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جـامعة بيروت العربية
BEIRUT ARAB UNIVERSITY

the guide faculty of Engineering

Vision Innovation Continuity

Faculty of Engineering

Dean's Message \

The Faculty of Engineering was established in recognition of the national and regional need for engineering education in 1975. The Faculty is at the forefront of engineering education in Lebanon and the region and is ranked among the top Faculties of Engineering in Lebanon. For more than 35 years, it has gained a reputation for building upon the best of past conventions and applying new practices to foster critical thinking, creativity, innovation, originality, and excellence. Our objective is to graduate high caliber engineers who are fit to compete domestically, regionally, and globally.

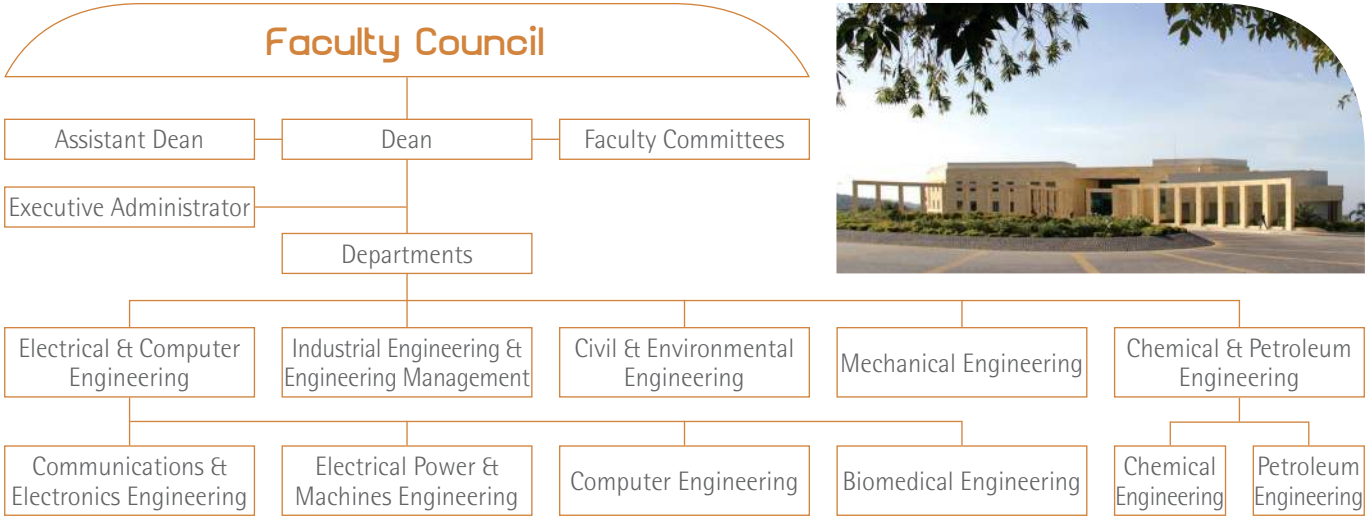
It also has fulfilled a large number of goals set by the University's Strategic Plan and will work on shaping and applying the next round of strategic development to insure a higher level of education and services to the students and to produce a better graduate ready to face the engineering challenges of the 21st Century.

The Faculty also has a graduate program that encourages conducting high-caliber basic and applied research in engineering and related fields.

Prof. Adel Ahmed Elkordi
Dean of
Faculty of Engineering

Organizational Structure \

The Faculty of Engineering consists of different areas of specialties: Electrical & Computer Engineering, Industrial Engineering & Engineering Management, Civil & Environmental Engineering, Mechanical Engineering, and Chemical & Petroleum Engineering. The Electrical & Computer Engineering Department offers four programs: Communications & Electronics Engineering, Electrical Power & Machines Engineering, Computer Engineering, and Biomedical Engineering. The Chemical & Petroleum Engineering department offers two programs Chemical Engineering and Petroleum Engineering. The Organizational Chart of the Faculty is as follows:



Academic Degrees \ Investing in the Future

The Faculty of Engineering offers:

Bachelor Degree in

- Civil Engineering
- Communications & Electronics Engineering
- Computer Engineering
- Electrical Power & Machines Engineering
- Biomedical Engineering
- Industrial Engineering
- Mechanical Engineering
- Petroleum Engineering
- Chemical Engineering

Master of Science (MSc) & Doctor of Philosophy (PhD) Degrees in

Electrical & Computer Engineering (7 Specialties)

Communications & Electronics

- Communications
- Electronics
- Radio Frequency & Systems

Electric Power & Machines

- Electric Power & High Voltage Engineering
- Electrical Machines & Drives
- Control Systems

Computer Engineering

Civil & Environmental Engineering (3 Specialties)

- Structures & Geotechnics
- Public Works
- Water Resources & Waste Water Treatment

Mechanical Engineering (4 Specialties)

- Design & Dynamic Systems
- Thermal Engineering
- Fluids Engineering
- Combustion & Automotive Engineering

Industrial Engineering & Management Engineering (4 Specialties)

- Project Management
- Engineering Management
- Maintenance Planning
- Production & Service Systems

Undergraduate Programs \ Making a Smart Choice

Department	Program	Bachelor	
		Total Credit Hours	Min No. of Years
Electrical & Computer Engrg	Communications & Electronics Engrg	150	5
	Computer Engrg	150	5
	Electrical Power & Machines	150	5
	Biomedical Engrg	150	5
Industrial Engrg & Engrg Management	Industrial Engrg	150	5
Civil & Environmental Engrg	Civil Engrg	150	5
Mechanical Engrg	Mechanical Engrg	150	5
Chemical & Petroleum Engrg	Petroleum Engrg	150	5
	Chemical Engrg	150	5

Admission Requirements

To be accepted for an Undergraduate Degree, applicants must:

- Hold the official Lebanese Secondary School Certificate in a branch relevant to the chosen undergraduate field of specialization or an official equivalent;
- Successfully pass the Entrance Exam to measure the level of proficiency in **English, Mathematics, Physics, Chemistry, and Logical Thinking.**

Graduation Requirements

To receive a Bachelor Degree in the engineering programs, a student must satisfactorily complete 150 credit hours with an overall minimum Cumulative Grade Point Average (CGPA) of 2.00 + International Computer Driving License (ICDL). The following table summarizes the number of credit hours required for each Bachelor-granting program at the Faculty.

Program	Common Requirements			Program Requirements			Total Credit Hours
	General Education	Basic Sciences/ Mathematics	General Engrg Topics	Major Core	Free Engrg. & Major Electives	Internship & FYP *	
CVLE	20	26	15	68	16	5	150
COME	20	26	15	72	12	5	150
BIME	20	26	15	-	-	5	-
COMP	20	26	15	69	15	5	150
POWE	20	26	15	72	12	5	150
INME	20	26	15	69	15	5	150
MCHE	20	26	15	75	9	5	150
PTRE	20	27	12	80	6	5	150
CHME	20	36	15	59	15	5	150

CVLE: Civil Engineering
COME: Communications & Electronics Engineering
BIME: Biomedical Engineering
COMP: Computer Engineering
POWE: Electrical Power & Machines Engineering
INME: Industrial Engineering
MCHE: Mechanical Engineering
PTRE: Petroleum Engineering
CHME: Chemical Engineering

* FYP: Final Year Project

Career Opportunities

Civil Engineering

- Private Sector or Government Agencies
- Design & Consultation
- Contracting & Supervision
- Project Management & Quality Control
- Departments of Structures, Transportation & Planning, Geotechnical Engineering, Environmental Engineering, Water Resources, & Computer Software
- Engineering Firm Partners
- Contractors

Electrical & Computer Engineering

Communications & Electronics Engineering Program

Designing, Installation, and Maintenance of the following:

- Fixed and Wireless Communications Systems
- Broadcast Equipment, Terrestrial & Satellite Based
- RF Antenna & Microwave Radio Equipment
- Radar Tracking & Control
- Simulators & Training Systems
- Electronic Boards Manufacturing
- Embedded Systems

Electrical Power & Machine Engineering Program

- Production of Electrical & Electronic Equipment & Machinery
- Electric Motors, Controls of Machinery, Lights & Wiring in Building Complexes, Vehicles, Aircrafts, Power Generations, Control & Transmission Devices
- New Product Design
- Maintenance Schedule & Chart Development
- Equipment & Machinery Testing
- Operation Problem Solving
- Electrical & Electronic Product Time Estimating & Cost

Computer Engineering

- Computer Systems
- Digital Control Subsystems
- Logic System Design
- Microprocessor-Based Interfaces
- Network Systems & Data Communication Systems
- General Security Schemes
- Operating Systems
- Database Systems
- Computer-Related Equipment Supervision

Biomedical Engineering

- Creation of Artificial Organs
- Automated Patient Monitoring

- Blood Chemistry Sensors
- Advanced Therapeutic & Surgical Devices
- Application of Expert Systems & Artificial Intelligence to Clinical Decision Making
- Design of Optimal Clinical Laboratories, Medical Imaging Systems, & Computer Modeling of Physiological Systems
- Biomaterials Design
- Biomechanics for Injury & Wound Healing

Industrial Engineering

- Engineering Project Manager
- Supply Chain Operation Manager
- Quality Engineer in Manufacturing System
- Industrial Scheduling Engineer
- Maintenance / Safety Engineer
- Production / Process Engineer
- Construction Management Engineer
- Industrial Management Engineer
- Production / Service Management Engineer

Mechanical Engineering

- Power Generation and Distribution
- Mechanical Services for Building
- HVAC, Plumbing, and Firefighting
- Automotive
- Food, Process
- Mechatronics
- Renewable Energy
- Mechanical Consulting & Contracting
- Water Resources & Pump Station
- Operation & Maintenance of Mechanical Systems

Chemical & Petroleum Engineering

Petroleum Engineering

- Oil & Gas Production
- Distribution & Refining
- Excavation, Process, Consulting, Environmental Institutions, & Government

Chemical Engineering

- Chemical Engineers bridge sciences and manufacturing by applying the principles of science and engineering, to solve problems involving modification of raw materials into required products in a variety of industries including: Oil & gas; pharmaceuticals; energy; water treatment; food & drink; plastics, & toiletries.

Graduate Programs \

Admission Requirements

Master's Degree

Applicants to a Master's Degree must hold a Bachelor Degree with a minimum CGPA of 2.33.

PhD Degree

Applicants to a PhD Degree must hold a Master's Degree from BAU or any other recognized university that qualifies the student to pursue a PhD with a minimum CGPA of 3.00.

Graduation Requirements

Master's Degree

The student has to successfully complete the required credit hours of the courses with a CGPA of no less than 2.33 in the courses and successfully defend the thesis in no less than one year from the date of registration in the program.

PhD Degree

The student should successfully complete the required credit hours with a CGPA of no less than 3.00 and should successfully defend the dissertation in a period of no less than three years from the date of registration in the program.

CGPA of 2.33 and 3.00 are equivalent to 73% and 80% respectively for the academic year system.

Programs & Degrees \

Program	Master		PhD	
	Total Credit Hours	Min No. of Years	Total Credit Hours	Min No. of Years
Communications & Electronics Engineering	30	1	40	3
Electrical Power & Machines Engineering	30	1	40	3
Computer Engineering	30	1	40	3
Biomedical Engineering	30	1	-	-
Industrial Engineering	30	1	-	-
Civil Engineering	30	1	40	3
Mechanical Engineering	30	1	40	3
Chemical Engineering	30	1	-	-
Petroleum Engineering	30	1	-	-

Academic Policy \ Supporting Your Steps

The Academic Policy helps students understand their rights and responsibilities and successfully complete all required academic tasks.

Academic Advising

Academic Advising is a shared responsibility; it entails a dynamic relationship between the advisor and the student. The advisors are committed to help students make a successful transition to the university and develop an appropriate academic plan. Advising is available to all students before the registration process to assist them in choosing a major, selecting courses, and completing all graduation requirements.

Code of Ethics

The Code of Ethics is designed to establish an environment of honor and trust within the University. BAU's Code of Ethics aims at promoting the growth of ethically responsible students through adherence to the highest standards of academic integrity, ethics, and morals.

Learning Facilities \ Inspiring Your Learning

The Faculty comprises a number of academic facilities that are open to students:

Library

The Faculty of Engineering Library supports all the Scientific Departments. Its collection consists of (4467) Books and (9000) E-books, and (117) Dissertations.

Laboratories

Communications & Electronics Engineering Program

- Measurements, Electric & Electronics Circuits Labs; Microprocessors, Microcontrollers, and FPGA Lab; Communications, Microwave, Antennas, and Acoustics Labs.

Electrical Machines & Power Engineering Program

- Measurements, Electric & Electronics Circuits Labs; Machines & Power Lab; Control, Automation, and Industrial Electronics Lab.

Computer Engineering Program

- Microprocessors, Microcontrollers, and FPGA Lab; Computer Labs ABDE; Computer Lab C.

Civil Engineering Program

- Hydraulics Lab; Structures & Materials Lab; Soil & Geotechnics Lab; Surveying Lab.

Mechanical Engineering Program

- Thermal Engineering Lab; Fluid Mechanics Lab; Measurements Mechatronics & Control Lab; Aerodynamics Lab.

Industrial Engineering Program

- Computer Numerical Control Lab; Engineering Materials Lab; Metal Shaping Lab.

Chemical & Petroleum Engineering Program

- Physical Geology Lab; Reservoir Simulation Lab; Reservoir Fluid Lab; Drilling Lab; Reservoir Rock Lab.

Student Life \ Advancing Knowledge... Transforming Lives

University Facilities and Services

All registered students have access to University facilities:

Health Care
- Medical Clinic
- Dental Clinic
- Nutrition and Dietetics Clinic
- Physical Therapy Clinic
- Psychological Clinic

Technology Services
- Portal (iConnect)
- Webmail
- Phone and Mail Services
- Campus Wi-Fi
- ATM

Dorms (Debbieh Campus)

Cafeterias

Debbieh Astronomical Observatory

Transportation and Parking

Legal Clinic

Cultural Campaigns

Teams & Clubs

(Beirut Campus)

Teams

Basketball (Male) ,Basketball (Female), Football, Futsal, Volleyball (Male), Volleyball (Female), Handball (Male), Archery, Chess, Muay Thai, Table Tennis, Swimming.

Clubs

Drama, Music, Folk Dance, Zumba, Scouts, Lebanese Red Cross Youth Center-BAU.

(Debbieh Campus)

Teams

Basketball (Male) ,Basketball (Female), Football (Male), Futsal (Male), Volleyball, Handball (Male), Chess , Table Tennis, Kick Boxing, Body Building, Tennis, Astronomy, Wrestling (Male), Athletics, Badminton.

Clubs

Drama, Music, Zumba, Scouts, Dance.

(Tripoli Campus)

Teams

Basketball (Male) ,Basketball (Female), Football (Male), Volleyball (Male) Volleyball (Female), Table Tennis (Male), Kick Boxing (Male), Body Building, Cardio, Aerobics.

Clubs

Drama, Music, Arts, Dance, Social, TEDx, Entrepreneur, Environmental, and Adventure.

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