traditional learning						
		•	0130100	Fundamentals of Information Technology	3	3	0	College Core Requirements: Software Engineering, Data Science and Artificial Intelligence, Cybersecurity, Mathematics
		•	0130110	Discrete Mathematics	3	2	2	College Core Requirements: Software Engineering, Data Science and Artificial Intelligence, Cybersecurity, Mathematics
		•	0130130	Computer Programming	3	2	2	College Core Requirements: Software

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Teaching style			Course No.	Course name	Credit hour	Theory Hours	Practical Hours	The type of requirement and the recipient
Traditional learning	Blended learning	Fully electronic						
								Engineering, Data Science and Artificial Intelligence, Cybersecurity, Mathematics
		•	0130231	Applied Programming	3	3	0	College Core Requirements: Software Engineering, Data Science and Artificial Intelligence, Cybersecurity, Mathematics