Programme Specification

Civil Engineering {Foundation} [Frenchay]

Version: 2025-26, v2.0, Validated

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Civil Engineering {Foundation} [Frenchay]

Highest award: MEng Civil Engineering

Interim award: BEng Civil Engineering

Interim award: DipHE Civil Engineering

Interim award: CertHE Civil Engineering

Awarding institution: UWE Bristol

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: Yes

Credit recognition: No

School responsible for the programme: CATE School of Engineering, College of Arts, Technology and Environment

Professional, statutory or regulatory bodies:

Joint Board of Moderators

Modes of delivery: Full-time, Sandwich

Entry requirements: For the current entry requirements see the UWE public website.

For implementation from: 01 September 2021

Programme code: H29Q13

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The award is designed and structured to provide an industry recognised , intellectually demanding, engaging and outstanding learning Programme, which equips graduates with enhanced employability as its overall objective, digital automation competencies for modern infrastructure development, and tools to respond to the Climate Emergency through smart engineering practices.

Features of the programme:

Educational Aims: On graduation from this Programme, a student will:

-Have knowledge, experience and understanding of engineering science necessary to develop engineering solutions and processes for an effective career in Civil Engineering.

-Through the enhanced experiential team-work, project-based learning Programme, civil engineering graduates will have an enhanced employability at the start of their careers.

-Have gained effective problem-solving skills and experience both within the specialisms of civil engineering and more widely through cross boundary activities within other engineering disciplines.

-Have knowledge, confidence and understanding to effectively contribute to sustainable built environment development and the mitigations and adaptions necessary to respond to the Climate Emergency.

-Have developed competency in digital automation technologies to support the design, development, and deployment of contemporary digital tools and emerging industry practices for civil engineering projects.

-Have gained the numerical skills appropriate and necessary for a potential

international career.

-Have the creative skills and innovative ability to synthesize solutions to complex real-world problems with a holistic systems approach.

-Be able to reflect critically upon their learning and understanding, as the foundation for continuing professional development and progression to Chartered Engineer.

-Have practiced skills in communicating effectively with other professionals from a variety of disciplines, clients and the public, with understanding and respect for the objectives and values of other stakeholders.

- There is stronger and clearer draw and attraction to international students to the benefit of the Programme and Student Experience.

Programme Learning Outcomes:

On successful completion of this programme graduates will achieve the following learning outcomes.

Programme Learning Outcomes

PO1. Ability to apply critical civil engineering knowledge and theory into practice through practice-led and research-informed learning, demonstrating a comprehensive understanding of appropriate civil engineering laboratory testing and techniques.

PO2. Apply the engineering principles appropriate to analyse key engineering processes in Civil Engineering infrastructures.

PO3. Define and investigate a problem considering the impact on the natural and built environment, sustainability, climate emergency and associated ethical issues, health and safety and risk management.

PO4. Develop creative and innovative design solutions following appropriate standards and codes of practice, embracing global sustainable development goals, cost drivers and functionality throughout the whole life cycle.

PO5. Model civil engineering systems to be able to specify and assess technical designs to a relevant industry standard.

PO6. Ability to communicate clearly and coherently using various general and engineering communication processes either as individuals or as members of a team.

PO7. Reflect on their learning in the contexts of ethics, climate change and broader professional responsibilities, exhibiting an appreciation of complexity and recognition of the value of continuing professional development.

PO8. Develop integrated multi-disciplinary design solutions to complex open ended real-world build environmental challenges with demonstrably clear response to the Climate Emergency and Net Zero targets.

Assessment strategy: Learning will be assessed through a range of assessment methods appropriate to the learning outcomes of the modules and the Programme, including:

- Coursework
- Laboratory experiment exercises and reports
- Computer-based exercises
- Presentations
- Poster/Conference Presentations
- Design projects
- Final- Year Dissertation
- Self-reflective writing
- Portfolios
- Field Site exercises
- Written examinations
- On-line tests and quizzes

The assessment strategy has been developed to expand progressive assessment where appropriate, to reinforce engagement and is informed by industry working approaches. Where students are required to work with other students and submit coursework as a group, these are typically assessed through a combination of peer-review and individual contribution. Written invigilated examinations have been minimized, with time managed online assessments and open book approach being adopted. All assessments are enquiry-based and assess particular Learning

Outcomes.

Summative assessment feedback will be provided through a range of methods appropriate to the assessments including verbal feedback sessions, double marking process with written feedback and formative assessment feedback through small groups tutorials, emails and staff office hours for most modules.

Student support: Student support includes:

The info point services: This comprehensive student support service includes : Advice on Academic regulations and procedures, Extenuating circumstances, Module choices, student records including enrolment, and accessing student's records and what to do if unforeseen circumstances affect their studies..

Induction: All students will be introduced to the faculty and its resource centres via a series of Health and Safety and introductory sessions. All teaching is sequential and students will be fully supported in acquiring and applying the necessary learning skills.

The Library: The library offers information skills workshops to students. There are opportunities in the curriculum that enable students to develop information retrieval and evaluation skills in order to identify appropriate resources effectively. Such support is available through the Library Services web pages, including interactive tutorials on finding books and journals, evaluating information and referencing. Students will also be introduced to and encouraged to use online databases such as WGSN, Style Sight and Women's wear daily.

UWE careers offer a wide range of accessible resources and services including one-one coaching, vacancy advertising, workshops and extensive website and recruiter events including fairs and work experience programmes. The Department of Art and Design also hosts a 'Professional Practice week', a symposium type event open to all students with a diverse Programme of speakers and advice sessions from experts in the creative industries.

Support for students with additional needs: Consideration will be given to ensure and enable students with additional needs are able to participate in all aspects of the academic and social life of the institution. The Programme team will monitor the effectiveness of provision for students with additional needs and identify opportunities for enhancement. There is a comprehensive and robust student support structure throughout the University that the students can access at any time.

Part B: Programme Structure

Year 1

The Student must take 120 credits from the modules in Year 1

Year 1 Compulsory Modules (Full Time and Sandwich)

Students must take 120 credits from the modules in year 1

Module Code	Module Title	Credit
UFMFHG-15-0	Foundation Group Project 2025-26	15
UFMFBG-30-0	Foundation Mathematics: Algebra and Calculus 2025-26	30
UFMFAG-30-0	Foundation Mechanics 2025-26	30
UFMFCG-15-0	Introduction to Mechatronics 2025-26	15
UFMFEG-30-0	Engineering Experimentation 2025-26	30

Year 2

Full-time and Sandwich students must take 120 credits from the modules in Year 2.

Year 2 Compulsory Modules (Full-time and Sandwich)

Full-time and Sandwich students must take 120 credits from the modules in Compulsory Modules (Full-time and Sandwich).

Module Code	Module Title	Credit
UFMEBC-15-1	Digital Design in Civil Engineering 2026-27	15

UFMEAS-15-1	Professional Skills for Engineers 2026-27	15
UBGMY1-15-1	Construction Materials and Sustainability 2026-27	15
UBGMX1-30-1	Civil Engineering Field Skills and Surveying 2026-27	30
UBGMKD-15-1	Civil Engineering Design and Technology 2026-27	15
UBGMXQ-30-1	Engineering Principles for Civil Engineering 2026-27	30

Year 3
Full-time and Sandwich students must take 120 credits from the modules in Year 3.

Year 3 Compulsory Modules (Full-time and Sandwich)
Full-time and Sandwich students must take 120 credits from the modules in Compulsory Modules (Full-time and Sandwich).

Module Code	Module Title	Credit
UFMEB5-15-2	Project Management for Engineers 2027-28	15
UFMEBD-15-2	Digital Automation for Civil Engineering 2027-28	15
UBGJFN-15-2	Computational Civil Engineering 2027-28	15
UBGJFQ-30-2	Integrated Structural Engineering 2027-28	30
UBGJCA-30-2	Hydraulics and its Applications 2027-28	30
UBGMUQ-15-2	Soil Mechanics 2027-28	15

Year 4
Full-time students must take 120 credits from the modules in Year 4.

Sandwich students must take 15 credits from the modules in Year 4.

Year 4 Compulsory Modules (Full-time)
Full-time students must take 105 credits from the modules in Compulsory Modules (Full-time).

Module Code	Module Title	Credit
UFMEB6-15-3	Engineering in Society 2028-29	15
UFMFX8-30-3	Engineering Project 2028-29	30
UBGJFP-15-3	Transport Engineering Design 2028-29	15
UBGMM3-15-3	Advanced Structural Analysis 2028-29	15
UBGMWQ-15-3	Geotechnics 2028-29	15
UBGLY9-15-3	Infrastructure Design and Implementation Project 2028-29	15

Year 4 Compulsory Modules (Sandwich)
Sandwich students must take 15 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UFMF89-15-3	Industrial Placement 2028-29	15

Year 4 Optional Modules (Full-time)
Full-time students must take 15 credits from the modules in Optional Modules (Full-time).

Module Code	Module Title	Credit
UBGL68-15-3	Engineering Geology 2028-29	15
UBGL67-15-3	Water Management 2028-29	15
UBGL66-15-3	Assessment and Mitigation of Natural and Anthropogenic Hazards 2028-29	15
UBGLXP-15-3	Traffic Management and Safety 2028-29	15

Year 5
Full-time students must take 120 credits from the modules in Year 5.

Sandwich students must take 105 credits from the modules in Year 5.

Year 5 Compulsory Modules (Full-time)
Full-time students must take 105 credits from the modules in Compulsory Modules (Full-time).

Module Code	Module Title	Credit
UFMF8T-60-M	Masters Group Capstone Project 2029-30	60
UBGL3U-15-M	Structural Monitoring and Rehabilitation 2029-30	15
UBGMSR-15-M	Advanced Construction Materials and Technology 2029-30	15
UBGMTA-15-M	Advanced Soil Mechanics and Foundation Design 2029-30	15

Year 5 Compulsory Modules (Sandwich)
Sandwich students must take 90 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UFMFX8-30-3	Engineering Project 2029-30	30
UBGJFP-15-3	Transport Engineering Design 2029-30	15
UBGMM3-15-3	Advanced Structural Analysis 2029-30	15
UBGMWQ-15-3	Geotechnics 2029-30	15
UBGLY9-15-3	Infrastructure Design and Implementation Project 2029-30	15

Year 5 Optional Modules (Full-time)
Full-time students must take 15 credits from the modules in Optional Modules (Full-time).

Module Code	Module Title	Credit
UBGL6A-15-M	Coastal Engineering 2029-30	15
UBGL5Q-15-M	Seismic Analysis and Structural Retrofitting 2029-30	15
UBGMUR-15-M	Advanced Water and Wastewater Engineering Design 2029-30	15
UBGMFX-15-M	Transport Infrastructure Design 2029-30	15

Year 5 Optional Modules (Sandwich)
Sandwich students must take 15 credits from the modules in Optional Modules (Sandwich).

Module Code	Module Title	Credit
UBGL67-15-3	Water Management 2029-30	15
UBGL66-15-3	Assessment and Mitigation of Natural and Anthropogenic Hazards 2029-30	15
UBGL68-15-3	Engineering Geology 2029-30	15
UBGLXP-15-3	Traffic Management and Safety 2029-30	15

Year 6
Sandwich students must take 120 credits from the modules in Year 6.

Year 6 Compulsory Modules (Sandwich)
Sandwich students must take 105 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UFMF8T-60-M	Masters Group Capstone Project 2030-31	60
UBGL3U-15-M	Structural Monitoring and Rehabilitation 2030-31	15

UBGMSR-15-M	Advanced Construction Materials and Technology 2030-31	15
UBGMTA-15-M	Advanced Soil Mechanics and Foundation Design 2030-31	15

Year 6 Optional Modules (Sandwich)
Sandwich students must take 15 credits from the modules in Optional Modules (Sandwich).

Module Code	Module Title	Credit
UBGL6A-15-M	Coastal Engineering 2030-31	15
UBGL5Q-15-M	Seismic Analysis and Structural Retrofitting 2030-31	15
UBGMUR-15-M	Advanced Water and Wastewater Engineering Design 2030-31	15
UBGMFX-15-M	Transport Infrastructure Design 2030-31	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

This programme of study requires students to develop a sound intellectual knowledge and understanding of civil and environmental engineering science, design and application; enabling creative and innovative synthesis of holistic solutions to complex problems. Alongside these skills students are required to develop effective communication across multiple formats, to both technical and non-technical audiences.

Part D: External Reference Points and Benchmarks

Set out which reference points and benchmarks have been used in the design of the Programme:

QAA UK Quality Code for HE:

-Framework for higher education qualifications (FHEQ)
-Subject benchmark statements : Subject Engineering 2023

Part E: Regulations

Approved to University Regulations and Procedures
The PSRB requirements below are permitted within the regulations.

The following requirements apply to awards which have been accredited by a PSRB that comes under the auspices of the Engineering Council UK:
- The permitted maximum compensated credit is 30 credits for a Bachelors or Integrated Masters degree, and a maximum of 20 credits in a Masters degree.
- The awarding of compensated credit may be considered for an overall module mark in the range of 30% to 39% for Levels 4-6 and 40%-49% for Level 7.
- Major individual and group-based project modules must not be compensated.