

AIN SHAMS UNIVERSITY BUILDING ENGINEERING PROGRAMME SPECIFICATION



Programme Aim and Title	BEng (Hons) Building Engineering
Intermediate Awards Available	BSc, DipHE, CertHE, University Certificate
Teaching Institution(s)	Ain Shams University, Cairo, Egypt
Alternative Teaching Institutions (for local arrangements see final section of this specification)	N/A
UEL Academic School	Architecture, Computing and Engineering
UCAS Code	N/A
Professional Body Accreditation	N/A
QAA Benchmark Statements	Engineering
Additional Versions of this Programme	NA
Date Specification Last Updated	November 2018

Programme Aims and Learning Outcomes

This programme is designed to:

- enable students to apply knowledge of mathematics, science and engineering concepts to the solution of building engineering problems
- educate students to a level that will enable them to function effectively in industry
- provide knowledge and understanding of current theories and developments in civil engineering
- enhance understanding of the design and management processes relevant to civil engineering
- encourage critical awareness and understanding of other professionals in the construction industry
- contribute to the development of the Engineer as an important professional in society and the built environment
- allow progression in career and educational development giving opportunities to study for a postgraduate degrees
- enable graduates to act professionally in design and supervision of civil engineering discipline
- Work effectively within multi-disciplinary teams.
- Communicate effectively.
- Consider the impacts of engineering solutions on society & environment.
- Display professional and ethical responsibilities; and contextual understanding
- Engage in self- and life- long learning.

What you will learn:

Knowledge

- Concepts and theories of mathematics, sciences, engineering projection and their

application within the field of building engineering.

- Quality assurance, codes of practice and standards, health and safety requirements and environmental issues associated with building engineering projects.
- Characteristics of engineering materials used in buildings.
- Principles of design of steel and concrete buildings.
- Current engineering technologies related to building systems
- Professional ethics, law and impacts of building engineering projects on the society and the environment

Thinking skills

- Select appropriate mathematical and computer-based methods to model and analyse building engineering problems.
- Select appropriate solutions for building engineering problems based on analytical thinking.
- Combine, exchange, and assess various types of information, views, and data from a range of different sources.
- Think in a creative and innovative way in problem solving and design.
- Assess and evaluate the characteristics and performance of building components, and systems.

Subject-Based Practical skills

- Professionally merge the engineering knowledge, understanding, and feedback to improve design of buildings.
- Re-design a building, or system, and carry out specialized building engineering designs.
- Use a wide range of analytical tools, techniques, equipment, and software packages developed for building engineering projects.
- Apply numerical modeling methods to building engineering problems.
- Demonstrate basic organizational and project management skills.

Skills for life and work (general skills)

- Collaborate effectively within multidisciplinary teams.
- Work in stressful environment and within constraints.
- Share ideas and communicate them with others effectively.
- Demonstrate efficient IT capabilities.
- Effectively manage tasks, time, and resources.
- Search for information and engage in life- long self-learning discipline.

Learning and Teaching

Knowledge is developed through

- Guided reading
- Attending lectures / guest presentations
- Knowledge-based activities with feedback

AIN SHAMS UNIVERSITY BUILDING ENGINEERING PROGRAMME SPECIFICATION



- Online discussions and activities
- preparation for examinations and timed controlled assignments

Thinking skills are developed through

- Reflective activities with feedback
- Tutorial activities and discussions.
- Online discussions and activities
- Preparation of coursework assignments

Practical skills are developed through

- IT activities with feedback
- Research skills-based activities with feedback
- Seminar preparation and presentations
- Applying technical regulations to given scenarios
- Application to real life and simulated case studies

Skills for life and work (general skills) are developed through

- The demands of the study medium
- Planning activities with feedback
- Project and team work
- Using specialist ICT and software

Assessment

The assessment methods to achieve the different learning outcomes are as follows:

Knowledge is assessed by

- Project work
- Coursework
- Reports
- Examinations
- Individual oral presentations

Thinking skills are assessed by

- Project work
- Coursework
- Time controlled assessments
- Individual oral presentations

Practical skills are assessed by

- Project work

AIN SHAMS UNIVERSITY BUILDING ENGINEERING PROGRAMME SPECIFICATION



- Practical reports
- Portfolio completion
- Timed controlled assessments

Skills for life and work (general skills) are assessed by

- Project work
- Group work
- Coursework

Students with disabilities and/or particular learning needs should discuss assessments with the Programme Leader to ensure they are able to fully engage with all assessment within the programme.

Work or Study Placements

We encourage full time students to seek work experience during their academic course, during the summer vacations

Training could be performed in an industrial/service facility related to the student's program, and must be under the full supervision of the faculty according to the requirements stipulated in Article (37) of the Credit Hour Educational Programmes (CHEP) bylaws. The training is mandatory only for the normal ASU degree.

In case the student wishes to study 120 credits at UEL, at level 5 or level 6, the credit hours of these courses will be transferred and included in the graduation transcript at ASU.

Programme Structure

The Programme follows the British system: One academic year covers 120 credits.

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

- 3 Equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme.
- 4 Equivalent in standard to the first year of a full-time undergraduate degree programme.
- 5 Equivalent in standard to the second year of a full-time undergraduate degree programme.
- 6 Equivalent in standard to the third year of a full-time undergraduate degree programme.
- 7 Equivalent in standard to a Master's degree.

AIN SHAMS UNIVERSITY
BUILDING ENGINEERING
PROGRAMME SPECIFICATION



Programmes are made up of modules that are each credit weighted.

The module structure of this programme:

Level	UEL module code	ASU module code	Module Title	Credit Weighting	Core/Option	Available by Distance Learning? Y/N
Structural Engineering, Construction Engineering & Environmental Engineering tracks						
3	EG3002	EG3311	Applied Mathematics for Engineering Problems	30	Core	N
3	EG3003	EG3312	Building Engineering Systems and Thermal Sciences	30	Core	N
3	EG3004	EG3313	Introduction to Structural Analyses and Material Properties	30	Core	N
3	EG3005	EG3314	Fluid mechanics, building engineering materials and professional practice	30	Core	N
Structural Engineering, Construction Engineering & Environmental Engineering tracks						
4	EG4002	EG3421	Engineering Surveying and Numerical Methods	30	Core	N
4	EG4003	EG3422	Concrete Technology and Structures Design	30	Core	N
4	EG4004	EG3423	Acoustics, lighting, thermodynamics and Building Systems Optimization	30	Core	N
4	EG4005	EG3424	Structural Analysis, Steel Design and Engineering Economy	30	Core	N
Structural Engineering, Construction Engineering & Environmental Engineering tracks						
5	EG5000	EG3531	Thermal Analysis of Building and Engineering Management	30	Core	N

AIN SHAMS UNIVERSITY
BUILDING ENGINEERING
PROGRAMME SPECIFICATION



5	EG5001	EG3532	Concrete structures design and construction engineering management	30	Core	N
5	EG5002	EG3533	Soil mechanics, foundation design and engineering law	30	Core	N
5	EG5003	EG4534	Computer-aided structural and concrete design	30	Option	N
5	EG5004	EG5534	Computer-aided structural and Planning & Scheduling	30	Option	N
5	EG5005	EG6534	Computer-aided structural and indoor Air quality	30	Option	N
Structural Engineering						
6	EG6000	EG3641	Structural dynamics and construction engineering	30	Core	N
6	EG6001	EG3642	Graduation project and senior seminar	30	Core	N
6	EG6002	EG3643	Modern building materials and building envelop	30	Core	N
6	EG6003	EG6644	Concrete, masonry and steel structures design	30	Core	N
Construction Engineering						
6	EG6000	EG3641	Structural dynamics and construction engineering	30	Core	N
6	EG6001	EG3642	Graduation project and senior seminar	30	Core	N
6	EG6002	EG3643	Modern building materials and building envelop	30	Core	N
6	EG6004	EG5644	Management of Resources risk & safety cost and legal issues in construction	30	Core	N
Environmental Engineering						
6	EG6000	EG3641	Structural dynamics and construction engineering	30	Core	N
6	EG6001	EG3642	Graduation project and senior seminar	30	Core	N

AIN SHAMS UNIVERSITY BUILDING ENGINEERING PROGRAMME SPECIFICATION



6	EG6002	EG3643	Modern building materials and building envelop	30	Core	N
6	EG6005	EG4644	Acoustics, Illumination, Energy Conservation and Control Systems in Buildings	30	Core	N

Please note: Optional modules might not run every year, the programme team will decide on an annual basis which options will be running, based on student demand and academic factors, in order to create the best learning experience.

Additional details about the programme module structure:

A core module for a programme is a module which a student must have passed (i.e. been awarded credit) in order to achieve the relevant named award. An optional module for a programme is a module selected from a range of modules available on the programme.

The overall credit-rating of this programme is 480 credits. If for some reason you are unable to achieve this credit you may be entitled to an intermediate award, the level of the award will depend on the amount of credit you have accumulated.

Programme Specific Regulations

NA

Typical Duration

This is a full-time study programme. The minimum allowed study duration is 4 years / 8 terms.

Further Information

More information about this programme is available from:

- The ASU web site (<http://eng.asu.edu.eg>)
- The programme handbook
- Module study guides

For further information, BEng (Hons) Building Engineering programme via email: BLDG.chep@eng.asu.edu.eg

All Faculty of Engineering, Ain Shams University programmes are subject to thorough programme approval procedures and quality check by the National Authority for Quality Assurance and Accreditation in Education (NAQAAE) before they are allowed to commence. We also constantly monitor, review and enhance our programmes by listening to student and employer views and the views of external examiners and advisors.

Tuition Fees

AIN SHAMS UNIVERSITY BUILDING ENGINEERING PROGRAMME SPECIFICATION



- Tuition fees, set per 120 credits, are specified yearly by the University administration based on the recommendation of the Programmes Administration Council and the approval of the Council of the Faculty of Engineering.
- The student will sign a pledge to abide by the educational service charges proposed by the Faculty, and approved by the University, with the commitment of timely payment of fees from admission until graduation.
- The tuition fees are paid every year (the first semester of each year) based on 120 credits registered by the student,
- The educational service fees for the Summer semester are determined separately.

Additional Costs

There are no mandatory additional costs.

Alternative Options of Delivery

NA