



## Study Plan for Bachelor's Degree in Communications Engineering \ Internet of Things for year 2021-2022

The Bachelor's Degree in Communications Engineering \ Internet of Things 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 (18 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11100	Computer Skills (Remedial)	0			Online
31021	Arabic Language Communication Skills (Remedial)	0			Online
31022	English Language Communication Skills (Remedial)	0			Online
31112	Arabic Language Communication Skills	3	31021		Online
31122	English Language Communication Skills	3	31022		Online
31151	National Education	3			Online
31160	Leadership and Societal Responsibility	0			
31251	Military Science	3			Online
31254	Entrepreneurship and Innovation	3	Finish 60 Credit Hours		Online
31374	Life Skills	3	Finish 60 Credit Hours		Online

#### 2. Elective Requirements (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
20251	History of Science	3			Blended
31100	Sports and Health	3			Blended
31130	Foreign languages	3			Blended
31152	Arabic Islamic Civilization	3			Blended
31211	Arabic Literature	3	31112		Blended
31252	Governance and Development	3			Blended
31260	Human Rights	3			Blended
31261	Introduction to Politics and Economic Science	3			Blended
31264	Introduction To Psychology	3			Blended
31272	Development and Environment	3			Blended
31311	Scientific Research Methods	3			Blended
31351	Contemporary Issues in the Arab World	3			Blended
31352	Jerusalem : History and Facts	3			Blended
31362	Philosophy and Critical Thinking	3			Blended

### School Requirements (30 CHs)

#### 1. Compulsory Requirements (30 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11103	Structured Programming	3	11100		



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11151	Structured Programming Lab	1		11103	
20132	Calculus (1)	3			
20133	Calculus (2)	3	20132		
20140	Basic Concepts in Chemistry	1			Online
20141	Physics (1)	3			
20142	Physics (2)	3	20141		
20150	Physics Lab	1		20142	
20200	Technical Writing and Communication Skills	3	31112,31122		Blended
20231	Calculus (3)	3	20133		
21218	Engineering Drawing Lab	1			Blended
21219	Engineering Workshop	1			
23411	Engineering Economics	3	Finish 99 Credit Hours		
24411	Engineering Ethics	1	Finish 99 Credit Hours		Blended

**Program Requirements (103 CHs)**

**1. Compulsory Requirements (94 CHs)**

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11325	Database Fundamentals	3	11103		Blended
20134	Discrete Mathematics (1)	3			Blended
20232	Engineering Mathematics(1)	3	20133		Blended
20234	Linear Algebra	3			
20331	Engineering Mathematics(2)	3	20231,20232		Blended
20335	Applied Probability and Statistics	3	20231		Blended
21221	Electric Circuits (1)	3	20142		
21222	Electric Circuits (2)	3	21221		
21229	Electric Circuits Lab	1		21222	
21231	Electronics (1)	3	21221		
21331	Electronics (2)	3	21231		
21338	Electronics Lab	1	21229	21331	
22241	Digital Logic Design	3			
22242	Object Oriented Laboratory for IoT	1	11103		
22348	Digital Logic Lab	1	22241		
22442	Embedded Systems	3	21338,22241		
22448	Embedded Systems Lab	1	22442		
22570	Artificial Intelligence and Machine Learning	3	11325,20234,20335		
23321	Electromagnetics (1)	3	20142,20331		
23351	Signals and Systems	3	20232,21222	23356	Blended
23355	Communication Principles	3	23351		
23356	Programming Applications in Signals & Systems Lab	1		23351	
23454	Communication Networks	3	23355		Blended
23455	Communication Networks Lab	1		23454	



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
23457	Cellular Communications	3	23355		Blended
23459	Communications Lab	1	21338	23355	
23571	Digital Signal Processing	3	23351		Blended
24471	Automatic Control	3	23351		
27251	Introduction to IoT	1	20142		
27351	Internet of things programming and applications	3	27251		
27352	Internet of things programming and applications Lab	1		27351	
27450	Antennas and Waves Propagation	3	23321,23355		Blended
27453	IoT Sensors and Applications	3	22442,23355,27251		
27454	IoT Sensors and Applications Lab	1		27453	
27490	Practical Training	3	Finish 115 Credit Hours		
27541	IoT Security and Privacy	3	20134,20234,27251		
27542	Internet of Things Security Lab	1		27541	
27551	Wireless IoT	3	23355		Blended
27552	Cellular Communications and Wireless IoT Lab	1	23457	27551	
27591	Senior Design Project (1)	1	27490, Finish 118 Credit Hours		Blended
27592	Senior Design Project (2)	2	27591		Blended

**2. Elective Requirements (9 CHs)**

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
21581	Special Topics in Electronics Engineering	3			Blended
22582	Special Topics in Computer Engineering (1)	3			
23482	Satellite Communications	3	23355		Blended
23483	Advanced Communications Systems	3	23355		Blended
23551	Optical Communications	3	23355		Blended
23582	Special Topics in Communications Engineering (1)	3			Blended
23584	Coding and Cryptography	3	23355		Blended
23585	Wireless Network Architecture	3	23454,23457		Blended
23586	Sensor Networks	3	23454		Blended
23587	Digital Image Processing	3	23571		Blended
24583	Special Topics in Power And Energy Engineering	3			Blended
25593	Special Topics in Network Security Engineering (1)	3			Blended
27580	Special Topics in IOT	3			
27583	Blockchain in the Internet of Things	3	11325,27251		
27584	Internet of Robotics	3	22442		
27585	Cloud Computing in IoT	3	11325,27251		
27586	Control Technology of IoT	3	22442,24471		
27587	Network Protocols for IoT	3	23454,23457		



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
27588	Autonomous Vehicles	3	11325,27251		
27589	Optimization	3	20234		
27594	Smart Grid Communications	3	23355,23454		