

BRITISH DEGREES

at **Applied Science University**
in Partnership with
London South Bank University
(Leading to a Dual Award from ASU and LSBU)



BEng (Hons) Mechanical Engineering
BEng (Hons) Electrical and Electronic Engineering

London South Bank University

Established as the Borough Polytechnic Institute in 1892, the original aim of London South Bank University (LSBU) was to promote industrial skills, general knowledge, health and well-being of young men and women and this mission remains remarkably similar today. The University's focus on vocational education and professional opportunity allows it to produce graduates who can meet the challenges of today's workplace. LSBU won the Entrepreneurial University of the Year award in 2016.

Applied Science University

aspires to become a leading University in the Kingdom of Bahrain and in the wider Gulf region. ASU supports economic and social development by providing undergraduate and postgraduate programmes that are designed to develop students' understanding of key theories and concepts through knowledge acquisition and development of practical skills, and with a focus on providing modules in that are in high demand by employers both domestically and internationally. ASU aims to foster life-long learning and to prepare graduates for a range of career paths within their chosen field or discipline.



Dual Award

In partnership with London South Bank University (LSBU), UK, a leading British University, Applied Science University (ASU) is now hosting British Programmes, making it affordable for students to gain internationally recognised British qualifications in Bahrain. Upon the successful completion of a hosted programme, students will be awarded a degree from ASU and LSBU.

Advantages

- Save on the high cost of living and tuition in the UK, and live close to your family and friends in Bahrain while earning a British degree.
- Your degree is awarded by ASU and a British university giving you a competitive advantage in the job market, wherever your career takes you.
- Gain practical knowledge from highly qualified academics with robust professional experience.
- Develop a thorough understanding of the key aspects of your programme of study as well as life-long learning skills. These key competencies and values are sought after by employers domestically and internationally.
- Get a chance to attend workshops in UK interacting and collaborating with LSBU staff and international students.
- Become a global professional.



Entry Requirements

In order to be considered for entry to the programme, applicants are required to have:

- A Bahraini or GCC Secondary School (Scientific) Certificate, or equivalent, with a minimum of 65% GPA* and a 60% in Mathematics and 60% in English language. (In addition, English language competency equivalent to IELTS 4.5 or above is required)

* Candidates with a lower GPA may also be admitted subject to a satisfactory interview by the college.

Or

- Five GCSE passes, at grade C or above, including Mathematics and English (or another subject that demonstrates an adequate command of English).

Progressing to the second year of the programme is subject to:

- Demonstrating English competency equivalent to IELTS 5 or above.

Programmes

- In partnership with London South Bank University (UK), the following programmes are being hosted by ASU:
- BEng (Hons) Mechanical Engineering
- BEng (Hons) Electrical and Electronic Engineering

The Bachelor's degree programmes are four years long. In each year, students must complete a specific number of modules (see study plans).

To achieve the award, all years of the programme must be passed successfully.

Detailed descriptions of the individual modules for each programme may be found on the web page: www.asu.edu.bh/engineering.



BEng (Hons) Mechanical Engineering

Objectives of the Programme

This programme is intended for undergraduate students who wish to study the discipline of Mechanical Engineering to Honours degree level and who may wish to achieve professional status later. This programme is designed to embrace developments in the industry, in particular the Engineering Council UK (ECUK) Standard for Professional Engineering Competence (UK-SPEC). The curriculum emphasises the development of traditional engineering numerical strengths coupled with an enquiring creative approach as required by employers.

Distinctive features of the programme

- The programme aims to provide a broad education and specialist training in the field of mechanical engineering producing graduates capable of pursuing professional careers in industry underpinned by the mechanical engineering discipline.
- The modules are designed and content creation and delivery is done with emphasis on vocational and practical skills needed by engineering employers.
- The programme aims to provide an understanding of a cognitive map of topics within the mechanical engineering subject area incorporating knowledge and understanding of core Mechanical Engineering topics.
- Students on this programme will develop characteristics focused on the role of the engineer as a problem solver applying knowledge, skill and technical know-how within economic, legal and ethical constraints.
- The knowledge provided throughout the programme is based on the knowledge and understanding of scientific and mathematical principles and their applications; and the skills are related to communications, time management and team work.
- Design, sustainability and environmental considerations form coherent themes throughout the degree modules.

Study Plan

BEng (Hons) Mechanical Engineering

Year 1 (Level S)

Level S – Semester 1
Modules
Engineering Science 1
Intermediate English
Mathematics 1
Scientific Principles of Engineering
Laboratory and Workshop Skills

Level S – Semester 2
Modules
Engineering Science 2
Advanced English
Mathematics 2
Engineering Design and Modelling
Study Skills and Professional Practice
Computer Programming for Engineerin

Level S – Summer Semester (Compulsory)
Modules
Human Rights
Bahrain Civilisation and History
Arabic Language / Arabic Language for Non-Arabic Speakers

Year 2 (Level 4)

Level 4 – Semester 1
Modules
Design and Practice
Engineering Mathematics and Modelling
Introduction to Mechanical Engineering

Level 4 – Semester 2
Modules
Engineering Computing
Thermofluids and Dynamics
Introduction to Electrical and Electronic Engineering

Year 3 (Level 5)

Level 5 – Semester 1
Modules
Advanced Engineering Mathematics and Modelling
Solid Mechanics and Finite Element Analysis (FEA)
Machine Drives and Mechatronics

Level 5 – Semester 2
Modules
Dynamics and Control
Thermofluids and Sustainable Energy
Engineering Design
Internship

Year 4 (Level 6)

Level 6 – Semester 1
Modules
Dynamics and System Modelling
Project

Level 6 – Semester 2
Modules
Innovation and Enterprise
Thermofluids and Turbo Machinery
Manufacturing Systems and Materials Technologies

Career Paths:

Unleash your potential with our Mechanical Engineering Programme and explore a variety of exciting career opportunities. Here is a glimpse into the diverse jobs possibilities that await you in the field of mechanical engineering. Take the first step towards a rewarding career in this dynamic industry.

1. Pipeline Engineer
2. Facilities Engineer - Oil and Gas
3. Mechanical Engineer - Oil and Gas
4. Safety Engineer - Oil and Gas
5. Instrumentation Engineer - Oil and Gas
6. Mechanical Design Engineer
7. Manufacturing Engineer
8. Project Engineer
9. HVAC Engineer (Heating, Ventilation, and Air Conditioning)
10. Aerospace Engineer
11. Automotive Engineer
12. Robotics Engineer
13. Materials Engineer
14. Quality Assurance Engineer
15. Process Engineer
16. Energy Systems Engineer
17. Structural Engineer
18. Research and Development Engineer
19. Systems Engineer
20. Controls Engineer
21. Maintenance Engineer
22. Thermal Engineer
23. Product Development Engineer

BEng (Hons) Electrical and Electronic Engineering

Objectives of the Programme

This programme is intended for undergraduate students who wish to study the discipline of Electrical and Electronic Engineering to Honours degree level and who may wish to achieve professional status later. This programme is designed to embrace developments in the industry, in particular the Engineering Council UK (ECUK) Standard for Professional Engineering Competence (UK-SPEC). The curriculum emphasises the development of traditional engineering numerical strengths coupled with an enquiring creative approach as required by employers.

Distinctive features of the programme

- The programme aims to provide an understanding of the key aspects of electrical and electronic engineering, including acquisition of detailed knowledge informed and defined by the discipline.
- The modules are designed and content creation and delivery is done with emphasis on vocational and practical skills needed by engineering employers.
- Give students a broad base of active knowledge in electrical and electronic engineering, and the skills necessary to update, extend and deepen it for career development or further study.
- Students will be able to apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out design projects.
- Produce graduates who can analyse electrical and electronic engineering components and systems from first principles, through to advanced simulation techniques, understand the advantages and disadvantages of different analysis approaches and be able to select an appropriate method.
- Produce graduates with competent practical skills including basic design and measurement skills, awareness of advanced software and hardware tools and techniques to inform design choices.

Study Plan

BEng (Hons) Electrical and Electronic Engineering

Year 1 (Level S)

Level S – Semester 1
Modules
Engineering Science 1
Intermediate English
Mathematics 1
Scientific Principles of Engineering
Laboratory and Workshop Skills

Level S – Semester 2
Modules
Engineering Science 2
Advanced English
Mathematics 2
Practical Electronics
Study Skills and Professional Practice
Computer Programming for Engineering

Level S – Summer Semester (Compulsory)
Modules
Human Rights
Bahrain Civilisation and History
Arabic Language / Arabic Language for Non-Arabic Speakers

Year 2 (Level 4)

Level 4 – Semester 1
Modules
Design and Practice
Engineering Principles
Engineering Mathematics and Modelling

Level 4 – Semester 2
Modules
Engineering Computing
Introduction to Electrical and Electronic Engineering
Introduction to Digital Electronics

Year 3 (Level 5)

Level 5 – Semester 1
Modules
Advanced Engineering Mathematics and Modelling
Circuits, Signals and Systems
Principles of Control

Level 5 – Semester 2
Modules
Team Design Project
Electrical Machines and Power electronics
Analogue and Digital Circuit Design
Internship

Year 4 (Level 6)

Level 6 – Semester 1
Modules
Digital Systems Design
Project

Level 6 – Semester 2
Modules
Advanced Analogue and RF Electronics
Innovation and Enterprise
Control Engineering

Career Paths:

Unleash your potential with our Electrical and Electronic Engineering Programme and explore a variety of exciting career opportunities. Here is a glimpse into the diverse jobs possibilities that await you in the field of electrical and electronic engineering. Take the first step towards a rewarding career in this dynamic industry.

1. Field Service Engineer
2. Analog Design Engineer
3. Operations Manager
4. Automation Engineer
5. Commissioning Engineer
6. Physical Design Engineer
7. Process Engineer
8. Product Engineer
9. Controls Engineer
10. Quality Engineer
11. ASIC Design Engineer
12. Design Verification Engineer
13. Radio-frequency (RF) Engineer
14. Radio-frequency (RF) Design Engineer
15. Digital Design Engineer
16. Electromagnetic Compatibility (EMC) Engineer
17. Reliability Engineer
18. Electrical Engineer
19. Signal Integrity Engineer
20. Signal Processing Engineer
21. Electrical Estimator
22. Systems Integration Engineer
23. Telecommunications Engineer
24. Test Engineer
25. Validation Engineer
26. Equipment Engineer
27. Field Programmable Gate Array (FPGA) engineer



Undergraduate Tuition & Fees

The estimated duration for completion of a Bachelors Degree at Applied Science University is 4 years. This is structured around 150 credit-hours .

High school average	Scholarship	Fees/ Hour	Year 1 (Level S) semester 1	Year 1 (Level S) semester 2	Year 1 (Level S) Summer semester	Total Year-1 (Level S)	Total Year 1 (Level S) – After Scholarship
95%-100%	25%	180	2700	3240	1620	7560	5670
85%-94%	20%	180	2700	3240	1620	7560	6048
70%-84%	15%	180	2700	3240	1620	7560	6426
Below 70%		180	2700	3240	1620	7560	7560

High school average	Scholarship	Fees/Hour	Years-2 & 3 & 4 (Levels 4 & 5 & 6) semester 1	Years-2 & 3 & 4 (Levels 4 & 5 & 6) semester 2	Total Per Annum For The Years 2 & 3 & 4 (Levels 4 & 5 & 6)	Total Per Annum For The Years 2 & 3 & 4 (Levels 4 & 5 & 6) After Scholarship
95%-100%	25%	180	3240	3240	6480	4860
85%-94%	20%	180	3240	3240	6480	5184
70%-84%	15%	180	3240	3240	6480	5508
Below 70%		180	3240	3240	6480	6480

High school average	Scholarship	Fees/Hour	Total 4 Years Before Scholarship	Total 4 Years After Scholarship
95%-100%	25%	180	27000	20250
85%-94%	20%	180	27000	21600
70%-84%	15%	180	27000	22950
Below 70%		180	27000	27000

Notes:

Note 1: The above is an approximate calculation as per the study plan per year.

Note 2: The fees may increase/decrease depending on the registered courses per semester.

Note 3 : The tuition fees are paid every semester in three instalments: The First instalment when registering the courses and the Second instalment prior to the Mid-Term exams and the Third instalment prior to the Final Exams.



Applied Science University

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Applied Science University on the Road of Excellence



قدم هذا الإعلان بموافقة مجلس التعليم العالي - رقم الموافقة (ع / ت / ب / 2024 / 1)