Princess Sumaya جامعة الأميرة سمية للتكنولوجيا University for Technology

Date Of Issue: 16/01/2024

Study Plan for Bachelor'sDegree in Computer Engineering for year 2019-2020

The Bachelor's Degree in Computer Engineering awarded at Princess Sumaya University for Technology after the successful completion of 160 Credit Hours distributed as follows:-

University Requirements (27 CHs)

1. Compulsory Requirements (12 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11100	Computer Skills (Remedial)	0		
31019	Arabic Language(Remedial)	0		
31029	English Language (Remedial)	0		
31111	Arabic Language	3	31019	
31121	English Language	3	31029	
31151	National Education	3		
31153	Introduction to Society, Technology and Environment Protection	0		
31251	Military Science	3		

2. Elective Requirements (15 CHs)

2.1. Elective University Requirements (General) (6 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
20251	History of Science	3		
20252	Arab Islamic Scientific Heritage	3		
31100	Sports and Health	3		
31152	Arabic Islamic Civilization	3		
31161	Introduction to Library Science	3		
31211	Arabic Literature	3	31111	
31252	Governance and Development	3		
31261	Introduction to Politics and Economic Science	3		
31262	Introduction to Educational Science	3		
31264	Introduction To Psychology	3		
31271	Environmental Science	3		
31351	Contemporary Issues in the Arab World	3		
31352	Jerusalem : History and Facts	3		
31361	Introduction to Philosophy	3		
31371	Health Education	3		

2.2. Elective University Requirements (Scientific, Practical) (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
31130	Foreign languages	3		
31255	Entrepreneurship for Business	3	Finish 60 Credit Hours	
31311	Scientific Research Methods	3		
31373	21st Century Skills	3	Finish 60 Credit Hours	

School Requirements (30 CHs)

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1. Compulsory Requirements (30 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11103	Structured Programming	3	11100	
11151	Structured ProgrammingLab	1		11103
20132	Calculus (1)	3		
20133	Calculus (2)	3	20132	
20140	Basic Concepts in Chemistry	1		
20141	Physics (1)	3		
20142	Physics (2)	3	20141	
20150	Physics Lab	1		20142
20200	Technical Writing and Communication Skills	3	31111,31121	
20231	Calculus (3)	3	20133	
21218	Engineering Drawing Lab	1		
21219	Engineering Workshop	1		
23411	Engineering Economics	3	Finish 99 Credit Hours	
24411	Engineering Ethics	1	Finish 99 Credit Hours	

Program Requirements (103 CHs)

1. Compulsory Requirements (94 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11206	Object Oriented Programming	3	11103	
11212	Data Structures and Introduction to Algorithms	3	11206,20134	
11253	Object Oriented Programming Lab	1		11206
11313	Algorithms Design and Analysis	3	11212	
11323	Database Systems	3	11212	
20134	Discrete Mathematics (1)	3		
20232	Engineering Mathematics(1)	3	20133	
20234	Linear Algebra	3		
20333	Numerical Analysis	3	20133	
20335	Applied Probability and Statistics	3	20231	
21221	Electric Circuits (1)	3	20142	
21222	Electric Circuits (2)	3	21221	
21229	Electric Circuits Lab	1		21222
21231	Electronics (1)	3	21221	
21332	Digital Electronics	3	21231	
21339	Digital Electronics Lab	1	21229	21332
22241	Digital Logic Design	3		
22320	Computer Architecture (1)	3	22241	
22321	Computer Architecture (2)	3	22320	
22344	Microprocessors	3	21231,22241	
22348	Digital Logic Lab	1	22241	
22420	Computer Design Lab	1	22321	
22442	Embedded Systems	3	21231,22348	
22443	Computer Networks	3	20335,22241	

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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
22448	Embedded Systems Lab	1	22442	
22449	Computer Networks Lab	1	22443	
22460	Operating Systems and Security	3	11212,25330	
22461	Operating Systems and Security Lab	1		22460
22490	Practical Training	3	Finish 99 Credit Hours	
22560	Network Programming and Applications	3	22443,22460	
22570	Artificial Intelligence and Machine Learning	3	11212,20234,20335	
22591	Senior Project (1)	1	Finish 120 Credit Hours	
22592	Senior Project (2)	2	22591	
23351	Signals and Systems	3	20232,21222	23356
23355	Communication Principles	3	23351	
23356	Programming Applications in Signals & Systems Lab	1		23351
24471	Automatic Control	3	23351	
24479	Automatic Control Lab	1		24471
25330	Information Security Fundamentals	3	20134,20234	

2. Elective Requirements (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
12446	Digital Image Processing	3	11206	
13477	Software Engineering	3	11323	
21531	VLSI Circuits	3	21332	
21581	Special Topics in Electronics Engineering	3		
22466	Mobile Application Programming	3	11206	
22520	Parallel Processing	3	22321	
22542	Advanced Computer Networks	3	22443	
22543	Digital System Design	3	22321	
22545	Neural Networks and Fuzzy Logic	3	11212,22241	
22546	Network Management & Security	3	22443	
22582	Special Topics in Computer Engineering (1)	3		
22583	Special Topics in Computer Engineering (2)	3		
23457	Cellular Communications	3	23355	
23571	Digital Signal Processing	3	23351	
23576	Wireless Internet of Things	3	23355	
23582	Special Topics in Communications Engineering (1)	3		
24583	Special Topics in Power And Energy Engineering	3		
25541	Cloud Computing & Security	3	22443,25330	
25576	Network Performance Analysis	3	20335,22443	
25593	Special Topics in Network Security Engineering (1)	3		
25595	Special Topics in Information Security (1)	3		