

Al-Ahliyya Amman University

Faculty of Engineering



Study Plan (2019-2020) for Electrical Engineering (160 Credit Hours)

First: University Requirements: (24) Credit Hours

1) Compulsory University Requirements (12) Credit Hours

| Course No | Course Title | Cr. H | Prerequisite | Exception |
|-----------|------------------------------|-------|--------------|----------------|
| A0161101 | Arabic Communication Skills | 3 | A0161100 | - |
| A0161201 | English Communication Skills | 3 | A0161200 | - |
| A0161301 | National Education | 3 | - | - |
| A0161401 | Military Sciences | 3 | - | Non-Jordanians |

2) Elective University Requirements (12) Credit Hours

A) First group (6) Credit Hours

| Course No | Course Title | Cr. H | Prerequisite | Exception |
|-----------|----------------------------------|-------|--------------|--------------------|
| A0161501 | Islamic Culture | 3 | - | - |
| A0161601 | Contemporary Issues | 3 | - | - |
| A0161701 | History of Jordan and Palestine | 3 | - | - |
| A0161901 | Media and Public Relations | 3 | - | - |
| A0411601 | Legal culture and human rights | 3 | - | Law Students |
| A0161703 | Archeology and Tourism in Jordan | 3 | - | Marketing students |

B) Second group (6) Credit Hours

| Course No | Course Title | Cr. H | Prerequisite | Exception |
|-----------|---------------------------------|-------|--------------|--|
| A0161602 | Critical Thinking Skills | 3 | - | - |
| A0161603 | Entrepreneurship Skills | 3 | - | - |
| A0161801 | Environmental and Public Safety | 3 | - | - |
| A0181100 | Sport and Health | 3 | - | physical and health education students |
| A0612303 | Community Health | 3 | - | Nursing Students |
| A0871103 | Principles of Renewable Energy | 3 | - | Electrical Engineering |

Second: Faculty Compulsory Requirements (37) Credit Hours

| Course No | Course Title | Cr. H | Prerequisite | Corequisite |
|-----------|---|-------|--------------|-------------|
| A0111101 | Mathematics (1) | 3 | - | - |
| A0111102 | Mathematics (2) | 3 | A0111101 | - |
| A0111201 | General Physics (1) | 3 | - | - |
| A0111202 | General Physics (2) | 3 | A0111201 | - |
| A0111203 | General Physics Lab. | 1 | - | A0111201 |
| A0111301 | General Chemistry | 3 | - | - |
| A0112101 | Linear Algebra | 3 | A0111102 | - |
| A0811201 | Computer Skills (Engineering) | 3 | A0331700 | - |
| A0811202 | Engineering Workshops | 1 | - | - |
| A0812201 | Communications Skills & Professional Ethics | 3 | A0161201 | - |
| A0831201 | Engineering Drawing | 2 | - | - |
| A0832101 | Differential Equations | 3 | *A0111102 | - |
| A0832102 | Engineering Statistics | 3 | A0111101 | - |
| A0833101 | Numerical Analysis | 3 | A0112101 | - |

Community Service is a Mandatory Graduation Requirement (10 hours of service).

*This prerequisite must be successfully passed before registering the course

Third: Major Requirements (99) Credit Hours

A) Compulsory Major Requirements (49) Credit Hours

| Course No | Course Title | Cr. H | Prerequisite | Corequisite |
|-----------|--|-------|--|-------------|
| A0872301 | Electric Circuits (1) | 3 | A0111202 | - |
| A0872302 | Electric Circuits (2) | 3 | *A0872301 | - |
| A0872304 | Electric Circuits Lab. | 1 | A0872301 | A0872302 |
| A0872501 | Electromagnetics | 3 | *A 0111202 | - |
| A0873503 | Electrical Machines | 3 | A 0872302 | - |
| A0873504 | Electrical Machines Lab. | 1 | - | A 0873503 |
| A0874301 | Power Electronics | 3 | A0822502 | - |
| A0874302 | Power Electronics Lab. | 1 | - | A 0874301 |
| A0874501 | Control Systems | 3 | A0823401 | - |
| A0874502 | Control Systems Lab. | 1 | - | A0874501 |
| A0874503 | Electrical Power Systems (1) | 3 | A 0873503 | - |
| A0874504 | Electrical Power Systems (2) | 3 | *A0874503 | - |
| A0874505 | Electrical Power Systems Lab. | 1 | A 0874503 | A0874504 |
| A0874506 | Renewable Energy Systems | 3 | A0874301 A0874503 | - |
| A0874507 | Renewable Energy Lab. | 1 | - | A0874506 |
| A0874508 | Design of Lighting and Electrical Installations | 3 | A 0874503 | - |
| A0874509 | Design of Lighting and Electrical Installations Lab. | 1 | - | A 0874508 |
| A0874601 | Field Training | 3 | Pass (115) Cr.H. | - |
| A0875501 | Power Systems Protection | 3 | A0874503 | - |
| A0875502 | Design of Electrical Power Systems | 3 | A0874504 | - |
| A0875601 | Graduation Project (1) | 1 | Must pass Field Training (*A0874601) | - |
| A0875602 | Graduation Project (2) | 2 | A 0875601 | - |

B) Ancillary Major Requirements (41) Credit Hours

| Course No | Course Title | Cr. H | Prerequisite | Corequisite |
|-----------|---|-------|--------------|-------------|
| A0812101 | Discrete Mathematics | 3 | A0111101 | - |
| A0812401 | Digital Logic Circuits | 3 | A0111101 | - |
| A0812402 | Digital Logic Circuits Lab. | 1 | - | A0812401 |
| A0813201 | Engineering Economy and Management | 3 | A0111101 | - |
| A0813402 | Microprocessors | 3 | A0812401 | - |
| A0814401 | Embedded Systems | 3 | A0813402 | - |
| A0814403 | Microprocessors & Embedded Systems Lab. | 1 | A0813402 | A 0814401 |
| A0822502 | Electronics | 3 | *A0872301 | - |
| A0823401 | Signals and Systems | 3 | A0872302 | - |
| A0823403 | Analog Communications | 3 | *A0823401 | - |
| A0823404 | Analog Communications Lab. | 1 | - | A0823403 |
| A0823502 | Electronics Lab. | 1 | - | A0822502 |

| Course No | Course Title | Cr. H | Prerequisite | Exception |
|-----------|---------------------------|-------|--------------|-----------|
| A0823503 | Digital Electronics | 3 | A0822502 | - |
| A0823504 | Digital Electronics Lab. | 1 | - | A0823503 |
| A0824302 | Wireless Communications | 3 | A0824401 | - |
| A0824401 | Digital Communications | 3 | A0823403 | - |
| A0825501 | Communication Electronics | 3 | A0824401 | - |

C) Elective Major Requirements (9) Credit Hour

| Course No | Course Title | Cr. H | Prerequisite | Corequisite |
|-----------|---|-------|------------------------------|-------------|
| A0874510 | Electrical Drives | 3 | A0873503 A0874301 | - |
| A0875503 | Distributed Generation and Smart Grids | 3 | A0874504 | - |
| A0875504 | Computer Applic .in Elec. Power Systems | 3 | A0874503 | - |
| A0875505 | High Voltage Engineering | 3 | A0874503 | - |
| A0875506 | Power Systems Reliability | 3 | A0874503 | - |
| A0875507 | Power Systems Economics | 3 | A0874503 | - |
| A0875508 | Power Systems Security | 3 | A0874503 | - |
| A0875509 | Power Systems Restructuring | 3 | A0874503 A0813201 | - |
| A0875603 | Selected Topics in Electrical Engineering | 3 | EE Department Approval | - |

Fourth: Remedial Requirements (to a student who has not passed the exam level)

| Course No | Course Title | Cr.H | Prerequisite |
|-----------|---------------------------|------|--------------|
| A0161100 | Arabic Language Remedial | 3 | - |
| A0161200 | English Language Remedial | 3 | - |
| A0331700 | Computer Skills Remedial | 3 | - |



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