Princess Sumaya University for Technology
جامعة الأميرة سمية للتكنولوجيا

Date Of Issue: 16/01/2024

Study Plan for Bachelor'sDegree 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
11100	Computer Skills (Remedial)	0		
31019	Arabic Language(Remedial)	0		
31029	English Language (Remedial)	0		
31111	Arabic Language	3	31019	
31121	English Language	3	31029	
31151	National Education	3		
31153	Introduction to Society, Technology and Environment Protection	0		
31251	Military Science	3		

2. Elective Requirements (15 CHs)

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

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

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

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

School Requirements (30 CHs)

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1. Compulsory Requirements (30 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
11103	Structured Programming	3	11100	
11151	Structured ProgrammingLab	1		11103
20132	Calculus (1)	3		
20133	Calculus (2)	3	20132	
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	31111,31121	
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	

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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent
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	
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		