BEng (Hons) Architectural Engineering (Bridging)

LSBU London South Bank University

ASU جامعة العلوم التطبيقية APPLIED SCIENCE UNIVERSITY

Programme Coordinator:
Dr. Ali Sedki

Office Number:
+973 16036348

Email:
ali.ali@asu.edu.bh

Head of Department:
Dr. Rouya Hdeib

Office Number:
+973 16036151

Email:
rouya.hdeib @asu.edu.bh

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Enquiry

Programme Details

Final Qualification	Language of Study	Mode of Study
BEng (Hons)	English	Full Time

Programme Structure

Study Period	Total Credit Hours	Number of Courses
2 Years	81 Credit Hours	26 Courses

Brief about the Programme

The Bridging Programme is open to students who have completed a diploma or associate degree in related disciplines from the Kingdom of Bahrain, or an equivalent qualification from outside the Kingdom, provided the certificate is accredited by the relevant authorities in the issuing country.

CIOB The Chartered Institute of Building

This programme is designed to align with industry developments, particularly the Engineering Council UK (ECUK) Standard for Professional Engineering Competence (UK-SPEC).
The programme leads to a dual award from the Applied Science University (ASU Bahrain) and London South Bank University (LSBU-UK).

Aims of the Programme

1. Graduates will be able to pursue successful careers in the architectural engineering industry with a wide range of employers in various countries.
2. Graduates will be equipped for postgraduate study and capable of taking up responsible professional employment in architectural engineering, becoming lifelong learners who appreciate the societal value of architectural engineering.
3. Graduates will develop a broad and in-depth understanding of the key aspects of architectural engineering.
4. Graduates will acquire and develop analytical, problem-solving, and subject-specific skills, as well as the ability to evaluate evidence, arguments, and assumptions to reach sound judgements and communicate effectively.
5. Graduates will gain the academic background required for advanced postgraduate studies and the educational foundation needed to progress toward Chartered Engineer status.

The first university in the Kingdom of Bahrain to achieve global accreditation from the British Quality Assurance Agency for Higher Education (QAA)

Rated 5 Stars in the QS Rating System

Ranked 30th in the QS Arab Region University Rankings 2026

Ranked 613 in the QS World University Rankings 2026

Ranked 301+ Worldwide in the Times Higher Education University Impact Rankings

Career Paths

1. Architectural Engineer
2. Structural Engineer
3. Building Services Engineer
4. BIM Specialist
5. Construction Project Manager
6. Sustainable Design Consultant
7. Urban Development Engineer
8. Design & Planning Engineer
9. Environmental Building Consultant
10. Facility Design Engineer

Entry Requirements

1. The applicant must hold a diploma or associate degree from the Kingdom of Bahrain or its equivalent from outside the Kingdom, accredited by the relevant authorities in the country of issuance.
2. The applicant's cumulative GPA must be at least "Good" or its equivalent. Applicants with a lower GPA must provide evidence of at least one year of relevant professional experience or pass remedial courses related to their specialization.
3. The applicant's previous specialization must qualify them to study in the programme they wish to join.
4. Applicants holding professional or vocational qualifications (e.g., National Diploma - ND or Higher National Diploma - HND) must pass remedial courses as required by their specialization, in addition to HEC compulsory courses where applicable.
5. The applicant must have an IELTS score of 6 or higher, or an equivalent qualification. (Free English-language support will be provided based on the initial OOPT test result.)

Study Plan

HEC Compulsory Courses				
No.	**Course Code**	**Course Title**	**Credit**	**Level**
1	ASU_S_HUR	Human Rights	0	S
2	ASU_S_ALA ASU_S_ALN	Arabic Language or Arabic Language for Non-Arabic Speakers	0	S
3	ASU_S_BCH	Bahrain Civilization C History	0	S

Programme Study Plan				
No.	**Course Code**	**Course Title**	**Credit**	**Level**
Year 1 – First Semester				
1	ASU_5_SD1	Structural Design 1	10	5
2	ASU_5_AEM	Advanced Engineering Mathematics	10	5
3	ASU_5_GT1	Geotechnics 1	10	5
4	ASU_5_DA1	Design Procedures for Architecture 1	10	5
5	ASU_5_A3D	AutoCAD-3D	10	5
6	ASU_5_EME	Engineering Management and Economics	10	5
Year 1 – Second Semester				
1	ASU_5_SD2	Structural Design 2	10	5
2	ASU_5_BIM	Building Information Modelling	10	5
3	ASU_5_EET	Engineering Ethics	10	5
4	ASU_5_DA2	Design Procedures for Architecture 2	10	5
5	ASU_5_AFS	Architectural Engineering Field Studies	10	5
Year 1 – Summer Semester				
1	ASU_5_ITS	Internship	10	5
Year 2 – First Semester				
1	ASU_6_PR1	Project 1	10	6
2	ASU_6_SA1	Structural Design and Analysis 1	10	6
3	ASU_6_ERM	Engineering Research Methods	10	6
4	ASU_6_ECB	Energy Conservation in Buildings	10	6
5	ASU_6_TDB	Thermodynamics for Buildings	10	6
6	ASU_6_FEC	Forensic Engineering and Conservation	10	6
Year 2 – Second Semester				
1	ASU_6_PR2	Project 2	10	6
2	ASU_6_SA2	Structural Design and Analysis 2	10	6
3	ASU_6_GT2	Geotechnics 2	10	6

4	ASU_6_IEM	Innovation, Enterprise and Management	10	6
5	ASU_6_DPR	Design project	20	6

ASU_5_SD1 Structural Design 1

Introduction to stress and deformation of basic structural materials subjected to axial, torsional, bending, and pressure loads. Plane stress, plane strain, and stress-strain laws. Applications of stress and deformation analysis to members subjected to centric, torsional, flexural, and combined loading. Introduction to theories of failure.

ASU_5_AEM Advanced Engineering Mathematics

This module covers advanced undergraduate engineering mathematics.

ASU_5_GT1 Geotechnics 1

This module introduces to the students a number of simple concepts and models, which are used to describe soil and its mechanical behaviour. Standard laboratory tests are carried out, and soil properties are derived from the results.

ASU_5_DA1 Design Procedures for Architecture 1

Personal student architectural design project embracing design studio and technology studio against a defined brief.

ASU_5_A3D AutoCAD-3D

The module covers key command revision, 3D viewing, viewports and coordinate systems, wire-frame modelling, surface modelling and meshing, solid modelling, studio effects, materials and lighting, and Boolean operators.

ASU_5_EME Engineering Management and Economics

This module helps to prepare students for their future roles as professional engineers in a number of ways. It includes:

- Detailed study of project planning techniques, including network techniques, with preparation for the student's individual projects
- An overview of the business functions which interact with engineering
- An introduction to systems thinking. A formal method for studying systems will be introduced.
- An introduction to recruitment, retention and equal opportunities in employment
- The use of published standards in engineering
- Use of the bsi website to access national and international standards
- An introduction to statistics and their use in managing engineering processes
- An introduction to quality management, with particular reference to the iso 9000 series
- An introduction to european directives and harmonised standards writing technical business reports, including the importance of acknowledging published sources and the use of formal methods for doing so.

ASU_5_SD2 Structural Design 2
This module develops students' practice with structural engineering, introduces structural concepts, and provides an overview of specific techniques for analysing determinate structures, trusses, beams, and frames.

ASU_5_BIM Building Information Modelling
This module introduces the concepts of Building Information Modelling (BIM) through the development of architectural 3D models on industry-standard parametric CAD systems. It covers the practical competence of architectural modelling and provides exposure to coordinating building information models.

ASU_5_EET Engineering Ethics
This module introduces the theory and the practice of engineering ethics using a multi- disciplinary and cross-cultural approach. The theory includes ethics and the philosophy of engineering. Historical cases are taken primarily from the scholarly literature on engineering ethics, and hypothetical cases are written by students. Each student will write a story by selecting an ancestor or mythic hero as a substitute for a character in a historical case. Students will compare these cases and recommend action.

ASU_5_DA2 Design Procedures for Architecture 2
Personal student architectural design project embracing design studio and technology studio against a defined brief.

ASU_5_AFS Architectural Engineering Field Studies
This is substantially a project-based learning module. It seeks to bring together construction and materials needed for design, surveying for execution, and some geology. It emphasises the link between materials and site geological properties and their relationship with design and execution. There will be a block week devoted to a construction-type activity and others, including geological and site visits. Multimedia support will feature in the delivery.

ASU_5_ITS Internship
This module provides the student with an opportunity to experience the industrial world and be part of a team working on real-world projects. The University assists each student in finding the most suitable industry.

ASU_6_PR1 Project 1
To plan, execute, review and report upon a piece of project work related to the BEng programme being followed by the student. A Module Guide for the project is augmented by four lectures.

ASU_6_SA1 Structural Design and Analysis 1
This module offers the knowledge and skills of reinforced concrete design to Eurocodes, analysis of structural form and the ability to design in both qualitative and quantitative directions.

ASU_6_ERM Engineering Research Methods

The module studies the scope and significance of engineering research. It introduces students to the various aspects of engineering research; its types, tools and methods and students will learn how to apply research techniques to real-world situations. The module covers topics, such as the identification of a topic by the student, proposition of hypothesis, formulation of research inquiries, development of literature review, and select research design and methodologies. Additionally, students will learn data collection techniques; primary and secondary data with application to specific problems, scaling and research instrument design and sampling design.

ASU_6_ECB Energy Conservation in Building

This module will provide students with the ability to quantify the energy available from the sun, wind, sea or river, or earth for a given application at a given site. Students will develop the skills to understand and analyse the potential and limitations of the available energy conversion devices and exercise basic engineering judgment in their application.

ASU_6_TDB Thermodynamics for Buildings

This module provides students with relevant the principles of heat transfer, fluid flow and thermodynamics for application to buildings and their engineering systems.

ASU_6_FEC Forensic Engineering and Conservation

This module uses mainly case studies to develop the principles design by looking at the influence of failures on the evolution of the professional practice. It teaches students an understanding of holistic design applications, conservation, and the role of regulations. It teaches, develops and assesses observational, deductive, creative and communications skills.

ASU_6_PR2 Project 2

To plan, execute, review and report upon a piece of project work related to the BEng programme being followed by the student. A Module Guide for the project is augmented by four lectures.

ASU_6_SA2 Structural Design and Analysis 2

This module offers the knowledge and skills of steel design to Eurocodes, analysis of structural form and the ability to design in both qualitative and quantitative directions.

ASU_6_GT2 Geotechnics 2

This module is intended to provide an understanding of the application of theory to the analysis and design of geotechnical structures.

ASU_6_IEM Innovation, Enterprise and Management

The module is intended to be practical, with students developing some appropriate ideas of their own in such a way that they become practical, profitable propositions. Students will practice ways of finding ideas, testing those ideas and developing them, and will write their own business strategies, risk assessments and scenario testing, so that they demonstrate the commercial viability of their ideas.

One of the assignments will require students to work in groups, typically to adopt a concept and develop it such that it could be commercially viable and sustainable. This might be a product or a service (such as consultancy or contract management).

Students will experience topics addressing intellectual property, market research, market placement, advertising and finance. They will be expected to reflect on what they can contribute to a group.

ASU_6_DPR Design Project

Main architectural design project embracing design studio and technology studio against a defined brief.