

BSc (Hons) Civil Engineering

Course Aim and Title	BSc (Hons) Civil Engineering
Intermediate Awards Available	BSc, Cert HE, Dip HE
Teaching Institution(s)	UEL
Alternative Teaching Institutions (for local arrangements see final section of this specification)	
UEL Academic School	Architecture, Computing and Engineering
UCAS Code	H205
Professional Body Accreditation	JBM Accredited: IEng (Full) Accredited by Chartered Institution of Civil Engineering Surveyors (ICES)
Relevant QAA Benchmark Statements	Engineering
Additional Versions of this Course	BSc (Hons) Civil Engineering (with Foundation Year) BSc (Hons) Civil Engineering (with Placement Year)
Date Specification Last Updated	June 2022

Course Aims and Learning Outcomes

The general aim is to provide an educational course of study for Civil Engineers that will meet the demands of their profession and to enable them to progress to the status of Incorporated Engineer. A specific aim of the course is to promote an active interest in applying and managing technology to engineering problem and to encourage students to respond to changes and developments within their profession.

Throughout the course there are overlapping objectives:

- to train engineering technicians to a level that will enable them to function effectively in industry
- to provide a knowledge and understanding of current theories and technologies in civil engineering field
- to enhance their understanding of the design and management processes relevant to civil engineering
- to contribute to development as an important professional in society and the built environment
- to allow progression in career and educational development giving opportunities to study for a technical masters degree.

What you will learn:

Knowledge

- Current theories, concepts and developments in civil engineering (structures, geotechnics and highways, materials, sustainability, surveying)
- Digital interventions and IT in construction, construction technology and management

- Design and practical project applications

Thinking skills

- Critical thinking, assessment and decision making
- Critical awareness and understanding of professionals in the construction sector
- Time, cost and risk management

Subject-Based Practical skills

- Analysis and design through field, laboratory and desk-based studies
- Use of Information Technology

Skills for life and work (general skills)

- Communication and team working
- Independent analysis and problem-solving
- Management and ethics
- Health and Safety
- Professionalism and mental wealth

Learning and Teaching

Knowledge is developed through

- Guided reading
- Attending lectures, tutorials, practical sessions, field work and guest presentations
- Knowledge-based activities with feedback
- Online discussions and activities
- Preparation for examinations and timed controlled assignments

Thinking skills are developed through

- Reflective activities supported with feedback
- Tutorial activities and discussions
- Online discussions and activities
- Preparation of coursework assignments
- Discussions with Industry professional

Practical skills are developed through

- IT activities supported with feedback
- Research skills-based activities supported with feedback
- Seminar preparation and presentations
- Application to real life and simulated case studies

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

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

Assessment

Knowledge is assessed by

- time constrained examinations
- laboratory and Field work exercises
- assignments, design and project work

Thinking skills are assessed by

- approach to solving problems
- analysis of alternative solutions
- practical solutions to complex tasks

Practical skills are assessed by

- laboratory reports and experimental assessment
- group survey work
- application to practical problem-solving

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

- oral presentations
- written communication exercises
- drawing, sketching and design work
- team project work
- use of specialist software

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

Work or Study Placements

For our UEL on-campus based students:

Students are encouraged to consider seeking some form of industrial experience during their academic course, either through work experience during the summer vacations or through the optional sandwich placement between level 5 and level 6. Those students who opt for a year out placement will be enrolled on a 120 credit Industrial Sandwich Placement module EG5100 which will appear in the final transcript as evidence of the 'sandwich' placement year.

An employment liaison officer oversees the administration of the year out placements and assists in helping students secure a placement. We are fortunate in the support of our Industrial Advisory Board (IAB) partners in enabling this important optional element to happen, although this is a competitive process and a placement cannot be guaranteed.

Course Structure

All courses 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 course.
- 4 Equivalent in standard to the first year of a full-time undergraduate degree course.
- 5 Equivalent in standard to the second year of a full-time undergraduate degree course.
- 6 Equivalent in standard to the third year of a full-time undergraduate degree course.
- 7 Equivalent in standard to a Masters degree.

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

The module structure of this course:

Level	Year	Code	Module title	credit	Core/ Option
4	1	EG4019	Mental Wealth: Professional Life 1	20	Core
4	1	EG4014	Engineering Materials	20	Core
4	1	EG4010	Analytical Skills in Built Environment	20	Core
4	1	EG4012	The Built Environment	20	Core
4	1	EG4015	Engineering Mechanics	20	Core
4	1	EG4018	Land and Construction Surveying	20	Core
5	2	EG5010	Mental Wealth: Professional Life 2	20	Core
5	2	EG5022	3D Data Modelling and Analysis	20	Core
5	2	EG5018	Structural Analysis and Element Design	20	Core
5	2	EG5017	Ground Engineering	20	Core
5	2	EG5016	Engineering Surveying (¥)	20	Core
5	2	EG5014	Advanced Sustainable Technology	20	Option
5	2	EG5015	Tendering, Estimating and Cost Control	20	Option
<i>Students who take an optional industrial sandwich placement would normally do so after completion of level 5 modules. They are required to register for:</i>					
<i>P</i>	<i>*</i>	EG5023	<i>Industrial Sandwich Placement</i>	120P	<i>Option*</i>
6	3	EG6010	Mental Wealth: Professional Life 3	20	Core
6	3	EG6011	Capstone Project	40	Core
6	3	EG6137	Structural Design with Temporary Works	20	Option
6	3	EG6014	Advanced Construction Technology and Innovation	20	Option
6	3	EG6022	Geotechnical Engineering	20	Option
6	3	EG6026	Transport Infrastructure Engineering	20	Option
6	3	EG6012	Project Management	20	Option
<i>Please note: Optional modules might not run every year, the course 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. ¥ = compulsory field trip)</i>					
Additional detail about the course module structure:					
Part time day release students (including Degree Apprentices) would normally study 60 credits per academic year and follow the same structure as noted for full time study.					

'Civil Engineer' Degree Apprentices would normally start at L4, whereas 'Civil Engineering Site Management' Degree Apprentices would normally start at L5.

- The learning outcomes for approximately 25% of the assignments for each part time study year are able to be achieved via work related examples/projects.
- The opportunity to achieve the learning outcomes via work based assignments will depend on the occupational profile of the apprentice.
- Work based assignment learning outcomes will be assessed by module teaching team under UEL's academic framework.

The optional level P placement module EG5023 is required to obtain a sandwich degree, in addition to the other requirements, but does not count towards the degree classification.

A core module for a course 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 course is a module selected from a range of modules available on the course.

The overall credit-rating of this course is 360 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. You can read the University Student Policies and Regulations on the UEL website.

Course Specific Regulations

For our UEL on-campus students:

The BSc (Hons) Civil Engineering course is accredited IEng (Full) by the Joint Board of Moderators, which represents the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Chartered Institution of Highways and Transportation (CIHT) and the Institute of Highway Engineers (IHE).

This degree is accredited (at 3rd class honours and above) as:

1. fully satisfying the educational base for an Incorporated Engineer (IEng) and an Engineering Technician (EngTEch).

See www.jbm.org.uk for further information and details of Further Learning courses for CEng.

This professional accreditation means that the degree course can provide part of your preparation for Incorporated Engineer status.

This course can provide the underpinning educational base for the Civil Engineering Site Management degree apprenticeship and the Civil Engineering Degree Apprenticeship (as per the course structure set out in table 2 respectively).

The School hosts a regular course of construction site visits open to all students on construction management courses. Students will benefit from visiting some of the most prestigious construction projects being built today in London with the opportunity to network with many civil engineering and construction company professionals. Recent visits have included the Tate Modern Phase 2 Extension courtesy of Mace and the Canary Wharf Crossrail Station courtesy of Canary Wharf Contractors.

Typical Duration

It is possible to move from full-time to part-time study and vice-versa to accommodate any external factors such as financial constraints or domestic commitments. Many of our students make use of this flexibility and this may impact on the overall duration of their study period.

The expected duration of this course is 3 years full-time or 5 years part-time.

Day release/Degree Apprenticeship mode

There is also a 5 year part-time day release (including apprenticeships) mode of study, which does not include the Industrial Sandwich Placement.

- 'Civil Engineer' Degree Apprentices would normally start at L4
- 'Civil Engineering Site Management' Degree Apprentices would normally start at L5

A student cannot normally continue study on a course after 4 years of study in full time mode unless exceptional circumstances apply and extenuation has been granted. The limit for completion of a course in part time mode is 7 years from first enrolment.

Further Information

More information about this course is available from:

- The UEL web site (www.uel.ac.uk)
- The course handbook
- Module study guides
- UEL Manual of General Regulations (available on the UEL website)
- UEL Quality Manual (available on the UEL website)
- School web pages
- Institution of Civil Engineers <http://www.ice.org.uk>
- Joint Board of Moderators <http://www.jbm.org.uk/>
- Engineering Council <http://www.engc.org.uk/>

All UEL courses are subject to thorough course approval procedures before we allow them to commence. We also constantly monitor, review and enhance our courses by listening to student and employer views and the views of external examiners and advisors.

Additional costs:

For the 2018/19 academic year these were typically:

Compulsory field trip (at level 5): £300 - £400 per student

Note that cost could be considerably lower if students book ahead of time and/or share accommodation with friends.

Besides the normal costs of stationery, there are also costs involved in the purchase of specialist construction PPE, drawing equipment and transport costs to two/ three day trips to exhibitions and trade fairs. These costs will be in the region of £150 for the course.

Alternative Locations of Delivery

N/A