جامعة اليرموك
Yarmouk University
كلية تكنولوجيا المعلومات وعلوم الحاسوب
Faculty of Information Technology and Computer Sciences

Document Approval Date	Study Plan	Document Code
		AP02-PR04

Department: Computer Science	Program: Bachelor's in Computer Science	Official Stamp
The study plan was approved by the decision of the Deans' Council no. ...... on		

About the Program
The Department of Computer Sciences was established in 1978 and started offering a B.Sc. degree in Computer Science in 1980. At the beginning of the academic year 2002/2003 the Faculty of Information Technology and Computer Sciences was established, and the Department of Computer Science was moved to this new faculty. The curriculum has been modified accordingly to keep pace with changes and developments taking place locally and internationally in order to raise the level of academic graduates and to provide them with the skills and techniques that qualify them to be competitive in the market. The department of Computer Science offers two master's programs: the mater's program in Computer science that was established in 2000 and the master's program in Artificial Intelligence that was established in 2019. Both master's programs were designed to provide advanced theoretical and technical skills.

Vision and Mission	
Vision	Deliver leading and entrepreneur educational program in Computer Science area that is recognized locally, regionally and globally.
Mission	Providing students with the necessary skills, knowledge, and competences to solve complex computing problems using distinguished teaching and learning process.

Program Objective	
1	Graduates are expected to be successfully employed, pursue a graduate degree, or continue their professional education
2	Graduates are expected to apply their skills in clear communication and demonstrate professional attitudes and ethics to be identified as a valuable member in the organization and demonstrate adaptability, responsibility and leadership.
3	Graduates are expected to demonstrate an understanding of the context and broader impacts of technology in their organization and have the ability to adapt to a rapidly changing environment

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Program Learning Outcomes PLOs	
PLO1	Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
PLO2	Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of computer science.
PLO3	Communicate effectively in a variety of professional contexts.
PLO4	Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
PLO5	Function effectively as a member or leader of a team engaged in activities appropriate to computer science.
PLO6	Apply computer science theory and software development fundamentals to produce computing-based solutions.

Credit hours to obtain a degree in Computer Science in a specialization of Computer Science			
	Credit Hours		
	Compulsory	Elective	Total
University Requirements	12	15	27
Faculty Requirements	22	0	22
Department Requirements	67	18	85
Total	**101**	**33**	**134**

First: University Compulsory Courses (12) Credit Hours						
Course Code	Course No.	Course Name	Number of Credit Hours			Pre-requisite
			Theoretical	Practical	Total	
AL	101	Arabic Language 1	3	0	3	–
EL	101	English Language Skills	3	0	3	–
PS	102	National Education	3	0	3	–
MILT	100A	Military Sciences and Citizenship	3	0	3	–
EL	099	English Language Skills-Comprehensible	Comprehensible	0	0	–
AL	099	Arabic Language-Comprehensible	Comprehensible	0	0	–
COMP	099	Computer Skills-Comprehensible	Comprehensible	0	0	–

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Second: University Elective Courses (15) Credit Hours						
Course Code	**Course No.**	**Course Name**	**Number of Credit Hours**			**Pre-requisite**
			Theoretical	**Practical**	**Total**	
Hum	101	Media Culture	3	0	3	–
Hum	102	Citizenship and Home Loyalty	3	0	3	–
Hum	103	Islam: Thought and Civilization	3	0	3	–
Hum	104	Art and Behavior	3	0	3	–
Hum	105	Jordan Contribution in Human Civilization	3	0	3	–
Hum	106	Introduction to Human Cultures	3	0	3	–
Hum	107	Human Rights	3	0	3	–
Hum	108	Thinking Skills	3	0	3	–
Sci	101	The Environment and the General Health	3	0	3	–
Sci	103	Body Fitness for ALL	3	0	3	–
Sci	105	Renewable Energy	3	0	3	–
Sci	106	Administration and Society Development	3	0	3	–
Sci	107	Scientific Research	3	0	3	–

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Third: Faculty Compulsory Courses (22) Credit Hours

Course Code	Course No.	Course Name	Number of Credit Hours			Pre-requisite
			Theoretical	Practical	Total	
CS	111	Programming in a Selected Language	3	0	3	–
CS	111L	Programming in a Selected Language Lab	0	3	1	CS 111
MATH	101	Calculus (1)	3	0	3	-
CIS	101	Introduction to Information Systems	3	0	3	-
CIS	260	Database systems	3	0	3	CS 210 and CIS 101
STAT	111	Introduction to Probability (1)	3	0	3	-
BIT	106	Communication Skills for Information Technology	3	0	3	-
BIT	221	Legal Issues in Information Technology	3	0	3	BIT 106 and CIS 101

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Fourth: Department Compulsory Courses (67) Credit Hours						
Course Code	**Course No.**	**Course Name**	**Number of Credit Hours**			**Pre-requisite**
			Theoretical	**Practical**	**Total**	
CS	130	Operating Systems (1)	3	0	3	CS 111
CS	142	Discrete Structures	3	0	3	MATH 101
CS	210	Object-Oriented Programming	3	0	3	CS 111
CS	210L	Object-Oriented Programming Lab	0	3	1	CS 111L and CS 210
CS	220	Computer Logic Design	3	0	3	CS 142
CS	225	Computer Organization Lab	0	3	1	CS 220
CS	250	Data Structures	3	0	3	CS 210
CS	281	Multimedia Systems	3	0	3	CIS 101 and CS 210
CS	310	Advanced Programming	3	0	3	CS 210
CS	332	Data Communications and Networks	3	0	3	CYS 230
CS	332L	Data Comm. and Networks lab	0	3	1	CS 332
CS	342	Theory of Computation	3	0	3	CS 142
CS	351	Analysis and Design of Algorithms	3	0	3	CS 142 and CS 250
CS	352	Problem Solving (1)	0	3	1	CS 351
CS	376	Artificial Intelligence	3	0	3	CS 351
CS	411	Smart Phones Applications Development	3	0	3	CS 130 and CS 310
CS	432	Computer Architecture	3	0	3	CS 225
CS	499A	Graduation Project	0	0	0	Complete successfully 98
CS	499B	Graduation Project	3	0	3	CS 499A
CIS	240	Software Engineering	3	0	3	CIS 101 and CS 210
CIS	244	Visual Programming	3	0	3	CIS 101 and CS 210
CIS	342	System Analysis and Design	3	0	3	CIS240, CIS260
BIT	381	Web application Development (1)	3	0	3	CIS260, CS210
MATH	102	Calculus (2)	3	0	3	MATH 101
MATH	241	Linear Algebra (1)	3	0	3	MATH 101
CYS	230	Principles of Cyber Security	3	0	3	CIS101, BIT106

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Fifth: Department Elective Courses (9) Credit Hours

Course Code	Course No.	Course Name	Number of Credit Hours			Pre-requisite
			Theoretical	Practical	Total	
CS	331	Operating Systems (2)	3	0	3	CS 130
CS	360	Wireless Networks	3	0	3	CS 332
CS	380	Computer Graphics	3	0	3	CS 250 and MATH 241
CS	452	Problem Solving (2)	3	0	3	CS 352
CS	470	Expert Systems	3	0	3	CS 376
CS	480	Image Processing	3	0	3	CS 376
CS	492	Special Topics	3		3	Complete successfully 90 Credit Hours
CS	498	Practical Training	3	0	3	Complete successfully 90 Credit Hours and Department Approval
PHYS	102	General Physics (2)	3	0	3	PHYS 101
BIO	101	General Biology (1)	3	0	3	-
BIO	102	General Biology (2)	3	0	3	BIO 101
CHEM	101	General Chemistry (1)	3	0	3	-
CHEM	102	General Chemistry (2)	3	0	3	CHEM 101
EES	101	General Geology	3	0	3	-
EES	102	Environmental Geology	3	0	3	EES 101

Sixth: Department Elective Courses (6) Credit Hours

Course Code	Course No.	Course Name	Number of Credit Hours			Pre-requisite
			Theoretical	Practical	Total	
BIT	222	Entrepreneurship in IT	3	0	3	BIT 106
BIT	481	Web application Development (2)	3	0	3	BIT 381
CIS	467A	Data Mining	3	0	3	CIS 260
CIS	382	Cloud Computing	3	0	3	CS 332 and CIS 260

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Seventh: Department Elective Courses (3) Credit Hours

Course Code	Course No.	Course Name	Number of Credit Hours			Pre-requisite
			Theoretical	Practical	Total	
STAT	101	Introduction to Statistics (1)	3	0	3	-
STAT	211	Introduction to Probability (2)	3	0	3	STAT 111 and MATH 102
PHYS	101	General Physics (1) (Mechanics)	3	0	3	–
MATH	322	Numerical Analysis (1) (For IT. Students)	3	0	3	CS 142