Programme Specification

Civil Engineering [Frenchay]

Version: 2024-25, v1.0, 01 Aug 2023

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Civil Engineering [Frenchay]

Highest award: MEng Civil Engineering

Interim award: BEng (Hons) Civil Engineering

Interim award: BEng Civil Engineering

Interim award: DipHE Civil Engineering

Interim award: CertHE Civil Engineering

Awarding institution: UWE Bristol

Affiliated institutions: Not applicable

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

Contributing schools: Not applicable

Professional, statutory or regulatory bodies:

Joint Board of Moderators

Apprenticeship: Not applicable

Mode of delivery: Full-time, Part-time, Sandwich

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

For implementation from: 01 September 2024

Programme code: H29M13

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, and tools to respond to the Climate Emergency.

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 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.

Part B: Programme Structure

Year 1

Full-time and Sandwich students must take 120 credits from the modules in Year 1.

Part-time students must take 75 credits from the modules in Year 1.

Year 1 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
UBGMKD-15-1	Civil Engineering Design and Technology 2024-25	15
UBGMX1-30-1	Civil Engineering Field Skills and Surveying 2024-25	30
UBGMY1-15-1	Construction Materials and Sustainability 2024-25	15
UFMFKS-30-1	Engineering Practice 1 2024-25	30
UBGMXQ-30-1	Engineering Principles for Civil Engineering 2024-25	30

Year 1 Compulsory Modules (Part-time)

Part-time students must take 75 credits from the modules in Compulsory Modules (Part-time).

Module Code	Module Title	Credit

UBGMKD-15-1	Civil Engineering Design and Technology 2024-25	15
UBGMY1-15-1	Construction Materials and Sustainability 2024-25	15
UFMFKS-30-1	Engineering Practice 1 2024-25	30
UBGLW9-15-1	Engineering Principles for Civil Engineering 2024-25	15

Year 2
Part-time students must take 75 credits from the modules in 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
UBGJFN-15-2	Computational Civil Engineering 2025-26	15
UFMFQS-15-2	Engineering Practice 2 2025-26	15
UFMFRS-15-2	Engineering Research 2025-26	15
UBGJCA-30-2	Hydraulics and its Applications 2025-26	30
UBGJFQ-30-2	Integrated Structural Engineering 2025-26	30
UBGMUQ-15-2	Soil Mechanics 2025-26	15

Year 2 Compulsory Modules (Part-time)
Part-time students must take 75 credits from the modules in Compulsory Modules (Part-time).

Module Code	Module Title	Credit
UBGMKD-15-1	Civil Engineering Design and Technology 2025-26	15

UBGMX1-30-1	Civil Engineering Field Skills and Surveying 2025-26	30
UBGJFQ-30-2	Integrated Structural Engineering 2025-26	30

Year 3
Sandwich students must take 15 credits from the modules in Year 3.

Part-time students must take 75 credits from the modules in Year 3.

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

Year 3 Compulsory Modules (Full-time)
Full-time students must take 105 credits from the modules in Compulsory Modules (Full-time).

Module Code	Module Title	Credit
UBGMM3-15-3	Advanced Structural Analysis 2026-27	15
UFMFX8-30-3	Engineering Project 2026-27	30
UBGMWQ-15-3	Geotechnics 2026-27	15
UBGLY9-15-3	Infrastructure Design and Implementation Project 2026-27	15
UFMFNQ-15-3	Professionalism for Engineers 2026-27	15
UBGJFP-15-3	Transport Engineering Design 2026-27	15

Year 3 Compulsory Modules (Part-time)
Part-time students must take 75 credits from the modules in Compulsory Modules (Part-time).

Module Code	Module Title	Credit
UBGMW9-15-3	Computational Civil Engineering 2026-27	15
UFMFQS-15-2	Engineering Practice 2 2026-27	15

UBGMNU-30-2	Hydraulics and Engineering Applications 2026-27	30
UBGMUQ-15-2	Soil Mechanics 2026-27	15

Year 3 Compulsory Modules (Sandwich)
Sandwich: Students undertaking the Sandwich programme with a placement year take the following module:

Module Code	Module Title	Credit
UFMF89-15-3	Industrial Placement 2026-27	15

Year 3 Optional Modules (Full-time)
Full-time students must select 15 credits from Optional Modules (Full-time).

Module Code	Module Title	Credit
UBGL66-15-3	Assessment and Mitigation of Natural and Anthropogenic Hazards 2026-27	15
UBGL68-15-3	Engineering Geology 2026-27	15
UBGLXP-15-3	Traffic Management and Safety 2026-27	15
UBGL67-15-3	Water Management 2026-27	15

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

Sandwich students must take 105 credits from the modules in Year 4.

Part-time students must take 75 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
UBGMSR-15-M	Advanced Construction Materials and Technology 2027-28	15

UBGMTA-15-M	Advanced Soil Mechanics and Foundation Design 2027-28	15
UFMF8T-60-M	Masters Group Capstone Project 2027-28	60
UBGL3U-15-M	Structural Monitoring and Rehabilitation 2027-28	15

Year 4 Compulsory Modules (Part-time)
Part-time students must take 75 credits from the modules in Compulsory Modules (Part-time).

Module Code	Module Title	Credit
UBGMM3-15-3	Advanced Structural Analysis 2027-28	15
UFMFRS-15-2	Engineering Research 2027-28	15
UBGMWQ-15-3	Geotechnics 2027-28	15
UBGLY9-15-3	Infrastructure Design and Implementation Project 2027-28	15
UBGJFP-15-3	Transport Engineering Design 2027-28	15

Year 4 Compulsory Modules (Sandwich)
Sandwich students must take 90 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UBGMM3-15-3	Advanced Structural Analysis 2027-28	15
UFMFX8-30-3	Engineering Project 2027-28	30
UBGMWQ-15-3	Geotechnics 2027-28	15
UBGLY9-15-3	Infrastructure Design and Implementation Project 2027-28	15
UBGJFP-15-3	Transport Engineering Design 2027-28	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
UBGMUR-15-M	Advanced Water and Wastewater Engineering Design 2027-28	15
UBGL6A-15-M	Coastal Engineering 2027-28	15
UBGL5Q-15-M	Seismic Analysis and Structural Retrofitting 2027-28	15
UBGMFX-15-M	Transport Infrastructure Design 2027-28	15

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

Module Code	Module Title	Credit
UBGL66-15-3	Assessment and Mitigation of Natural and Anthropogenic Hazards 2027-28	15
UBGL68-15-3	Engineering Geology 2027-28	15
UBGLXP-15-3	Traffic Management and Safety 2027-28	15
UBGL67-15-3	Water Management 2027-28	15

Year 5
Sandwich students must take 120 credits from the modules in Year 5.
Part-time students must take 60 credits from the modules in Year 5.

Year 5 Compulsory Modules (Part-time)
Part-time students must take 45 credits from the modules in Compulsory Modules (Part-time).

Module Code	Module Title	Credit
UFMFX8-30-3	Engineering Project 2028-29	30

UFMFNQ-15-3	Professionalism for Engineers 2028-29	15

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

Module Code	Module Title	Credit
UBGMSR-15-M	Advanced Construction Materials and Technology 2028-29	15
UBGMTA-15-M	Advanced Soil Mechanics and Foundation Design 2028-29	15
UFMF8T-60-M	Masters Group Capstone Project 2028-29	60
UBGL3U-15-M	Structural Monitoring and Rehabilitation 2028-29	15

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

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

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

Module Code	Module Title	Credit
UBGMUR-15-M	Advanced Water and Wastewater Engineering Design 2028-29	15

UBGL6A-15-M	Coastal Engineering 2028-29	15
UBGL5Q-15-M	Seismic Analysis and Structural Retrofitting 2028-29	15
UBGMFX-15-M	Transport Infrastructure Design 2028-29	15

Year 6
Part-time students must take 60 credits from Year 6.

Year 6 Compulsory Modules (Part-Time)
Part-time students must take 45 credits of modules from the modules in Compulsory Modules.

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

Year 6 Optional Modules (Part-Time)
Part-time students must take 15 credits of modules from the modules in Optional Modules.

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

Year 7
Part-time students must take 60 credits from modules in Year 7.

Year 7 Compulsory Modules (Part-Time)
Part-time students must take 60 credits from the modules in Compulsory modules.

Module Code	Module Title	Credit
UFMF8T-60-M	Masters Group Capstone Project 2030-31	60

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 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 variant University Academic Regulations and Procedures.

The following variant regulation for compensation applies to students on this award which has been accredited by a PSRB that comes under the auspices of Engineering Council UK.

The variant applied to Level 4 September 2023 intake onwards (Note -

Compensation applied to all levels not just new students).

- 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 30% to 39%.

No excused credit.