



## Study Plan for Bachelor's Degree in Electrical Power and Energy Engineering for year 2023-2024

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

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

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

### School Requirements (30 CHs)

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

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11103	Structured Programming	3	11100		



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
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	31112,31122		Blended
20231	Calculus (3)	3	20133		
21218	Engineering Drawing Lab	1			Blended
21219	Engineering Workshop	1			
24411	Engineering Ethics	1	Finish 99 Credit Hours		Blended
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	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	
22210	Programming Applications Lab	1	11151		
22241	Digital Logic Design	3			
22348	Digital Logic Lab	1	22241		
22442	Embedded Systems	3	21231,21338,22241,22348		
24311	Thermodynamics	3	20142		Blended
24322	Instruments and Measurements	3	21222,21231		
24329	Instruments and Measurements Lab	1	21229	24322	
24361	Electric Machines (1)	3	21222,27321		
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	



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
24470	Power Systems Planning, Operation and Control	3	24463		
24471	Automatic Control	3	27353		
24479	Automatic Control Lab	1		24471	
24490	Practical Training	3	Finish 115 Credit Hours		
24562	Power Systems Protection	3	24463		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
27321	Electromagnetics (1)	3	20142,20331		
27353	Signals and Systems	3	20232,21222,22210		
27356	Communications (1)	3	27353		

**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			
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
27582	Special Topics in Communications Engineering	3			