



Study Plan for Bachelor's Degree in Electrical Power and Energy Engineering

The Bachelor's Degree in Electrical Power and Energy 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
20232	Engineering Mathematics(1)	3	20133	
20234	Linear Algebra	3		
20331	Engineering Mathematics(2)	3	20231,20232	
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	
21331	Electronics (2)	3	21231	
21338	Electronics Lab	1	21229	21331
22241	Digital Logic Design	3		
22348	Digital Logic Lab	1	22241	
22442	Embedded Systems	3	21231,21338,22241,22348	
23321	Electromagnetics (1)	3	20142,20331	
23351	Signals and Systems	3	20232,21222	23356
23356	Programming Applications in Signals & Systems Lab	1		23351
23357	Communications (1)	3	23351	
24311	Thermodynamics	3	20142	
24322	Instruments and Measurements	3	21222,21231	
24329	Instruments and Measurements Lab	1	21229	24322
24361	Electric Machines (1)	3	21222,23321	
24462	Electric Machines (2)	3	24361	
24463	Power Systems Analysis	3	21222	24361
24467	Power Electronics	3	21331,24361	
24468	Electric Machinery Lab	1		24462
24469	Power Systems lab	1		24470
24470	Power Systems Planning, Operation and Control	3	24463	



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
24471	Automatic Control	3	23351	
24479	Automatic Control Lab	1		24471
24490	Practical Training	3	Finish 99 Credit Hours	
24562	Power Systems Protection	3		24470
24568	Power Electronics Lab	1	24467	
24569	Power Systems Protection Lab	1	24469,24562	
24574	Energy Efficiency & Auditing	3	24463	
24575	Power Systems Economics & Reliability	3	24463	
24576	Renewable Energy Systems (1)	3	24463	
24591	Senior Project (1)	1	Finish 120 Credit Hours	
24592	Senior Project (2)	2	24591	

2. Elective Requirements (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11206	Object Oriented Programming	3	11103	
20242	Materials Physics and Chemistry for Engineers	3	20132,20142	
21581	Special Topics in Electronics Engineering	3		
22582	Special Topics in Computer Engineering (1)	3		
23582	Special Topics in Communications Engineering (1)	3		
24472	Energy Conversion	3	24311	
24564	Transmission & Distribution Systems	3	24463	
24565	High Voltage Engineering	3	24463	
24566	Reliability of Power Systems	3	24463	
24567	Power Systems Design	3	24463	
24572	Electric Drives Systems	3	24462	
24581	Special Topics in Power Engineering	3		
24582	Special Topics in Energy Engineering	3		
24588	Renewable Energy Systems (2)	3	24576	
25593	Special Topics in Network Security Engineering (1)	3		