

BEng (Hons) Civil Engineering

Civil Engineering / Faculty of Science and Engineering

Year 1 Modules

The preliminary year is designed to help you develop your English language skills so that you can make the most of your degree programme.

This special English language programme designed by the English for Academic Purposes experts at the University's Centre for English Language Education is carefully integrated with academic content modules so that you are prepared fully for years two to four of your degree programme.

Module Code	Module Title	Credits
CELEF008	Introduction to Academic Skills	10
CELEN038	The Scientific Method	10
CELEF005	Foundation Algebra	20
CELEN056	Electricity and Magnetism	10
CELEN057	Foundation Mechanics	10
CELEF003	Foundation Calculus	20
CELEF006	English for Specific Academic Purposes: Science and Engineering	10
CELEN040	Foundation Science B: Chemistry	15
CELEN058	Further Foundation Mechanics	15

Year 2 Modules

Conceptual design project:

This project concludes the communication module and involves groups of students working on the conceptual design of a stadium, station, airport or other structure.

Surveying field course:

You will work on group exercises in surveying, mapping and setting out. This is a six-day residential course during the spring semester.

Module Code	Module Title	Credits
CIVE1015	Hydraulics 1	10
CIVE1017	Group Design Project	30
CIVE1018	Portfolio of Civil Engineering Studies	30
MATH1031	Mathematical Methods for Civil Engineering	20
CIVE1025	Structural Analysis 1	20
CIVE1014	Geotechnics 1	10

Year 3 Modules

Steel design project:

You will be introduced to the civil engineering design process by a year-long project that follows the design of a civil engineering project, from initial concepts through to detailed design. You will work individually, and in groups to produce a design portfolio that includes outline solutions, project appraisal, loading calculations and engineering drawings. The project provides you with opportunities to facilitate your written and oral presentation skills.

Module Code	Module Title	Credits
CIVE2025	Hydraulics 2	10
CIVE2054	Fundamentals of Materials	10
CIVE2053	Civil & Structural Steel Design Project	30
CIVE2052	Portfolio of Civil Engineering Studies 2	30
CIVE2051	Structural Analysis 2	20
CIVE2029	Geotechnics 2	10
MATH2031	Advanced Mathematical Methods for Civil Engineering	10

Year 4 Modules

Individual investigative project:

You can choose a project in your preferred discipline and plan a detailed investigation. Typically, projects involve lab work, field investigations or computer modelling, and require data collection and analysis. Once the investigation is complete, a detailed report is prepared.

Compulsory Modules

Module Code	Module Title	Credits
CIVE3048	BEng Individual Investigative Project	20
CIVE3073	Structural Concrete Design	20
CIVE3049	Geotechnics 3	20
CIVE3055	BEng Group Design Project	30
CIVE3074	Hydraulic Design and Experiments	20

Optional Modules

Module Code	Module Title	Credits
CIVE3072	Traffic Engineering	10