جامعة بيروت العربية
BEIRUT ARAB UNIVERSITY
Faculty of Engineering

Department of Electrical and Computer Engineering

Electrical Power and Machines Engineering Program
Four-Year Study Plan - Last Updated 2025-2026

Basic Sciences & Mathematics | Engineering Topics from Outside | General Engineering
General Elective | Core & Technical Elective | General Education

Year 1

Fall (17 cr)

- PHYS 281 3 cr — Electricity and Magnetism
- CHEM 241 3 cr — Principles of Chemistry
  - Co: CHEM 241L 1 cr — Principles of Chemistry LAB
- MATH 281 3 cr — Linear Algebra
- MATH 282 3 cr — Calculus
- ENGR 002 2 cr — Introduction to Engineering
- ENGL 001 2 cr — General English

Spring (17 cr)

- POWE 212 3 cr — Electric Circuits I
- PHYS 280 3 cr — Classical Physics
- MATH 283 3 cr — Differential Equations
- MATH 381 3 cr — Probability & Statistics
- CHEM 405 2 cr — Fund. of Solid State Chemistry
- MCHE 213 3 cr — Dynamics
- 0 cr — IC3
- ENGL 211 2 cr — Advanced Writing

Summer (6 cr)

- 2 cr — General Elective
- ARAB 001 2 cr — Arabic Language

Year 2

Fall (17 cr)

- POWE 271 3 cr — Electromagnetic Fundamentals
- COME 214 3 cr — Electric Circuits II
  - Co: COME 212L 1 cr — Elec. Circts II LAB
- MATH 284 3 cr — Numerical Analysis
- 1 cr — General Elective
- COME 221 3 cr — Electronic Circuits I
- COMP 225 3 cr — Digital Systems I

Spring (17 cr)

- POWE 324 3 cr — Electrical Power Systems
  - Co: POWE 324L 1 cr — Electrical Power Systems LAB
- POWE 342 3 cr — Control Systems I
  - Co: POWE 342L 1 cr — Control Systems I LAB
- MATH 380 3 cr — Discrete Mathematics
- POWE 344 3 cr — Instrumentation & Measurement
- COMP 208 3 cr — Programming I

Summer (7 cr)

- ENGR 001 1 cr — Engineering Ethics
- BLAW 001 1 cr — Human Rights
- WRNL 200 3 cr — Work Ready Now
- ENGL 300 2 cr — Speech Communication

Year 3

Fall (16 cr)

- POWE 435 3 cr — Electric Machinery I
  - Co: POWE 435L 1 cr — Electric Machinery I LAB
- POWE 423 3 cr — Electrical Power System Analysis
- INME 221 3 cr — Engineering Economy
- POWE 433 3 cr — Power Electronic Circuits I
  - Co: POWE 433L 1 cr — Power Electronic Circuits I LAB
- ENGR 500 2 cr — Research Methodology

Spring (18 cr)

- POWE 436 3 cr — Electric Machinery II
  - Co: POWE 436L 1 cr — Electric Machinery II LAB
- POWE 420 3 cr — Electrical Power System Protection
  - Co: POWE 420L 1 cr — Electrical Power System Protection LAB
- POWE 438 3 cr — Electrical Installation Design
- POWE 434 3 cr — Power Electronic Circuits II
- COMP 345 3 cr — Intro. to Microprocessor
  - Co: COMP 345L 1 cr — Intro. to Microprocessor LAB

Summer (1 cr)

- POWE 499 1 cr — Internship

Year 4

Fall (18 cr)

- POWE 543 3 cr — Industrial Automation
  - Co: POWE 543L 1 cr — Industrial Automation LAB
- POWE 480 3 cr — Introduction to AI in Power Systems
- 3 cr — Technical Elective
- POWE 525 3 cr — Intro. to Renewable Energy
- POWE531 3cr — Electric Drives
  - Co: POWE 531L 1 cr — Electric Drives LAB
- POWE 501 1 cr — Final Year Project I

Spring (16 cr)

- POWE 427 3 cr — Electric Vehicle and its Control
- 3 cr — Technical Elective
- 3 cr — Technical Elective
- 3 cr — Technical Elective
- POWE 525L 1 cr — Intro to Ren. Energy LAB
- POWE 502 3 cr — Final Year Project II