



**Study Plan for Bachelor's Degree in  
Electrical Power and Energy Engineering  
for year 2021 - 2022**

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	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		