



## Study Plan for Bachelor's Degree in Communication Engineering\Internet of Things for year 2023-2024

The Bachelor's Degree in Communication 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
11100	Computer Skills (Remedial)	0		
31021	Arabic Language Communication Skills (Remedial)	0		
31022	English Language Communication Skills (Remedial)	0		
31112	Arabic Language Communication Skills	3	31021	
31122	English Language Communication Skills	3	31022	
31151	National Education	3		
31160	Leadership and Societal Responsibility	0		
31251	Military Science	3		
31254	Entrepreneurship and Innovation	3	Finish 60 Credit Hours	
31374	Life Skills	3	Finish 60 Credit Hours	

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

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

### School Requirements (30 CHs)

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

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11103	Structured Programming	3	11100	
11151	Structured Programming Lab	1		11103
20132	Calculus (1)	3		
20133	Calculus (2)	3	20132	



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
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	31112,31122	
20231	Calculus (3)	3	20133	
21218	Engineering Drawing Lab	1		
21219	Engineering Workshop	1		
24411	Engineering Ethics	1	Finish 99 Credit Hours	
27411	Engineering Economics	3	Finish 99 Credit Hours	

**Program Requirements (103 CHs)**

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

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11325	Database Fundamentals	3	11103	
20134	Discrete Mathematics (1)	3		
20232	Engineering Mathematics(1)	3	20133	
20234	Linear Algebra	3		
20331	Engineering Mathematics(2)	3	20231,20232	
20335	Applied Probability and Statistics	3	20231	
21221	Electric Circuits (1)	3	20142	
21222	Electric Circuits (2)	3	21221,22210	
21229	Electric Circuits Lab	1		21222
21231	Electronics (1)	3	21221	
21331	Electronics (2)	3	21231	
21338	Electronics Lab	1	21229	21331
22210	Programming Applications Lab	1	11151	
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	
24471	Automatic Control	3	27353	
27251	Introduction to IoT	1	20142	
27321	Electromagnetics (1)	3	20142,20331	
27351	Internet of things programming and applications	3	27251	
27352	Internet of things programming and applications Lab	1		27351
27353	Signals and Systems	3	20232,21222	
27355	Communication Principles	3	27353	
27450	Antennas and Waves Propagation	3	27321,27355	
27451	Communication Networks	3	27355	



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
27452	Communication Networks Lab	1		27451
27453	IoT Sensors and Applications	3	22442,27251,27355	
27454	IoT Sensors and Applications Lab	1		27453
27455	Cellular Communications	3	27355	
27456	Communications Lab	1	21338	27355
27490	Practical Training	3	Finish 99 Credit Hours	
27541	IoT Security and Privacy	3	20134,20234,27251	
27542	Internet of Things Security Lab	1		27541
27550	Digital Signal Processing	3	27353	
27551	Wireless IoT	3	27355	
27552	Cellular Communications and Wireless IoT Lab	1	27455	27551
27591	Senior Design Project (1)	1	Finish 120 Credit Hours	
27592	Senior Design Project (2)	2	27591	

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

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
21581	Special Topics in Electronics Engineering	3		
22582	Special Topics in Computer Engineering (1)	3		
24583	Special Topics in Power And Energy Engineering	3		
25593	Special Topics in Network Security Engineering (1)	3		
27457	Optical Communications	3	27355	
27458	Satellite Communications	3	27355	
27481	Coding and Cryptography	3	27355	
27554	Digital Image Processing	3	27550	
27555	Sensor Networks	3	27451	
27556	Wireless Network Architecture	3	27451,27455	
27557	Advanced Communications Systems	3	27355	
27558	Smart Grid Communications	3	27355,27451	
27580	Special Topics in IOT	3		
27582	Special Topics in Communications Engineering	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	27451,27455	
27588	Autonomous Vehicles	3	11325,27251	
27589	Optimization	3	20234	