



## Study Plan for Bachelor's Degree in Networks and Information Security Engineering

The Bachelor's Degree in Networks and Information Security 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 (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		
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
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	
21231	Electronics (1)	3	21221	
21332	Digital Electronics	3	21231	
22241	Digital Logic Design	3		
22348	Digital Logic Lab	1	22241	
22442	Embedded Systems	3	21231,22348	
22443	Computer Networks	3	20335,23355	
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
22560	Network Programming and Applications	3	22443,22460	
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	
25347	Cryptography	3	20134,20234	



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
25420	Networks Security	3	25347	25441
25441	Wireless Networks	3	22443	
25445	Wireless Networks Lab	1	25441	
25490	Practical Training	3	Finish 99 Credit Hours	
25520	Penetration Testing	3	25420	
25543	Intrusion Detection & Network Forensics	3	25420	
25545	Network Security Lab	1	25420	
25549	Ethical Hacking Techniques Lab	1		25543
25591	Senior Project (1)	1	Finish 120 Credit Hours	
25592	Senior Project (2)	2	25591	

### 2. Elective Requirements (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11466	Secure Software Development	3	22460	
11467	Database Security	3	11323,25330	
22530	Software Reverse Engineering	3	22442	
22570	Artificial Intelligence and Machine Learning	3	11212,20234,20335	
22582	Special Topics in Computer Engineering (1)	3		
23576	Wireless Internet of Things	3	23355	
23582	Special Topics in Communications Engineering (1)	3		
25530	Information Systems Security Assessment	3	25330	
25541	Cloud Computing & Security	3	22443,25330	
25542	Cyber Laws	3	25330	
25576	Network Performance Analysis	3	20335,22443	
25582	Operation & Administration of Security Centers	3	22443,25330	
25583	IT Audit	3	22443,25330	
25584	Risk Management	3	20335,25330	
25585	Multimedia Networks	3	22443	
25586	Hardware Security	3	22442,25330	
25587	Secure System Architecture	3	25330	
25593	Special Topics in Network Security Engineering (1)	3		
25594	Special Topics in Network Security Engineering (2)	3		
25595	Special Topics in Information Security (1)	3		
25596	Special Topics in Information Security (2)	3		