



Study Plan for Bachelor's Degree in Electrical Power and Energy Engineering for year 2015-2016

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 |
|---------------|---|--------------|--------------|------------|---------|
| 20252 | Arab Islamic Scientific Heritage | 3 | | | |
| 31100 | Sports and Health | 3 | | | Blended |
| 31152 | Arabic Islamic Civilization | 3 | | | Blended |
| 31161 | Introduction to Library Science | 3 | | | |
| 31171 | History of Science | 3 | | | Blended |
| 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 | | | |
| 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 |
| 31372 | Business Skills | 3 | Finish 60 Credit Hours | | Online |

School Requirements (30 CHs)



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1. Compulsory Requirements (30 CHs)

| Course Number | Course Title | Credit Hours | Prerequisite | Concurrent | Online |
|---------------|--|--------------|------------------------|------------|---------|
| 00099 | 99 Credit Hours | 0 | | | |
| 11103 | Structured Programming | 3 | 11100 | | |
| 11151 | Structured Programming Lab | 1 | | 11103 | |
| 20132 | Calculus (1) | 3 | | | |
| 20133 | Calculus (2) | 3 | 20132 | | |
| 20141 | Physics (1) | 3 | | | |
| 20142 | Physics (2) | 3 | 20141 | | |
| 20148 | Physics (1) Lab | 1 | | 20141 | |
| 20149 | Physics (2) Lab | 1 | | 20142 | |
| 20200 | Technical Writing and Communication Skills | 3 | 31111,31121 | | Blended |
| 20231 | Calculus (3) | 3 | 20133 | | |
| 24218 | Engineering Drawing Using Computers | 1 | | | |
| 24219 | Engineering Workshop | 1 | | | |
| 24411 | Engineering Ethics | 1 | Finish 99 Credit Hours | | Blended |
| 32431 | Engineering Economics | 3 | Finish 99 Credit Hours | | Blended |

Program Requirements (103 CHs)

1. Compulsory Requirements (97 CHs)

| Course Number | Course Title | Credit Hours | Prerequisite | Concurrent | Online |
|---------------|---|--------------|--------------|------------|---------|
| 20232 | Engineering Mathematics(1) | 3 | 20133 | | Blended |
| 20234 | Linear Algebra | 3 | 20132 | | |
| 20331 | Engineering Mathematics(2) | 3 | 20231,20232 | | Blended |
| 20333 | Numerical Analysis | 3 | 20133 | | Blended |
| 20334 | Applied Probability | 3 | 20231 | | Blended |
| 21231 | Electronics (1) | 3 | 24221 | | |
| 21331 | Electronics (2) | 3 | 21231 | | |
| 21338 | Electronics Lab | 1 | 24229 | 21331 | |
| 22241 | Digital Logic Design | 3 | | | |
| 22340 | Microprocessors & Embedded Systems | 3 | 21231,22241 | | |
| 22346 | Logic & Embedded Systems Lab | 1 | | 22340 | |
| 23351 | Signals and Systems | 3 | 20232,24222 | 23352 | Blended |
| 23352 | Programming Applications in Signals & Systems | 1 | | 23351 | |
| 24221 | Electric Circuits (1) | 3 | 20142 | | |
| 24222 | Electric Circuits (2) | 3 | 24221 | | |
| 24229 | Electric Circuits Lab | 1 | | 24222 | |
| 24311 | Thermodynamics | 3 | 20142 | | Blended |
| 24321 | Applied Electromagnetics | 3 | 20142,20331 | | |
| 24322 | Instruments and Measurements | 3 | 21231 | | |
| 24329 | Instruments and Measurements Lab | 1 | 24229 | 24322 | |
| 24461 | Electric Machines (1) | 3 | 24222,24321 | | |



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| Course Number | Course Title | Credit Hours | Prerequisite | Concurrent | Online |
|---------------|---|--------------|-------------------------|------------|---------|
| 24462 | Electric Machines (2) | 3 | 24461 | | Blended |
| 24463 | Power Systems Analysis | 3 | 24222 | 24461 | |
| 24465 | Power Systems Economics | 3 | 24463 | | |
| 24468 | Electric Machinery Lab | 1 | | 24462 | |
| 24469 | Power Systems lab | 1 | | 24463 | |
| 24471 | Automatic Control | 3 | 23351 | | |
| 24472 | Energy Conversion | 3 | 24311 | | Blended |
| 24479 | Automatic Control Lab | 1 | | 24471 | |
| 24490 | Practical Training | 3 | Finish 99 Credit Hours | | |
| 24561 | Power Electronics | 3 | 21331 | | |
| 24562 | Power Systems Protection | 3 | 24463 | | Blended |
| 24563 | Power Systems Planning, Operation and Control | 3 | 24463 | | |
| 24564 | Transmission & Distribution Systems | 3 | 24463 | | Blended |
| 24565 | High Voltage Engineering | 3 | 24463 | | Blended |
| 24568 | Power Electronics Lab | 1 | | 24561 | |
| 24569 | Power Systems Protection Lab | 1 | | 24562 | |
| 24571 | Renewable Energy Systems | 3 | 24463 | | |
| 24591 | Senior Project (1) | 1 | Finish 120 Credit Hours | | Blended |
| 24592 | Senior Project (2) | 2 | 24591 | | Blended |

2. Elective Requirements (6 CHs)

| Course Number | Course Title | Credit Hours | Prerequisite | Concurrent | Online |
|---------------|--|--------------|--------------|------------|---------|
| 11206 | Object Oriented Programming | 3 | 11103 | | |
| 21581 | Special Topics in Electronics Engineering | 3 | 20334,21331 | | Blended |
| 22581 | Special Topics in Computer Engineering | 3 | | | |
| 23581 | Special Topics in Communications Engineering | 3 | | | 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 |