



جامعة خليفة  
Khalifa University

ku.ac.ae

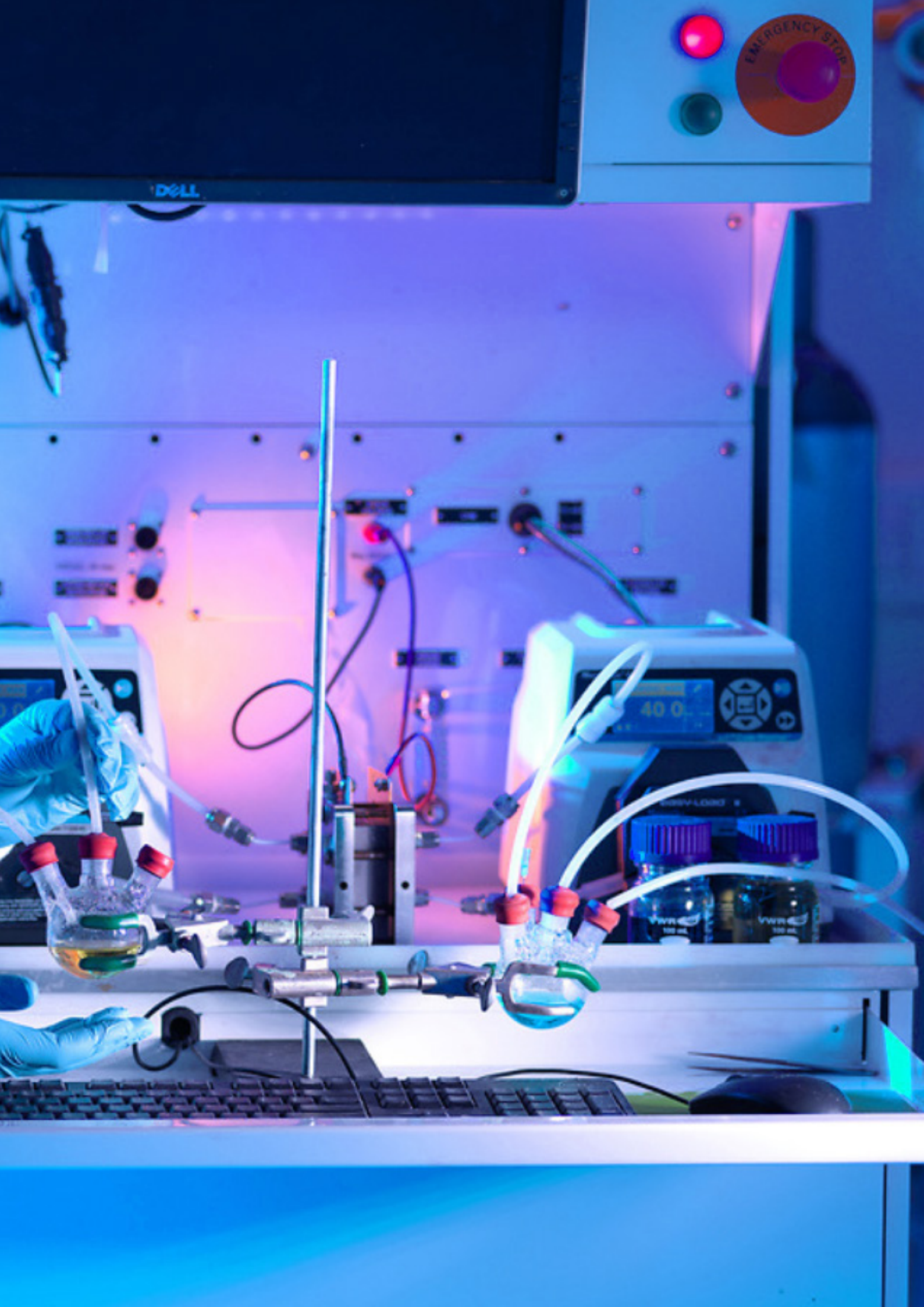
# STUDY AT KU UNDERGRADUATE

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NURTURING TOMORROW'S LEADERS.  
GROWING THE KNOWLEDGE ECONOMY.









## About Khalifa University

The internationally top-ranked Khalifa University is the one university in the UAE with the research and academic programs that address the entire range of strategic, scientific and industrial challenges facing the UAE's knowledge economy transformation and our rapidly evolving world.

Its world-class faculty and state-of-the-art research facilities provide an unparalleled learning experience to students from the UAE and around the world. The university brings together the best in science, engineering and medicine in the UAE, to offer specialized degrees that can take promising high school graduates all the way to top-rated doctorate degree holders.

## Faculty



Student to faculty ratio

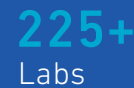


## Students

Khalifa University is an international university, with enrollment from all over the world.



## Research Impact



## Undergraduate Programs

Khalifa University's interdisciplinary BSc programs are designed to equip graduates with the necessary skills and knowledge that are highly sought-after in today's job market.

Khalifa University has granted over 3,200 bachelor's degrees to qualifying undergraduate students.

Undergraduate programs are offered in two Colleges, the College of Engineering and the College of Arts and Sciences. The University offers 16 Bachelor's degree programs, some of which offer optional concentrations, and four minor degree programs.

- ☐ Bachelor of Science in Computer Science
  - Artificial Intelligence
  - Cybersecurity
- ☐ Bachelor of Science in Earth and Planetary Sciences
- ☐ Bachelor of Science in Cell and Molecular
- ☐ Biology Bachelor of Science in Aerospace Engineering
- ☐ Bachelor of Science in Biomedical Engineering
- ☐ Bachelor of Science in Chemical Engineering
- ☐ Bachelor of Science in Civil Engineering
- ☐ Bachelor of Science in Computer Engineering
  - Software Systems
- ☐ Bachelor of Science in Electrical Engineering
- ☐ Bachelor of Science in Industrial and Systems Engineering
- ☐ Bachelor of Science in Mechanical Engineering
- ☐ Bachelor of Science in Petroleum Engineering
- ☐ Bachelor of Science in Petroleum Geoscience
  - Petroleum Geophysics
- ☐ Bachelor of Science in Chemistry
- ☐ Bachelor of Science in Physics
- ☐ Bachelor of Science in Applied Mathematics and Statistics
  - Financial Mathematics
  - Mathematical Biology

## Four Minor Degree Programs

- ☐ Minor in Nuclear Engineering
- ☐ Minor in Artificial Intelligence
- ☐ Minor in Mechatronics
- ☐ Minor in General Business





## About Undergraduate Programs

### [Bachelor of Science in Aerospace Engineering](#)

The BSc in Aerospace Engineering program lays the foundation for the core aerospace engineering discipline while engaging students to study and understand how engineering fits within the overall global aerospace and space-related profession and industry.

Students will learn the principles of science and engineering to design and analyze flight vehicles and related aerospace systems. Students will gain hands on experience in developing flight vehicles from concept to design, including the fabrication and testing processes. Using advanced computer modeling and simulations, as well as hands-on laboratories and real-life projects, students are equipped with the tools to contribute immediately and effectively to the aerospace and the rapidly developing space industries in the UAE and the region.





### Typical courses include

- ▢ Engineering Dynamics
- ▢ Introduction to Aerospace Engineering
- ▢ Aerospace Materials
- ▢ Mechanics of Solids
- ▢ Thermodynamics
- ▢ Aerospace Structures
- ▢ Aerodynamics
- ▢ Dynamic Systems and Control
- ▢ Aerospace Materials Manufacturing
- ▢ Aerospace Propulsion
- ▢ Flight Dynamics and Stability
- ▢ Space Mechanics and Control
- ▢ Aircraft Design Laboratory
- ▢ Aerospace Vehicle Performance
- ▢ Senior Design Project
- ▢ Fundamentals of Electronic Systems
- ▢ Engineering Internship



## Bachelor of Science in Biomedical Engineering

The BSc in Biomedical Engineering program integrates engineering and molecular and cellular biology into a single biomedical engineering core. Students select an area of specialization that provides more depth in a specific area of biomedical engineering. The instructional program is designed to impart knowledge of contemporary issues relevant to the health challenges in the UAE and at the forefront of biomedical engineering research in a student-centered, collaborative learning environment.

The overall goal is to produce high quality engineers who will be leaders in their field and who are well equipped to pursue further graduate degrees, medical school, or professional careers.

### Typical courses include

- ▢ Biomedical Engineering Fundamentals
- ▢ Physiological Systems and Modeling
- ▢ Mechanics for Biomedical Engineers
- ▢ Functional Biomechanics
- ▢ Biotransport Phenomena
- ▢ Molecular and Cellular Physiology
- ▢ Biomedical Circuits and Signals
- ▢ Fundamentals of Biomedical Signal Processing
- ▢ Biomaterials
- ▢ Regenerative Medicine
- ▢ Application of Bio-molecular Tools
- ▢ Physiological Control Systems
- ▢ Rehabilitation Engineering
- ▢ Biorobotics and Medical Device Design
- ▢ Bioinformatics



## Bachelor of Science in Chemical Engineering

The BSc in Chemical Engineering program educates engineers to design, develop, and operate chemical processes by which chemicals, petroleum products, food, pharmaceuticals, and consumer goods can be produced economically and safely. The program incorporates extensive laboratory work and computer process simulation to reinforce the principles and concepts learned in the classroom. The field of chemical engineering deals with the science and engineering of chemical reactions and separation processes. It applies physical and life sciences together with engineering and economic principles to produce, transform, transport, and properly use chemicals, materials and energy.

### Typical courses include

- ☐ Introduction to Biochemical Engineering
- ☐ Experimental Design
- ☐ Chemical Engineering Thermodynamics
- ☐ Fluid Mechanics
- ☐ Numerical Methods for Chemical Engineers
- ☐ Mass Transfer
- ☐ Heat Transfer
- ☐ Materials Science and Engineering
- ☐ Process Dynamics and Control
- ☐ Reaction Engineering
- ☐ Separation Processes
- ☐ Engineering Internship

## Bachelor of Science in Civil Engineering

The BSc in Civil Engineering program lays the foundation for the core civil engineering disciplines while engaging students to study and understand the overall global civil engineering profession and industry. Principles of science and engineering are applied to the design and analysis of problems in civil engineering in well-designed course sequences to ensure that students gain hands on and problem-based learning experiences.

The mission of the BSc of Civil Engineering program is to provide a high-quality education and prepare students for successful careers in this field.

### Typical courses include

- Statics
- Engineering Dynamics
- Mechanics of Solids
- Geomatics
- Fundamentals of Construction Engineering and Management
- Fluid Mechanics
- Civil Engineering Materials
- Geotechnical Engineering
- Behavior & Analysis of Structures
- Design of Steel Structures
- Introduction to Environmental Engineering
- Transportation Engineering
- Design of Concrete Structures
- Foundation Engineering
- Civil Engineering Internship





## Bachelor of Science in Computer Engineering

The BSc in Computer Engineering program is concerned with the design and development of computers and computer-based systems. It involves the study of hardware, software, and networking. The program provides a strong understanding of the relationship between computer hardware and software and all related issues. It is the key to many career opportunities in both government and industry sectors. Students are offered opportunities to customize their education by selecting from a pool of technical elective courses.

The BSc in Computer Engineering program also gives students the opportunity to select a concentration in Software Systems.

### Typical courses include

- Digital Logic Design
- Electric Circuits I
- Object Oriented Programming
- Signals and Systems
- Electronic Circuits and Devices
- Microprocessor Systems
- Introduction to Software Engineering
- Data Structures and Algorithms
- Computer Architecture and Organization
- Operating Systems
- Computer Networks
- Database Systems
- Embedded Systems
- System Analysis and Design
- Introduction to Human Computer Interfaces
- Software Testing and Quality Assurance
- Software Architecture
- Distributed Systems
- Computer Security
- Network Security
- Cloud Infrastructure and Services
- Embedded Systems
- Artificial Intelligence
- Image Processing and Analysis



## Bachelor of Science in Computer Science

The BSc in Computer Science program is concerned with the theoretical foundations of information and computation. Computation is defined as any type of calculation or use of computing technology that follows well-defined models (such as algorithms and protocols) in the practice of information processing. The study of computer science involves systematically studying, building, and testing methodical processes (such as algorithms) in order to aid the acquisition, representation, processing, storage, and communication of information.

The program provides a strong understanding of the relationship between computer hardware and software and all related issues. It is key to many career opportunities in high-tech manufacturing, in software development, and in mobile and digital security. Students are offered opportunities to customize their education by selecting from a wide pool of technical elective courses.

The BSc in Computer Science program also gives students the opportunity to select a concentration in Artificial intelligence and Cybersecurity.

### Typical courses include

- Foundations of Computer Science
- Computer Systems Organization
- Object Oriented Programming
- Introduction to Software Engineering
- Data Structures
- Design and Analysis of Algorithms
- Concepts of Programming Languages
- Introduction to Artificial Intelligence





- Introduction to Computer Security
- Operating Systems
- Computer Networks
- Parallel and Distributed Computing
- Human-Computer Interaction
- Database Systems
- Software Testing and Quality Assurance
- System Analysis and Design
- Computational Social Science
- Numerical Computing
- Data Analytics
- Algorithmic Robotics
- Introduction to Machine Learning
- Digital Forensics
- Applied Cryptography
- Computer Graphics
- Bioinformatics and Genomic Data Science
- Mobile and Web Applications Development
- Natural Language Processing
- Software Testing and Quality Assurance
- Software Architecture
- Distributed Systems
- Network Security
- Cloud Infrastructure and Services
- Embedded Systems
- Image Processing and Analysis

## Bachelor of Science in Electrical Engineering

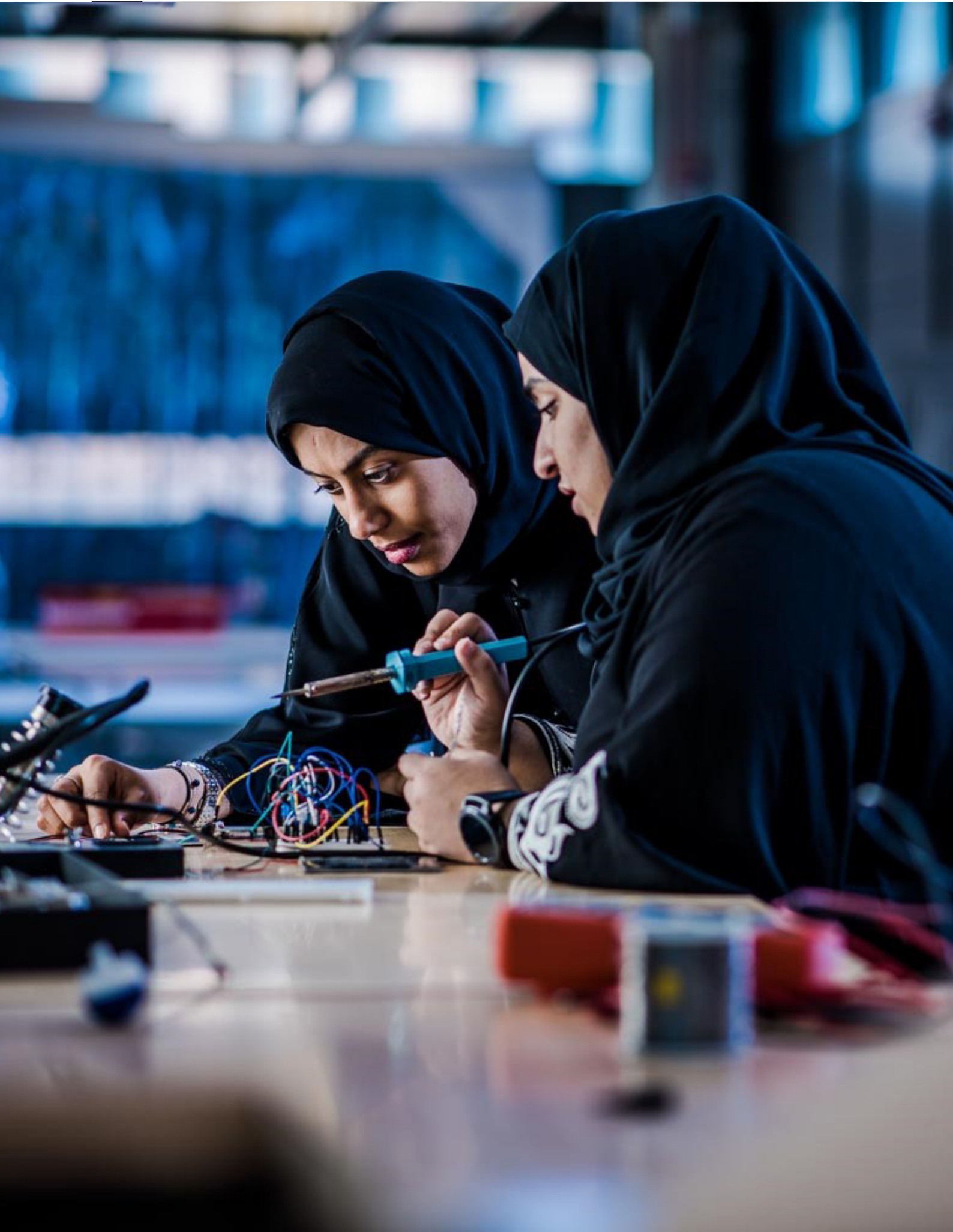
The BSc in Electrical Engineering program offers students a quality education that provides them with the knowledge, techniques and skills that will be needed by the next generation of highly qualified engineers. The program has well-designed core courses to ensure that students gain hands-on and problem-based learning experiences. The program also gives students the opportunity to select technical electives from a large pool of courses in order to specialize in certain areas.

Electrical systems are at the heart of the new industrial revolution and they affect nearly every aspect of our modern daily lives. These systems require professional engineers for their design, development, commissioning and service. The demand for such engineers is growing in the UAE because of the new and growing electrical and electronics industries.

### Typical courses include

- Digital Logic Design
- Electric Circuits I
- Electric Circuits II
- Object Oriented Programming
- Signals and Systems
- Electronic Circuits and Devices
- Microprocessor Systems
- Applied Electromagnetics
- Electrical Machines
- Feedback Control Systems
- Communication Systems
- Introduction to Semiconductor Devices
- System Analysis and Design
- Introduction to Software Engineering
- Computer Architecture and Organization
- Digital Communications I
- Computer Networks
- Filter Synthesis
- Digital Signal Processing
- Microwave Circuits and Devices
- Instrumentation and Measurements
- Digital Systems Design
- VLSI Systems Design
- Analog Integrated Circuits Design
- Industrial Automation
- Power System Analysis
- High Voltage Engineering
- Power Electronics
- Electrical Power Distribution Systems
- Power System Stability and Control
- Power Electronics for Renewables Integration
- Power System Protection
- Modern Control Systems
- Digital Control Systems
- Embedded Systems
- Artificial Intelligence
- Image Processing and Analysis
- Wireless Communications
- Digital Communications II
- Communication Systems Design and Prototyping
- Information and Coding Theory
- Antennas and Propagation
- Optical Communications and Networks
- Wireless Sensor Networks and IoT
- Satellite and Space Communications







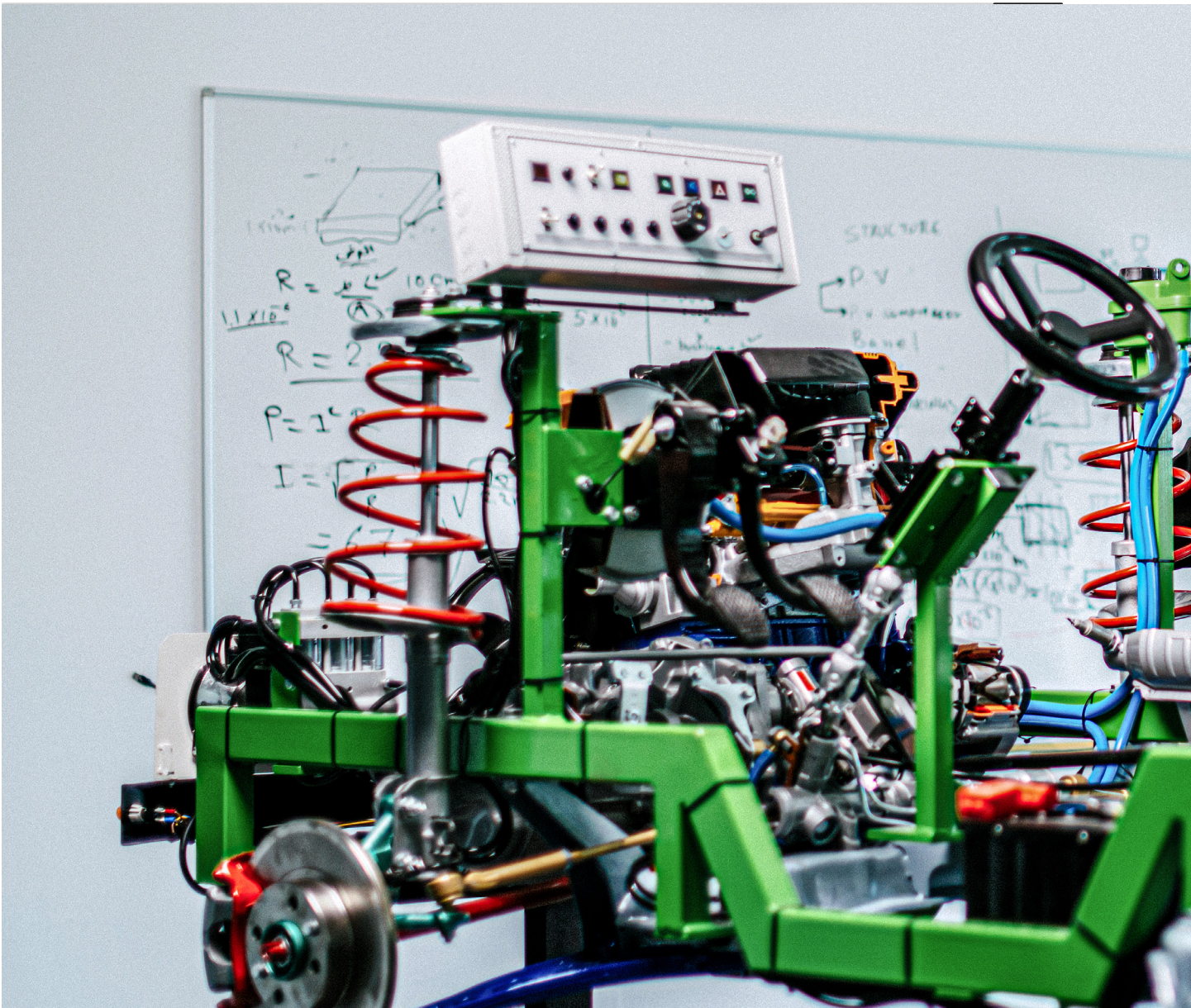
## Bachelor of Science in Industrial and Systems Engineering

The BSc in Industrial and Systems Engineering program provides a state-of-the-art undergraduate education to prepare students for successful and long-standing careers in the competitive global economy. Industrial and Systems Engineers make decisions concerning the best use of people, material, equipment, energy, and cost in achieving an organizational aim. The curriculum, led by world-class teachers, is based on strong fundamentals in operations research and is enriched by coursework that targets the specific needs of local industries.

Students gain valuable industrial experience through a summer internship and also have the opportunity to participate in international exchange programs during their junior year.

### Typical courses include

- ▢ Introduction to Industrial and Systems Engineering
- ▢ Operations Research
- ▢ Modern Methods of Manufacturing
- ▢ Quality Control and Reliability
- ▢ Stochastic Processes
- ▢ Simulation Modeling and Analysis
- ▢ Production, Operations, and Inventory Management
- ▢ Lean Manufacturing
- ▢ Human Factors and Safety Engineering
- ▢ Data and Information Engineering
- ▢ Systems Project Management
- ▢ Supply Chain and Logistics
- ▢ Engineering Internship



### Bachelor of Science in Mechanical Engineering

The BSc in Mechanical Engineering program is designed to provide a comprehensive engineering education for students interested in mechanics, thermo-fluids, manufacturing, and controls and automation. Complex mechanical systems involve structures, advanced materials, sensors, and thermo-fluid systems. Students are exposed to this core engineering discipline through the study and application of the principles of engineering to a broad range of systems, ranging from nano-devices to large-scale power plants.

Laboratories and industry-led projects allow graduates to be ready to create the next generation of ideas and products.



### Typical courses include

- ▢ Computer Aided Design
- ▢ Statics
- ▢ Engineering Dynamics
- ▢ Engineering Materials
- ▢ Thermodynamics
- ▢ Mechanics of Solids
- ▢ Fluid Mechanics
- ▢ Heat Transfer
- ▢ Dynamic Systems and Vibration
- ▢ Computer Controlled Systems
- ▢ Computational Methods for Mechanical Engineers
- ▢ Introduction to Manufacturing Processes
- ▢ Machine Element Design
- ▢ Turbomachinery
- ▢ Applied Thermodynamics
- ▢ Mechatronics
- ▢ Engineering Internship



## Bachelor of Science in Petroleum Engineering

The BSc in Petroleum Engineering program has a modern and well-balanced curriculum that emphasizes not only petroleum engineering fundamentals but also the business processes applied to reach optimal engineering solutions for field development and operations. This program is uniquely defined by well-equipped, state-of-the-art laboratory and computer facilities and access to local operating companies. The content of our courses, projects, and assignments are selected to help prepare graduates to launch their oil industry careers as willing and eager contributors.

Students are well equipped with skills and knowledge of basic engineering and science, fundamental understandings of reservoir, well, and production and surface facilities.

### Typical courses include

- ▢ Thermodynamics
- ▢ Reservoir Rock Properties
- ▢ Reservoir Fluid Properties
- ▢ Mechanics of Materials for PE
- ▢ Fluid Mechanics and Heat Transfer
- ▢ Well Logging
- ▢ Reservoir Characterization
- ▢ Drilling Engineering
- ▢ Reservoir Engineering
- ▢ Completion and Work Over
- ▢ Well Testing
- ▢ Production Facilities
- ▢ Production System Design and Analysis
- ▢ Petroleum Economics and Risk Analysis
- ▢ Sedimentary Petrology





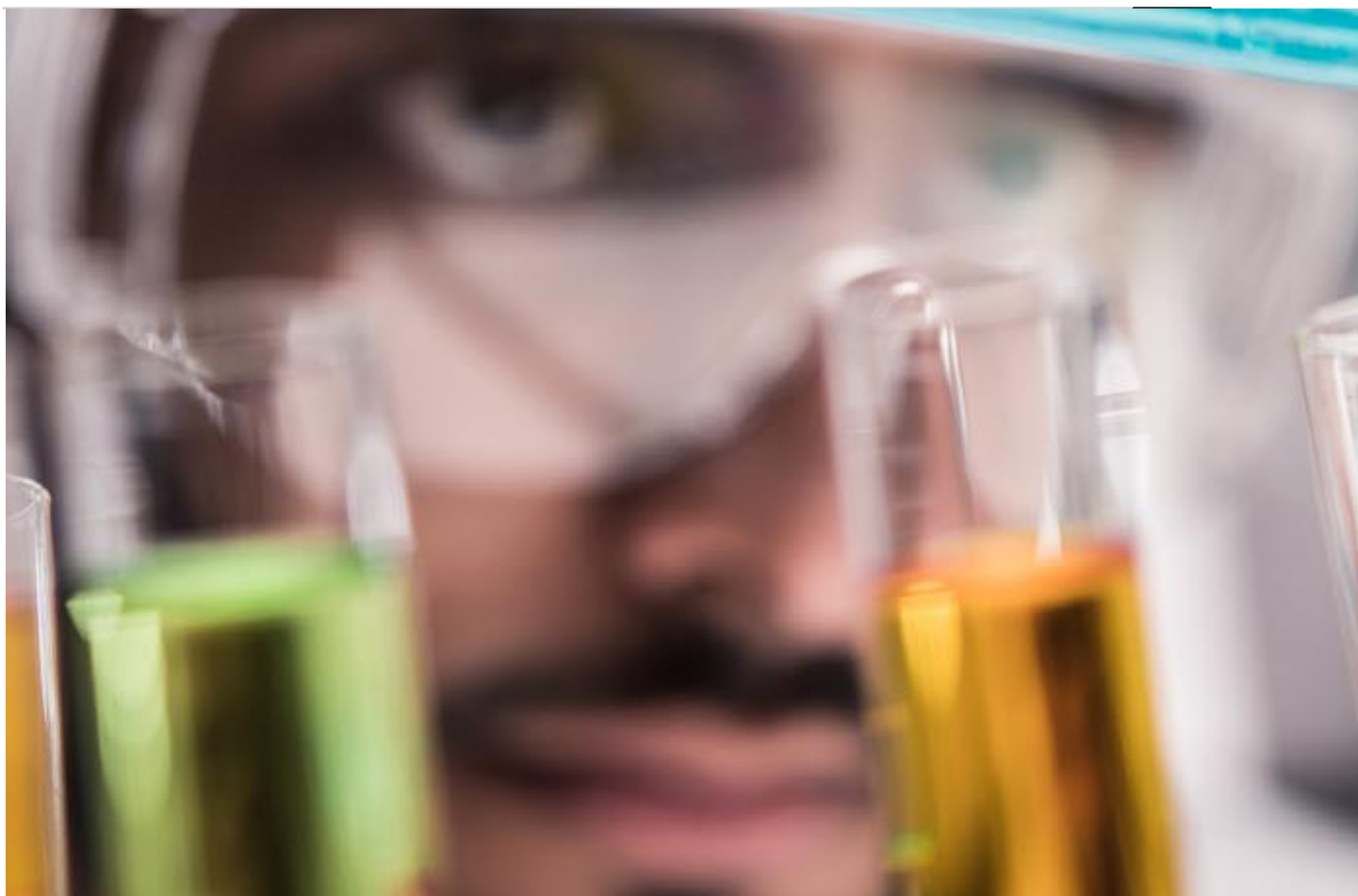
## Bachelor of Science in Petroleum Geosciences

The BSc in Petroleum Geosciences aims to provide a high-quality education in petroleum geology and geophysics and to produce graduates for successful, socially, and ethically responsible careers in the petroleum industry and other geosciences sectors. The BSc in Petroleum Geosciences features a broad education in the Earth Sciences with concentrations on geology and geophysics. Earth Sciences laboratories, including a computer laboratory, are well equipped, and up-to-date geophysical equipment is available for field exercises.

The program features a summer field geology course for students following the Petroleum Geosciences curriculum, and a summer internship in industry for students who select the concentration in Petroleum Geophysics.

### Typical courses include

- ☐ Computing using Matlab
- ☐ Geology and Geophysics
- ☐ Differential Equations
- ☐ Earth Materials
- ☐ Geology of the Middle East
- ☐ Geological Maps
- ☐ Innovation & Entrepreneurship in Engineering Design
- ☐ Sedimentary Petrology
- ☐ Structural Geology
- ☐ Igneous and Metamorphic Rocks
- ☐ Paleontology
- ☐ Applied Geophysics
- ☐ Sedimentology & Stratigraphy
- ☐ Data Analysis & Geostatistics
- ☐ Rock Mechanics and Reservoirs
- ☐ Field Petroleum Geology
- ☐ Reflection Seismology
- ☐ Petrophysics & Logging
- ☐ Seismic Reflection Interpretation
- ☐ Environmental Geology
- ☐ Reservoir Characterization Project
- ☐ Senior Research Project



### Bachelor of Science in Chemistry

The BSc in Chemistry program is designed to educate students to be able to design, develop, and investigate chemical processes at the fundamental level. It introduces students to a broad introduction of all areas of chemistry including organic, inorganic, physical, analytical and computational chemistry. Students spend time in the lecture room and in KU's well-equipped laboratories learning the practical and theoretical skills needed for modern chemistry. The program teaches students the modern theories of chemical behavior and how they are applied to a wide range of situations.

Students will also develop experimental skills for chemical synthesis and measurement and in experimental design. Students will become experts in numeracy, scientific literacy, critical thinking and IT, so that, as a chemistry graduate, they will be well-prepared for a wide range of careers.

#### Typical courses include

- General Chemistry
- Organic Chemistry
- Physical Chemistry
- Introduction to Computational Chemistry



- ☐ Biochemistry
- ☐ Introduction to Analytical Chemistry
- ☐ Spectroscopic and Separation Methods in Analytical Chemistry
- ☐ Advanced Instrumental Analysis Techniques in Chemistry
- ☐ Main Group Compounds: Structure, Reactivity and Characterization
- ☐ Advanced Inorganic Chemistry
- ☐ Chemistry Internship
- ☐ Senior Thesis
- ☐ Environmental Chemistry
- ☐ Pollution Science and Control – Management, Technology and Regulations
- ☐ Methods for Environmental Trace Analysis
- ☐ Fundamentals of Forensic Science
- ☐ Forensic Chemistry and Evidence Analysis
- ☐ Applications of Bio-Molecular Tools
- ☐ Nanoscience and Nanotechnology
- ☐ Nanochemistry
- ☐ Polymer Chemistry



## Bachelor of Science in Physics

The BSc in Physics program prepares graduates for a wide range of careers. It involves the development of a great range of knowledge, skills, and competencies, including critical thinking, inventiveness and the ability to address unforeseen problems; core physics knowledge, including basic concepts and the “canon” of physics topics; scientific and technical skills, including problem solving, use of advanced mathematics, modelling and simulations, generic experimental skills, coding and software use, data processing and analysis (including use of industry-standard software); communication skills, including scientific presentations and writing (such as for professional conferences and journals) and the ability to communicate science content and outcomes to individuals untrained in science (such as investors, managers, general audience or young people); and professional and workplace skills, including problem solving, communication, management, working effectively with others, and dealing with constraints (applicable to a range of careers in industry, government, non-governmental organizations, teaching, or self-employment)

The degree provides elective options in Engineering Physics, Space Science, and Physics Education. Alternatively, students will be encouraged to consider taking a minor with their Physics BSc degree, for example in Nuclear Engineering, Unmanned Aerial Vehicles, or Artificial Intelligence. A wide range of elective physics courses, such as in Advanced Instrumentation, Astronomy and Astrophysics, Atomic and Molecular Physics, Biological Physics, Nanotechnology, Nuclear and Particle Physics, Quantum Mechanics, and others will be made available to students.

### Typical courses include

- |  |  |
|--|--|
| <input type="checkbox"/> Calculus                        | <input type="checkbox"/> Engineering Physics                             |
| <input type="checkbox"/> Chemistry                       | <input type="checkbox"/> Electricity and Magnetism                       |
| <input type="checkbox"/> Orientation to Physics          | <input type="checkbox"/> Space Physics                                   |
| <input type="checkbox"/> Physics Instrumentation         | <input type="checkbox"/> Observational Stellar and Galactic Astrophysics |
| <input type="checkbox"/> Computational Physics           | <input type="checkbox"/> Introduction to Artificial Intelligence         |
| <input type="checkbox"/> Mathematical Physics            | <input type="checkbox"/> Introduction to Machine Learning                |
| <input type="checkbox"/> Differential Equations          | <input type="checkbox"/> Data Structures and Algorithms                  |
| <input type="checkbox"/> Atomic and Molecular Physics    | <input type="checkbox"/> Introduction to Nuclear Reactor Physics         |
| <input type="checkbox"/> Intermediate Mechanics          | <input type="checkbox"/> Introduction to Nuclear Systems and Operation   |
| <input type="checkbox"/> Quantum Mechanics               | <input type="checkbox"/> Dynamic Systems and Control/Vibration           |
| <input type="checkbox"/> Introduction to Nanophysics     | <input type="checkbox"/> UAV Modeling and Control                        |
| <input type="checkbox"/> Thermal and Statistical Physics |  |

## Bachelor of Science in Applied Mathematics and Statistics

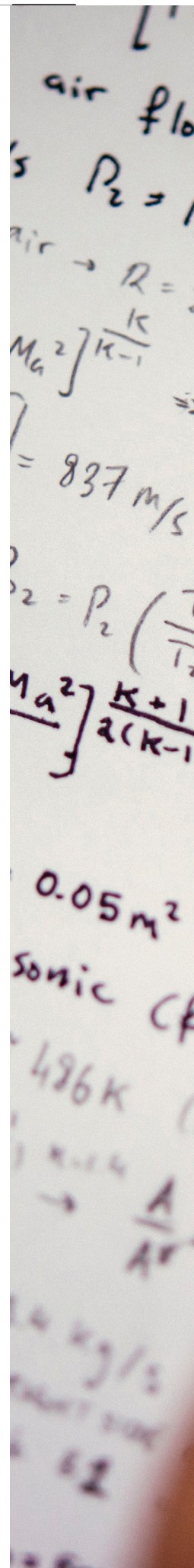
The BSc in Applied Mathematics and Statistics program offers training in mathematical problem-solving techniques with a reduced emphasis on abstract theory. The program is tailored to the student who will need to apply mathematical, statistical, and computational methods to practical problems. Applied mathematics includes the theoretical portions of physics, chemistry, biomedicine, engineering, economics, finance, and a wide variety of other disciplines. Recent advances in computing technology have made the use of quantitative methods of even greater importance in these disciplines.

There is a growing demand for professional mathematicians and statisticians in almost every sector of the job market, including the engineering and telecommunications industries, computer services and software development, actuarial and financial services, pharmaceutical industry and medical services, market research agencies, government laboratories and the military services, as well as academics and teaching.

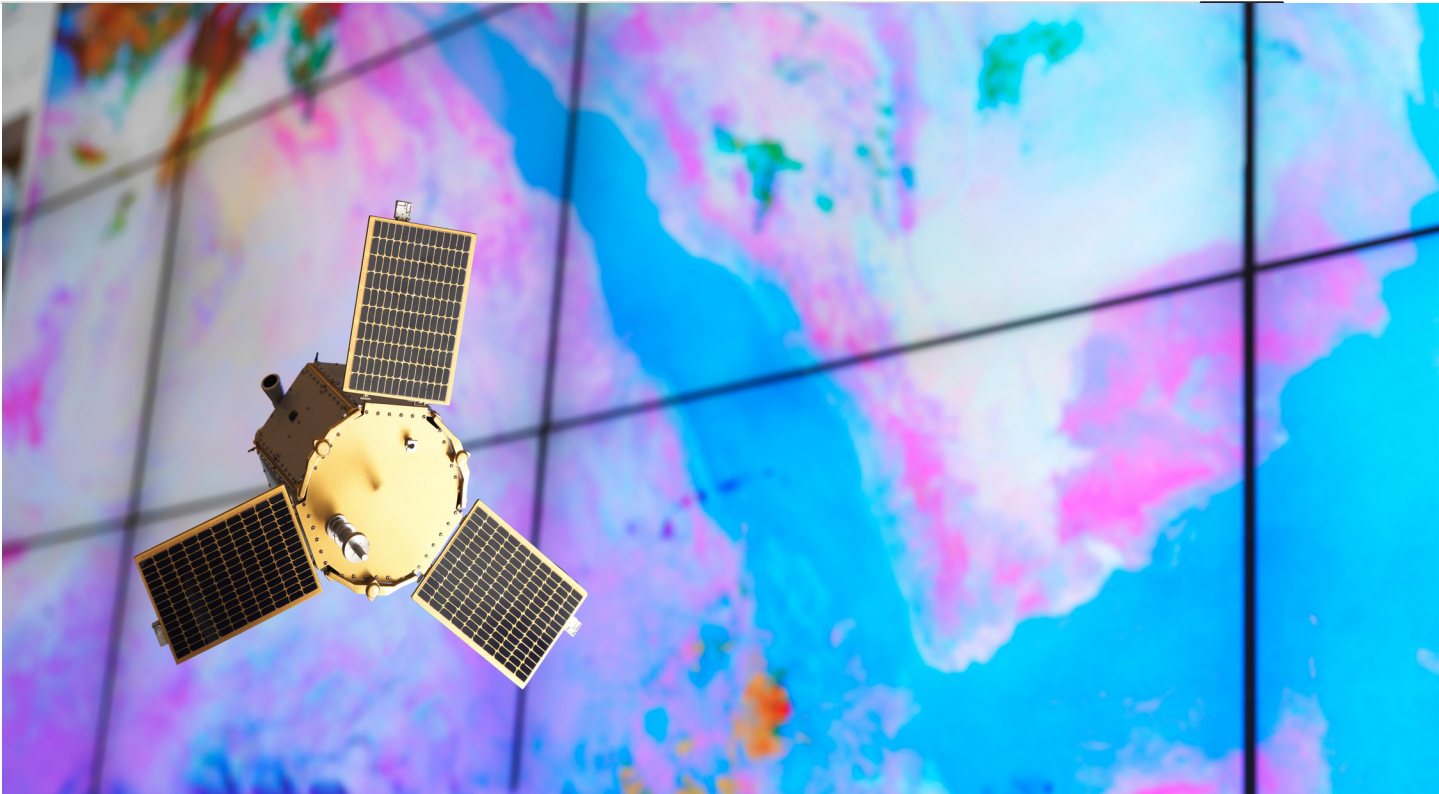
Students may select a concentration in Mathematical Biology or Financial Mathematics.

### Typical courses include

- |  |  |
|--|--|
| <input type="checkbox"/> Linear Algebra                        | <input type="checkbox"/> Optimization                      |
| <input type="checkbox"/> Differential Equations                | <input type="checkbox"/> Modern Algebra                    |
| <input type="checkbox"/> Probability and Statistical Inference | <input type="checkbox"/> Game Theory                       |
| <input type="checkbox"/> Operations Research                   | <input type="checkbox"/> Discrete Mathematics              |
| <input type="checkbox"/> Mathematical and Statistical Software | <input type="checkbox"/> Design of Experiments             |
| <input type="checkbox"/> Complex Functions                     | <input type="checkbox"/> Sample Survey Design and Analysis |
| <input type="checkbox"/> Real Analysis                         | <input type="checkbox"/> Internship                        |
| <input type="checkbox"/> Advanced Linear Algebra               | <input type="checkbox"/> Senior Research Project           |
| <input type="checkbox"/> Partial Differential Equations        |  |
| <input type="checkbox"/> Nonparametric Statistics              |  |
| <input type="checkbox"/> Multivariate Statistics               |  |
| <input type="checkbox"/> Numerical Analysis                    |  |







## Bachelor of Science in Earth and Planetary Sciences

The BSc in Earth and Planetary Sciences will prepare students to pursue careers in geosciences (geology and geophysics), with a focus on planetary and atmospheric science, including but not limited to positions in governmental organizations, private consulting firms, non-governmental organizations or academic research environments.

Specifically, the Earth and Planetary Sciences program addresses the need of the UAE society to improve both the employability of UAE nationals and the necessity for skilled graduates to manage the environment and natural resources that are the backbone of the economy of the country. Knowledge of planetary science is introduced through the study of planetary geology, remote sensing, astrobiology, astronomy and astrophysics, providing the skill set necessary for graduates to participate in the development of the UAE space sector.

### Typical courses include

- Geomorphology and Geohazards
- Earth Systems Science
- Remote Sensing and GIS
- Planetary Sciences
- Atmospheric and Climate Dynamics
- Hydrogeology
- Geology of Mars and other Planetary Bodies



## Bachelor of Science (BSc) in Cell and Molecular Biology

The BSc in Cell and Molecular Biology degree is modelled after US-based programs and aims to graduate students with a solid foundation in life sciences, allowing them to enter medical schools (MD program), other graduate programs, or pursue a career in industry. The program supports the University's alignment with the Abu Dhabi Economic Vision 2030 plan through the provision of internationally excellent education and student experience in Science, resulting in highly skilled Science professionals, capable of transferring state-of-the-art technologies in priority sectors of industry, business, and government.

The degree has the following three specific goals:

1. To offer comprehensive theoretical and practical knowledge of Cell and Molecular Biology to students interested in pursuing careers in life sciences or medicine
2. To graduate students who are critical thinkers with the ability to use their scientific knowledge to solve problems in life sciences
3. To train students in effective written and oral communication skills for presenting biological information

### Typical courses include

- |   |  |
|---|--|
| <input type="checkbox"/> General Chemistry    | <input type="checkbox"/> Physiology                        |
| <input type="checkbox"/> Organic Chemistry    | <input type="checkbox"/> Development Biology               |
| <input type="checkbox"/> Analytical Chemistry | <input type="checkbox"/> Immunology                        |
| <input type="checkbox"/> Biochemistry         | <input type="checkbox"/> Bioinformatics                    |
| <input type="checkbox"/> Biology              | <input type="checkbox"/> Molecular and Cellular Physiology |
| <input type="checkbox"/> Genetics             | <input type="checkbox"/> Molecular Gene, Tech & Tools      |
| <input type="checkbox"/> Applied Microbiology | <input type="checkbox"/> Internship                        |
| <input type="checkbox"/> Cell Biology         | <input type="checkbox"/> Senior Thesis I & II              |



## Minor Programs

Khalifa University offers four Minor Degree programs in:

- ▢ Nuclear Engineering
- ▢ Artificial Intelligence
- ▢ Mechatronics
- ▢ General Business

### Minor in Nuclear Engineering

The Minor in Nuclear Engineering is designed to provide undergraduate students from other appropriate engineering programs (mechanical, electrical, chemical etc.) with the fundamentals of nuclear physics and engineering theory and practice, necessary to equip them with a sound understanding of nuclear engineering. The courses designed for this Nuclear Engineering Minor will cover the following three fundamental nuclear engineering areas of study necessary to achieve the program goals and learning outcomes: Radiation Science and Health Physics, Nuclear Reactor Physics, and Nuclear Systems and Operation.

### Minor in Artificial Intelligence

The Minor in Artificial Intelligence (AI) is designed for non-Computer Engineering and non-Computer Science majors. It is open to all other engineering and science majors. The goal of the Minor in AI program is to provide students with the needed AI knowledge and related skills

to serve the UAE government agencies and industry in various engineering and science disciplines.

### Minor in Mechatronics

The Minor in Mechatronics is designed to give students the ability to design, implement, and evaluate mechatronics solutions to meet a given set of engineering and manufacturing requirements. Students will also learn how to use techniques, skills, and tools necessary for mechatronics-based solutions. And they will be able to synthesize and integrate mechatronics based solutions for optimum implementation.

### Minor in General Business

The Minor in General Business is designed to provide the undergraduate student with an understanding of business concepts and realities. The basic principle of the General Business Minor program is to enhance the knowledge and skills of the student to help them succeed in their future roles as manager, team leader and/ or business owner. Students will be able to apply the learned abilities to lead people, manage tasks, and provide financial reports to key parties.



## Undergraduate Program Admissions

Undergraduate program admission at Khalifa University is offered to highly qualified female and male students from the UAE and abroad. All applicants must meet established, clearly communicated minimum requirements to be considered for admission to, and maintain enrolment in, undergraduate studies at the University.

In order to be considered for admissions, students must meet the following minimum criteria:

- ☐ Applicant should have graduated from high school no later than two years prior to the current year.
- ☐ Minimum score of achievement in each of following EmSAT subjects: Math, Physics, Arabic and English.
- ☐ Pass admission tests in Mathematics (Algebra and pre-Calculus).
- ☐ Satisfactory entrance interview in English.
- ☐ Hold a UAE Secondary School Certificate (SSC) in one of the following study systems:
  - Advanced Stream – Ministry of Education (MOE) or Physics Stream – Department of Education and Knowledge (ADEK) with a minimum overall achievement of 80%.
  - General Stream – Ministry of Education (MOE) with a minimum overall achievement of 95% and a minimum score of 90 in mathematics and science subjects.

- Refer to the following website for different schooling systems: <https://www.ku.ac.ae/admissions/undergraduate-admissions/undergraduate-admissions-requirements/>

## Scholarships

All UAE National students accepted in KU's undergraduate programs enjoy a full scholarship to study at Khalifa University. For international students, the scholarship may consist of full or partial tuition assistance.

- ☐ **President's Scholarship (Full Scholarship)**  
A limited number of full scholarships are available for international students with outstanding academic performance and personal qualities. These scholarships are highly competitive and dependent on meeting the university's rigorous standards. To be considered for the President's Scholarship, students must maintain a cumulative GPA of 3.3 or higher during their studies at Khalifa University.
- ☐ **Khalifa University scholarship (Partial Scholarship)**  
The Khalifa University Scholarship is a general tuition support grant for students who meet the university's rigorous standards. Developed to be a financial support

for hardworking and deserving students, the KU Scholarship continues to incentivize a great number of students to do better. To be considered for the Partial's Scholarship, students must maintain a cumulative GPA of 3.0 or higher during their studies at Khalifa University.

▣ **Self-Pay (Self-Pay Scholarship)**

The self-pay scholarship is designed to help students who strive for recognition of their academic vigor after not initially qualifying for a scholarship. Students who are admitted to KU but did not maintain academic excellence and a high GPA before joining can make the most of this scholarship to prove themselves and receives financial reimbursements. To be considered for the Self-Pay's Scholarship, students must maintain a cumulative GPA of 3.8 or higher during their studies at Khalifa University.



## Living In Abu Dhabi

Khalifa University is a multi-campus, urban university, located across two campuses in the UAE's capital, making the entire city your campus. Life is very convenient and enjoyable in Abu Dhabi, one of the fastest growing cities in the world.

Khalifa University's two campuses include many canteens, restaurants, and coffee shops, providing the KU community with an array of different cuisines. Each campus is also well equipped with facilities, including sports fields and state-of-the-art gymnasiums.

## Campuses

Khalifa University has two purpose-built campuses—the KU Main Campus and the Sas Al Nakhl Campus. The KU Main Campus is on Abu Dhabi Island and is where the central administration for the University is located and all general education courses are taught. The Sas Al Nakhl Campus is near the Maqta Bridge connecting Abu Dhabi Island to the mainland, and hosts the Petroleum Institute and Masdar Institute. Both campuses have full academic and research facilities, as well as campus facilities like gyms, sports courts, and food and beverage retailers.

## Student Housing

Khalifa University provides student housing to academically-able students who live beyond commuting distance to the campus.

Living in Khalifa University's residences offers students the opportunity to develop their social skills in tandem with their academic potential while forging lasting friendships and participating in social activities.

Khalifa University's students come from many backgrounds, and we aim to be accommodating of cultural differences. It is our hope that students will learn and thrive in the presence of other cultures and traditions.

Student housing is available at both the Main and Sas Al Nakhl campuses. All housing facilities are managed by on-site staff and a security team. Two types of residence quarters are available for students: male-only and female-only. Students are expected to be respectful and considerate of all different cultures, customs, and traditions.

Student housing includes the following amenities:

- ☐ Fully functional kitchens (stove, oven, fridge, microwave)
- ☐ Laundry services (washing machines & dryer)
- ☐ Student Lounge
- ☐ Prayer rooms
- ☐ Learning centers
- ☐ Television & wireless internet services
- ☐ Transportation to and from campus
- ☐ Weekend transportation services
- ☐ 24-hour security services

## Transportation

The Transportation services are provided to students living in Khalifa University accommodation and students living in the Abu Dhabi suburbs. Daily, weekly (to and from their home emirates) shuttle buses between the two KU campuses are part of this service. The transportation service supports university students' external events, activities and field trips inside and outside Abu Dhabi.

The weekly transportation fees are set according to the University payment guidelines.





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