



PROGRAMME SPECIFICATION

Part 1: Information	
Awarding Institution	UWE Bristol
Teaching Institution	UWE Bristol
Delivery Location	Frenchay Campus, UWE Bristol
Study abroad / Exchange / Credit recognition	None
Faculty responsible for programme	Faculty of Environment and Technology
Department responsible for programme	Department of Geography and Environmental Management
Professional Statutory or Regulatory Body Links	Joint Board of Moderators Accredited for intakes 2017 - 2021
Highest Award Title	BEng (Hons) Civil Engineering
Default Award Title	
Interim Award Titles	BEng Civil Engineering DipHE Civil Engineering CertHE Civil Engineering
UWE Progression Route	
Mode of Delivery	FT/PT/SW
ISIS code/s	H290 – BEng(Hons) Civil and Environmental Engineering/ BEng(Hons) Civil Engineering For new students starting level 0 and level 1 from 2020: H29E13: BEng(Hons) Civil Engineering FT/PT H29E: BEng(Hons) Civil Engineering SW H29D43: BEng Civil and Environmental Engineering Degree Apprenticeship
For implementation from	September 2020

Part 2: Description

The award sets out to provide an accredited, intellectually demanding, engaging and outstanding learning experience enabling an outcome of ready and able graduates. The fundamental aims of the programme are to develop students':

1. Knowledge and understanding of engineering science necessary to develop engineering solutions and processes for an effective career in Civil Engineering.
2. Knowledge and understanding of the engineering contribution to sustainable development.
3. Creative and innovative ability in the synthesis of solutions to complex problems with a holistic systems approach.
4. Ability to reflect critically upon their learning, as the foundation for continuing professional development and progression to Chartered Engineer.
5. 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.

To provide a learning environment based upon:

1. A variety of classroom, laboratory, and online learning experiences and resources, supported by the Faculty's Learning Innovation Unit.
2. Industry standard laboratory equipment and IT software.
3. A variety of assessment approaches, linked to professional as well as academic standards (where appropriate).
4. A strong environmental thread to include inputs by the Department's Research Centres with expertise in Water, Transport, and Sustainable Materials.

And to provide the opportunity for:

1. Research and consultancy led case study and problem solving learning, led by the Department's Research Centres with expertise in Water, Transport, and Sustainable Materials.
2. Industrial interaction and experiential learning.
3. Hands on industry led case studies and problem based learning in the field and laboratory.
4. Career guidance and PSRB membership to Incorporated, or towards Chartered level.

Programme requirements for the purposes of the Higher Education Achievement Record (HEAR)

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.

Regulations

Approved to variant University Academic Regulations and Procedures.

The following variant regulation for condoned credit (E4) 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 1 (FHEQ 4) from September 2020 intake onwards.

Part 2: Description

- The permitted maximum condoned credit is 30 credits for a Bachelors or Integrated Masters degree and a maximum of 20 credits in a Masters degree.
- The awarding of condoned credit may be considered for an overall module mark in the range 30% to 39%.

As a consequence Engineering Council UK regulations about the offer of excused credit for modules critical to the awarding of accreditation, excused credit will not be available on this award.

Part 3: Learning Outcomes of the Programme

The award route provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas:

A. Knowledge and Understanding (subject specific)

1. Demonstrate knowledge and understanding of scientific principles and methodology to underpin their education in Civil Engineering.
2. Appreciate the scientific and engineering context of Civil Engineering.
3. Understand historical, current and future developments and technologies in Civil Engineering.
4. Demonstrate knowledge and understanding of mathematical principles underpinning Civil Engineering.
5. Knowledge of characteristics of particular Civil Engineering materials, equipment and construction processes.
6. Understand the engineering principles appropriate to analyse key engineering processes in structures, fluid mechanics, hydrology, materials and geotechnics.
7. Understand systems approaches to the solution of Civil Engineering problems.
8. Demonstrate an appreciation of project management, through design, construction, operation and maintenance.
9. Understand the role of the Chartered Engineer within the broader requirements of sustainable development, to deliver aesthetic and ethical projects.
10. Demonstrate a knowledge of health and safety risk management.
11. Demonstrate a technical and commercial awareness of client and user requirements of the civil engineering profession.

B. Intellectual Skills (generic)

1. Apply an understanding of engineering principles to analyse key engineering processes in structures, geotechnics and specialisms within Civil Engineering.
2. Identify, classify and describe the performance of civil engineering and natural systems and components through the use of analytical methods and modelling techniques.
3. Source and use technical literature, codes of practice, industry standards and other information sources showing an appropriate awareness of intellectual property and contractual issues.
4. Analyse and evaluate information from a range of sources and communicate quantitative information effectively and objectively.
5. Investigate and define a problem and identify constraints including environmental and sustainability limitations, health and safety and risk assessment issues.
6. Understand the application of engineering knowledge to technology development, design, operations and management.

C. Subject/Professional/Practical Skills (subject specific)

1. Apply mathematical methods, tools and notations proficiently in the analysis and solution of engineering problems.
2. Apply and integrate knowledge and understanding of other engineering disciplines to support the practice of Civil Engineering.
3. Use technical equipment (including surveying and laboratory equipment) competently in practical engineering activities.
4. Employ observation, measurement and experimental methods, in the field and the laboratory to enhance and demonstrate understanding of engineering principles.

5. Apply a range of ICT tools and numerical analyses to the solution of engineering problems.
6. Communicate effectively using engineering sketches, drawings, papers and oral presentations.
7. Develop creative and innovative design solutions with regard to cost drivers and functionality throughout the whole life cycle.
8. Manage the design process and evaluate outcomes with awareness of quality management and technical uncertainty.
9. Practice health and safety risk management in both practical activities and the design process.

D. Transferable Skills and other attributes (generic)

1. Communicate information and ideas clearly and coherently to influence the views of others using written, graphical and oral means.
2. Practice negotiation, team working and the motivation of others.
3. Undertake self-appraisal and reflection and formulate plans for continuing professional development.
4. Identify, access, research and interpret data and information required to undertake critical analysis and draw conclusions.
5. Apply a range of ICT tools to problem solving and communication.
6. Apply principles of sustainable development and ethical practice.

<i>Learning Outcomes:</i>	UBGMKD-15-1	UBGMY9-15-1	UBGMSQ-15-1	UBGMT9-15-1	UFMFYG-15-1	UBGMXQ-30-1	UBGMYD-15-1	UFMFF7-15-2	UBGMV9-15-2	UBGMVQ-15-2	UBGMUQ-15-2	UBGMU9-15-2	UBGMNU-30-2	UBGLX8-15-2	UBGMTQ-15-2	UBGMLU-15-2	UBGMWQ-15-3	UBGLY9-15-3	UBGMQP-30-3	UBGMW9-15-3	UBGMM3-15-3	UBGLXP-15-3	UBGMX9-15-3	UBGMPD-15-3	UBGLVX-15-3	UBGMGR-15-3
A) Knowledge and understanding of:																										
A1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X			
A2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X			X	X	
A3	X	X	X	X									X					X	X	X	X				X	
A4				X	X	X		X	X	X	X		X	X	X		X		X	X	X		X			
A5	X	X	X	X			X			X	X	X	X	X		X	X	X								
A6	X	X	X			X	X		X	X	X		X		X	X	X				X		X			
A7	X		X									X						X	X				X	X	X	
A8	X											X	X					X	X							
A9	X											X													X	
A10	X	X				X					X	X					X		X						X	

A11	X								X		X	X					X						X	X	X
B. Intellectual Skills																									
B1				X		X	X	X	X	X	X		X	X	X	X	X			X	X	X	X		
B2	X	X				X	X	X	X	X			X	X	X				X		X	X	X	X	
B3	X	X		X			X			X			X	X					X						
B4		X		X									X						X	X				X	X
B5	X											X							X	X					
B6	X											X	X						X	X					
(C) Subject/Professional/Practical Skills																									
C1				X	X			X	X	X	X		X	X	X		X			X	X		X		
C2	X											X	X					X							X
C3		X		X		X					X		X												
C4		X		X		X					X		X												
C5			X												X					X	X		X		
C6	X		X	X			X					X						X	X				X		X
C7	X												X					X	X						
C8										X		X						X							
C9		X										X	X												
(D) Transferable skills and other attributes																									
D1	X	X	X	X			X					X	X	X	X	X		X	X			X	X		
D2				X			X					X	X										X		
D3							X					X												X	X
D4		X											X						X				X		
D5			X										X							X	X				
D6																		X	X				X		

Part 4: Programme Structure

This structure diagram demonstrates the student journey from Entry through to Graduation for a typical **full time undergraduate student** including:

- level and credit requirements
- interim award requirements
- module diet, including compulsory and optional modules.

The programme is available to full-time students and to part-time students on a day release basis. The programme is designed as a BEng Honours degree allowing students to progress to study at Masters level and hence complete the Educational requirements for Chartered Engineer status.

ENTRY	Level 1	Compulsory Modules	Optional Modules	Interim Awards
		UFMFYG-15-1 Mathematics for Civil and Environmental Engineering UBGMXQ-30-1 Engineering Principles for Civil Engineering UBGMT9-15-1 Surveying UBGMYD-15-1 Civil and Environmental Engineering Field Study UBGMY9-15-1 Construction and Environmental Materials UBGMKD-15-1 Civil Engineering Technology and Design UBGMSQ-15-1 Engineering Graphics and Communication	None	CertHE Civil Engineering (120 credits with at least 100 credits at level 1 or above)
	└─ ϕ	Compulsory Modules	Optional Modules	Interim Awards

		UBGMV9-15-2 Structural Analysis UBGMVQ-15-2 Design of structural elements UBGMUQ-15-2 Soil Mechanics UBGMNU-30-2 Hydraulics and Engineering Applications UBGMU9-15-2 Project and Risk Management UFMFF7-15-2 Application of Mathematics for Civil and Environmental Engineering	UBGMLU-15-2 Engineering Geology Design Project <u>OR</u> UBGLX8-15-2 Transport Engineering Design <u>OR</u> UBGMTQ-15-2 Hydrology and Flood Risk Estimation	DipHE Civil Engineering 240 credits with at least 100 at level 2 and a further 120 at level 1 or above
Year Out: Students undertaking the Sandwich degree with a placement year take: UBGLVX-15-3 Placement Students who select to study through a placement are not required to study the module UBGMGR-15-3 Strategic Issues in Engineering in their final year of attendance.				
		Compulsory Modules	Optional Modules	Interim Awards
	Level 3	From 2019/20 students take: UBGMQP-30-3 Individual Civil Engineering Project UBGLY9-15-3 Infrastructure Design and Implementation Project UBGM3-15-3 Advanced Structural Analysis UBGMW9-15-3 Computational Civil Engineering UBGMWQ-15-3 Geotechnics	15 credits to be selected from Pool A and 15 credits from Pool B. <u>POOL A:</u> UBGLXP-15-3 Traffic Management and Safety <u>OR</u> UBGMX9-15-3 Hydraulic Modelling for Flood Risk Management <u>OR</u> UBGMMPD-15-3 Environmental Assessment <u>POOL B:</u> UBGLVX-15-3 Placement <u>OR</u> UBGMGR-15-3 Strategic Issues in Engineering	BEng Civil Engineering 300 credits of which at least 60 must be level 3 or above, a further 100 credits at level 2 or above and further 140 at level 1 or above. Highest Awards BEng(Hons) Civil Engineering 360 credits of which at least 100 must be level 3 or above, a further 100 credits at level 2 or above and further 140 at level 1 or above.

Part time:

The following structure diagram demonstrates the student journey from Entry through to Graduation for a typical **part time student**. **The programme is available to part-time students on a day release basis and block release basis.**

The programme is designed as a BEng Honours degree allowing students to progress to study at Masters level and hence complete the Educational requirements for Chartered Engineer status.

ENTRY		Compulsory Modules	Optional Modules	Interim Awards
		UBGMT9-15-1 Surveying UBGMY9-15-1 Construction and Environmental Materials UBGMKD-15-1 Civil Engineering Technology and Design UBGMSQ-15-1 Engineering Communication	None	CertHE Civil Engineering <i>(120 credits with at least 100 credits at level 1 or above)</i>
	Year 1 (Part Time 1.1)	Compulsory Modules	Optional Modules	Interim Awards
		UFMFYG-15-1 Mathematics for Civil and Environmental Engineering UBGMXQ-30-1 Engineering Principles for Civil Engineering UBGMYD-15-1 Environmental Engineering Field Study		
	Year 1 (Part Time 1.2)	Compulsory Modules	Optional Modules	Interim Awards
		UFMFF7-15-2 Application of Mathematics for Civil and Environmental UBGMV9-15-2 Structural Analysis UBGMVQ-15-2 Design of Structural Elements UBGMUQ-15-2 Soil Mechanics UBGMU9-15-2 Project and Risk Management		
	Year 2 (Part Time 2.1)	Compulsory Modules	Optional Modules	Interim Awards
		UFMFF7-15-2 Application of Mathematics for Civil and Environmental UBGMV9-15-2 Structural Analysis UBGMVQ-15-2 Design of Structural Elements UBGMUQ-15-2 Soil Mechanics UBGMU9-15-2 Project and Risk Management		

		Compulsory Modules	Optional Modules	Interim Awards
	Year 2 (Part Time 2.2)	UBGMMNU-30-2 Hydraulics and Engineering Applications Engineering UBGMMGR-15-3 Strategic Issues in Engineering UBGMMWQ-15-3 Geotechnics UBGMM3-15-3 Advanced Structural Analysis UBGLY9-15-3 Design and Implementation Project	UBGMLU-15-2 Engineering Geology Design Project <u>OR</u> UBGMTQ-15-2 Hydrology and Flood Risk Estimation <u>OR</u> UBGLX8-15-2 Transport Engineering Design	DipHE Civil Engineering 240 credits with at least 100 at level 2 and a further 120 at level 1 or above
	Year 3 (Part Time 3.1)	UBGMMQP-30-3 Individual Civil Engineering Project UBGMMW9-15-3 Computational Civil Engineering UBGMM3-15-3 Advanced Structural Analysis UBGMMWQ-15-3 Geotechnics	UBGMPD-15-3 Environmental Assessment <u>OR</u> UBGMMX9-15-3 Hydraulic modelling for Flood Risk Management <u>OR</u> UBGLXP-15-3 Traffic Management and Safety	BEng Civil Engineering 300 credits of which at least 60 must be level 3 or above, a further 100 credits at level 2 or above and further 140 at level 1 or above. Highest Awards BEng(Hons) Civil Engineering 360 credits of which at least 100 must be level 3 or above, a further 100 credits at level 2 or above and further 140 at level 1 or above

Part 5: Entry Requirements

The University's Standard Entry Requirements apply with the following additions/exceptions*:

All applicants for entry to the first year of the full time programme must have A-level in Mathematics or equivalent. Additionally they must meet the 'UK-SPEC' requirements for CEng accredited programmes. Candidates from Foundation Programmes within the Faculty will be accepted provided they meet the Mathematics requirement and achieve an overall grade of at least 50%.

Candidates may be admitted to Level 2.1, subjected to module mapping, with:

- Higher National Diploma (HND) in Civil Engineering (or equivalent) with at least 4 merits
- Foundation Degree in Civil Engineering (or equivalent) with a grade of at least 50%.

Candidates may be admitted to Level 1.2 with:

- Higher National Certificate (HNC) in any Construction route, with at least 4 merits, will be admitted subject to completion of pre-enrolment learning in Mathematics, Structures and Geology as appropriate.

Tariff points as appropriate for the year of entry - up to date requirements are available through the [courses database](#).

Part 6: 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
- Qualification characteristics for [Foundation degrees](#) and [Master's degrees](#)

[Strategy 2020](#)

[University policies](#)

Staff research projects

1. The programme draws on the benchmark statements in Engineering as shown in the Learning Outcomes above.
2. Faculty and University policies on teaching, learning and assessment including a strong emphasis on formative work, skills development and innovative approaches to teaching and learning.
3. The programme is underpinned by staff consultancy, professional practice and research.
4. The course team have excellent links with local employers who advise the course team on the content and structure of the programme through an Industrial Advisory Board that meets three times a year.
5. Professional body requirements: The programme (all modes of study) is to be assessed for accreditation by the Joint Board of Moderators.

