

**Electrical Engineering Department**  
**Power & Control Track Curriculum**  
**Effective year 2021**

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Degree Requirement (163) Credit Hours.

**1. University Requirements (27 Credit Hours):**

**1-a) Prerequisite Requirements (9 Credit Hours):**

Subject Number	Subject	Credit Hours	Prerequisite
0304096	Computer Skills Exam	0	-
0304099	Computer Skills (99)	3	0304096
1801096	Arabic Language Exam	0	-
1801099	Arabic Language (99)	3	1801096
1802096	English Language Exam	0	-
1802099	English Language (99)	3	1802096

**1-b) University Compulsory Requirements Courses (12 Credit Hours):**

Subject Number	Subject	Credit Hours	Prerequisite
0101173	Military Science	3	-
0605105	National Education	3	-
1801101	Arabic Language (1)	3	1801099
1802101	English Language (1)	3	1802099

**1-c) University Elective Requirements Courses- First Field (6 Credit Hours):**

Subject Number	Subject	Credit Hours	Prerequisite
0201102	Arabic Language (Literary Tasting)	3	-
0209107	Italian language (1)	3	-
0209109	French Language (1)	3	-
0500100	Islamic Culture	3	-
0500103	Human Right in Islam	3	-
0500105	Islam thoughts and life	3	-
0500106	Modern Islamic issues	3	-
0706100	Law In our Lives	3	-
0803101	Educational Principles	3	-
0801103	Environmental Education	3	-
0809101	Principles of Physiology	3	-
1301100	Principles of Physical Education	3	-
1802102	English Language (2)	3	1802101

**1-d) University Elective Requirements Courses- Second Field (6 Credit Hours):**

Subject Number	Subject	Credit Hours	Prerequisite
1601104	Introduction to Domestic Violence	3	-
1602104	Geography of Jordan	3	-
1603102	Tourism in Jordan	3	-
1603103	Archologies of Jordan and Palestine in Ancient Times	3	-
1604102	Islamic Civilization	3	-
1604104	Jerusalem in Arabic and Islamic History	3	-
1605101	Introduction to politics science	3	-
1605103	Contemporary international and regional issues	3	-
2100100	Work Ethics	3	-
2101102	Developing innovative work skills	3	-
2101103	Developing the skills of preparing and writing administrative reports	3	-
2101104	Managerial skills	3	-
2102101	Fundamentals of Management (Non-Management Students)	3	-
2104100	Introduction to Economics (Non-Management Students)	3	-
2109103	Life Communication Skills	3	-

### 1-e) University Elective Requirements Courses- Third Field (6 Credit Hours):

Subject Number	Subject	Credit Hours	Prerequisite
0304112	Computer Skills(2)	3	0304099
0307110	Libraries and Information	3	-
0401121	Principles of General Electricity	3	-
0402120	Principles in Automotive Mechanics and Maintenance	3	-
0403120	Traffic Safety	3	-
0405121	Principles of computer operation and maintenance	3	-
1101108	Ornamental plants and home garden	3	-
1401100	Health culture	3	-
2200100	Internet and social media applications	3	-

### 2.Faculty Compulsory Requirements Courses (29 Credit Hours):

Subject Number	Subject	Credit Hours	Prerequisite
0301101	Calculus (1)	3	-
0301102	Calculus (2)	3	0301101
0301203	Ordinary Differential Equation	3	0301102
0302101	General Physics (1)	3	-
0302102	General Physics (2)	3	0302101
0302111	General Physics laboratory (1)	1	0302101
0302112	General Physics laboratory (2)	1	0302102 or with
0303101	General Chemistry (1)	3	-
0303105	General Chemistry Laboratory (1)	1	0303101 or with
0402110	Engineering Workshop	1	-
0403198	Engineering Drawing	2	-
0403209	Computer Drawing by computer	1	0403198
0403302	Engineering Economy	3	0301203
0404200	Communication Skills	1	-

### 3. Department Compulsory Requirements Courses (49 Credit Hours):

Subject Number	Subject	Credit Hours	Prerequisite
0401200	Engineering analysis	3	0301203
0401109	<a href="#">Probability, Stochastic Processes &amp; Statistics</a>	3	0401102
0401208	Signals and Systems	3	0401211
0401211	Electric Circuits (1)	3	0302102
0401212	Electric Circuits (2)	3	0401211
0401219	Electrical Circuits & Filters LAB.	1	0401212 <b>Co</b>
0401220	<a href="#">MATLAB Applications Lab in Electrical Engineering</a>	1	0401212 <b>Co</b>
0401252	Electromagnetics	3	0401200
0401401	Field Training	3	Pass 123 CHs
0401441	Automatic Control	3	0401208
0401442	Measurements & Instrumentation	3	0401212
0401448	Measurements & Instrumentation LAB	1	0401442 and 0401219
0401500	Graduation Project (1)	0	Pass 120 CHs 0401220
0401591	Graduation Project (2)	3	0401500
0402226	<a href="#">Statics and Dynamics</a>	3	0302102 0403198
0402307	<a href="#">Numerical Analysis</a>	3	0301203
0405112	<a href="#">Programming for Engineers</a>	3	
0405271	Digital Systems Design	3	
0405486	<a href="#">Microprocessors and Embedded Systems</a>	3	0405271
0405487	<a href="#">Logic Design and Microprocessors Lab</a>	1	0405486

### 4. Specialty Compulsory Requirements Courses (49 Credit Hours):

Subject Number	Subject	Credit Hours	Prerequisite
0401230	Electronic Circuits and Devices	3	0401212
0401231	Electronic Circuits and Devices Lab	1	0401219 0401230
0401323	Communication Principles	3	0401208
0401372	Electric Machines (1)	3	0401212 0401252
0401376	Electric Machines (2)	3	0401372
0401464	Power Electronics	3	040230 0401372
0401491	Power Electronics LAB	1	0401479 0401464
0401479	Electric Machines Lab	1	0401219 0401376
0401480	Renewable Energy Systems	3	0401464
0401481	Power systems (1)	3	0401376
0401482	Power systems (2)	3	0401481

0401483	High voltage	3	0401482
0401484	Power Systems Programing Laboratory	1	0401482
0401488	Power systems LAB	1	0401482 0401479
0401543	Digital Automatic Control	3	0401441
0401548	Automatic Control Lab	1	0401441
0401556	Programmable Logic Controllers	3	0401543
0401582	Power Transmission and Distribution: Planning and Design	3	0401482
0401585	Protection and High voltage Lab	1	0401483 0401587
0401587	Power System Protection	3	0401482
0405597	Machines Drive Systems	3	0401464 0401376

### 5.Specialty Elective Requirements Courses (9 Credit Hours):

Subject Number	Subject	Credit Hours	Prerequisite
0401444	Power Systems Simulation and Modeling	3	0401441
0401486	Power Stations and Smart Grids	3	0401481
0401490	Introduction to IoT	3	0405486
0401540	Machines Controllers	3	0401465 0405476
0401546	Industrial Processes Control	3	0401441
0401550	Electrical Wiring & Illumination	3	0401212
0401579	Power Stations Design	3	0401482
0401580	Power Stations	3	
0401583	Electrical Energy Management	3	0401582
0401584	Reliability and economics of power systems	3	
0401592	Special Topics in Power and Control Engineering	3	0401482