



Study Plan for Bachelor's Degree in Electrical Power and Energy Engineering for year 2019-2020

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 (12 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11100	Computer Skills (Remedial)	0			Online
31019	Arabic Language (Remedial)	0			Online
31029	English Language (Remedial)	0			Online
31111	Arabic Language	3	31019		Online
31121	English Language	3	31029		Online
31151	National Education	3			Online
31153	Introduction to Society, Technology and Environment Protection	0			
31251	Military Science	3			Online

2. Elective Requirements (15 CHs)

2.1. Elective University Requirements (General) (6 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
20251	History of Science	3			Blended
20252	Arab Islamic Scientific Heritage	3			
31100	Sports and Health	3			Blended
31152	Arabic Islamic Civilization	3			Blended
31161	Introduction to Library Science	3			
31211	Arabic Literature	3	31111		Blended
31252	Governance and Development	3			Blended
31261	Introduction to Politics and Economic Science	3			Blended
31262	Introduction to Educational Science	3			
31264	Introduction To Psychology	3			Blended
31271	Environmental Science	3			Blended
31351	Contemporary Issues in the Arab World	3			Blended
31352	Jerusalem : History and Facts	3			Blended
31361	Introduction to Philosophy	3			Blended
31371	Health Education	3			

2.2. Elective University Requirements (Scientific, Practical) (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
31130	Foreign languages	3			Blended
31255	Entrepreneurship for Business	3	Finish 60 Credit Hours		Online
31311	Scientific Research Methods	3			Blended
31373	21st Century Skills	3	Finish 60 Credit Hours		Online



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School Requirements (30 CHs)

1. Compulsory Requirements (30 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11103	Structured Programming	3	11100		
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	31111,31121		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
20232	Engineering Mathematics(1)	3	20133		Blended
20234	Linear Algebra	3			
20331	Engineering Mathematics(2)	3	20231,20232		Blended
20333	Numerical Analysis	3	20133		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			
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	Blended
23356	Programming Applications in Signals & Systems Lab	1		23351	
23357	Communications (1)	3	23351		
24311	Thermodynamics	3	20142		Blended
24322	Instruments and Measurements	3	21231		



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
24329	Instruments and Measurements Lab	1	21229	24322	
24361	Electric Machines (1)	3	21222,23321		
24462	Electric Machines (2)	3	24361		Blended
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		
24471	Automatic Control	3	23351		
24479	Automatic Control Lab	1		24471	
24490	Practical Training	3	Finish 115 Credit Hours		
24562	Power Systems Protection	3		24470	Blended
24568	Power Electronics Lab	1	24467		
24569	Power Systems Protection Lab	1	24469,24562		
24574	Energy Efficiency & Auditing	3	24463		Blended
24575	Power Systems Economics & Reliability	3	24463		Blended
24576	Renewable Energy Systems (1)	3	24463		Blended
24591	Senior Project (1)	1	24490, Finish 118 Credit Hours		Blended
24592	Senior Project (2)	2	24591		Blended

2. Elective Requirements (9 CHs)

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