

# University of the West of Scotland

## Undergraduate Programme Specification

**Session: 2023/24**

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Status: Proposal

<b>Named Award Title:</b>	<b>BEng (Hons) Civil Engineering (Sandwich Available) Single</b>
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<b>Award Title for Each Award:</b>	<b>BEng (Hons) Civil Engineering (Sandwich Available) BEng Civil Engineering (Sandwich Available) Dip HE Engineering Cert HE Engineering Science</b>
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<b>Date of Validation:</b>	April 2019
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<b>Details of Cohorts Applies to:</b>	All students from session 2023-2024
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<b>Awarding Institution/Body:</b>	University of the West of Scotland
<b>Teaching Institution:</b>	University of the West of Scotland
<b>Language of Instruction &amp; Examination:</b>	English
<b>Award Accredited By:</b>	Joint Board of Moderators (JBM)
<b>Maximum Period of Registration:</b>	Full-time - 6 years, Part-time - 8 years
<b>Mode of Study:</b>	Full Time Part Time
<b>Campus:</b>	Paisley

<b>School:</b>	School of Computing, Engineering and Physical Sciences
<b>Programme Board</b>	Engineering
<b>Programme Leader:</b>	Dr George Papavasileiou

### Admission Criteria

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

#### SQA National Qualifications

Standard Entry Requirements: ABBB (114 UCAS Tariff points) including Maths & 1 other science from Physics, Chemistry, Biology, Human Biology or Computing Science

#### or GCE

BBC (112 UCAS Tariff points) including Maths & 1 other science from Physics, Chemistry, Biology, Human Biology or Computer Science

#### or SQA National Qualifications/Edexcel Foundation

An appropriate HNC/HND award with the level of entry and/or credit awarded being subject to the content of the HN programme.

#### Other Required Qualifications/Experience

Applicants may also be considered with other academic, vocational or professional qualifications deemed to be equivalent. We welcome applications from international students with an equivalency of qualifications.

#### Further desirable skills pre-application

## General Overview

### Aims and Objectives

- i) Develop critical, analytical problem-based learning skills and transferable skills to prepare the student for graduate employment;
- ii) Enable the student to engage in lifelong learning, study and enquiry, and to appreciate the value of education to society;
- iii) Assist the student to develop the skills required for both autonomous practices and team-working;
- iv) Develop an understanding of fundamental natural laws and their relevance to civil engineering and associated specialisations;
- v) Develop the ability to apply this understanding, in conjunction with observed information, to the solution of engineering problems;
- vi) Develop the ability to undertake engineering design, appreciating the variety of design solutions;
- vii) Develop the ability for group project work and individual project work;
- viii) Develop knowledge and appreciation of the science, engineering and properties of construction materials;
- ix) Develop interest in the art and practice of civil engineering, and the structure and management of the civil engineering industry;
- x) Create awareness of the continuing development of civil engineering and an appreciation of the need for continued study and personal and professional development throughout a career leading to Incorporated Engineer status and beyond;
- xi) Develop awareness of the procedures used for project and business management;
- xii) Develop awareness of the health and safety issues and environmental issues;
- xiii) Develop the ability to communicate clearly and concisely by means of all the recognised communication media;
- xiv) Promote an understanding of the position and responsibilities of civil engineers in society.

## GENERAL DESCRIPTION OF THE PROGRAMME

Civil engineers are concerned with the planning, design, construction and maintenance of buildings, bridges, roads, airfields, water supply, drainage and sewage, and many other projects which serve the community in its daily life. Careers for qualified civil engineers are varied, ranging from engineering design and construction in private industry to employment with nationalised industries or with the local, regional or central government.

The subjects covered in the programme are as follows :

Structural Design and Analysis  
Hydraulics and Water Engineering  
Construction Materials and Construction Techniques  
Sustainability  
Surveying  
Applied Geology, Soil Mechanics and Ground Engineering  
Highway Engineering  
Project Management

## WORKPLACE LEARNING

One of the most important aspects of the degree programme is the sandwich element which comprises a total of 36 weeks (an equivalent of 36 x 35 hours) of Workplace Learning. Field experience is also included in the programme. During the periods of Workplace Learning, students are in paid employment doing a real job in the industry. Sandwich training provides relevant experience and prepares our students in the best possible way for their future careers. We have built up a good reputation with employers in the industry over many years, both through our graduates and through the continuing contacts between us and our industrial counterparts.

## EMPLOYMENT PROSPECTS

UWS Civil Engineering graduates gain employment throughout the UK and overseas in construction companies, consulting civil engineering practices and local authorities.

## PROFESSIONAL ACCREDITATION

The BEng (Hons) degree has been accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers, and the Chartered Institution of Highways and Transportation as fully satisfying the educational base for an Incorporated Engineer (IEng) under licence from the UK regulator, the Engineering Council. See [www.jbm.org.uk](http://www.jbm.org.uk) for further information. A graduate with our BEng (Hons) degree may

progress to Chartered Engineer status after appropriate further study such as an accredited technical Masters degree, or by Chartered Professional Review (Progressive).

#### DURATION OF STUDY

Students should normally complete the BEng (Hons) Civil Engineering programme within a period of eight years part-time and six years full-time (including any resits).

The teaching and learning methods employed by staff in the delivery of the module portfolio covers a wide range of established and some novel approaches. Much of this is left to the professionalism of the staff delivering the material with traditional lectures and tutorials still forming the basis for much of the teaching within civil engineering. Extensive use is also made of laboratories, seminars, group work, independent learning and demonstrations. More use is now being made of problem-based learning materials in the teaching environment. One of the main objectives in this area is to keep teaching materials as interesting and as relevant as possible to ensure student enthusiasm for the subjects being presented. Staff make full use of all technologies when delivering material to students including high-quality notes, use of multimedia presentations and use of the internet/electronic technology. Civil engineering has a policy of using small tutorial groups in key subject areas and either sub-divides cohorts into small groups or increases staff numbers in classes or laboratories. All modules are taught by subject experts and for final year students, staff make use of materials and topics raised through their professional activities whether research or consultancy based. Many case studies and examples of applications are taken from live industrial situations. Engineering has always taken a lead in the use of IT to either deliver material or to supplement and reinforce the traditional teaching and learning approaches. Engineering has its own extensive Networks (currently running five servers) to support all of the area's activity. Students have access to 100+ high specification PC workstations in state of the art air-conditioned laboratories dedicated specifically for Engineering students. Students and staff have personal accounts for the Engineering networks with students able to gain 24-hour access to one of the area's Computing Laboratories, seven days per week. Staff use the networks to deliver materials electronically. Indeed, many modules are now supported electronically, providing notes, copies of lectures, models, sample simulations etc. The standard system for providing a VLE (Virtual Learning Environment) within the University is Moodle. This system is used mainly for the dissemination of materials and information regarding module administration. Students can also contact staff via e-mail and vice-versa. Students are supplied with staff contact details (including e-mail addresses) in the Programme handbooks. There are examples within civil engineering teaching where staff make use of the VLE to perform additional Teaching and Learning activities such as online tests and assessments. A variety of assessment methods are used throughout programmes. These range from class tests, laboratory reports, design assignments, individual and group presentations and formal examinations. In the 1st Trimester of the 1st year, assessment is by class test and coursework. This aims to build confidence in the student's ability to pass modules. Some examinations are introduced into the 2nd Trimester of the 1st year and thereafter most of the modules have a substantial examination element. Both group project work and individual project work are incorporated into the curriculum so that students develop the learning skills associated with a group and independent working as well as giving presentations on their work. Mixtures of formative and summative methods are used in the assessment of student performance within Civil Engineering. While most of the assessments are summative in nature, informal formative feedback is frequently given to students prior to the submission of summative assessments. Formative feedback and constructive comments are given on coursework submissions, and where possible this provides students with regular feedback. Anonymous marking is undertaken where possible. Honours projects and group projects are double marked.

#### Graduate Attributes, Employability & Personal Development Planning

The BEng(Hons) Civil Engineering Programme will support students to develop the following UWS graduate attributes: Academic - critical and analytical thinking, inquiring, knowledgeable, digitally literate, innovative, and problem-solving; Personal - ethically minded, creative, imaginative; Professional - research-minded and socially responsible. Some of the examples of how these attributes are developed can be found below.

Across the programme of study, the Personal Development Planning (PDP) process gives the opportunity for engagement of students with a set of core activities, which include:

- reflection on prior experience, personal attributes and goals;
- audits of skills and feedback on their development;
- opportunities and guidance on the recording of achievements;
- the identification/development of learning goals;
- opportunities to reflect on this material and to gain feedback;
- opportunities (and guidance) on presentation of evidence for different audiences and planning of future
- learning and career development (such as CVs);
- maintaining an effective PDP record.

PDP in the programme

The timetabled PDP sessions will be associated with the following core modules :

Level 7 Trimester 1 Engineering Industry  
Trimester 2 Technical Communications

Level 8 Trimester 1 Sustainable Construction

Level 9 Trimester 1 Project Management

## Trimester 2 Group Project

Level 10 Trimester 1 Civil Engineering Honours Project  
Trimester 2 Civil Engineering Honours Project

### Workplace learning

The employability skills and attributes which Students will gain experience in developing, applying and reflecting upon during the workplace learning will be those identified by The Council For Industry and Higher Education (CIHE) (2006) as the key competencies which employers value as defined below

- Cognitive skills (attention to detail, analysis and judgment)
  - o Demonstrate the use of their knowledge, understanding and skills, in both identifying and analysing problems and issues and formulating, evaluating and applying evidence-based solutions and arguments.
  - o Undertake critical analysis, evaluation and/or synthesis of ideas, concepts information and issues
  - o Identify and analyse routine professional problems and issues
  - o Draw on a range of sources in making judgments
- Generic competencies (planning & organisation, influencing, written communication, questioning, listening, teamwork, interpersonal sensitivity, organisational sensitivity and lifelong learning and development)
  - o Well developed skills for the gathering, evaluation, analysis and presentation of information, ideas, concepts and quantitative and/or qualitative data, drawing on a wide range of current sources. This will include the use of ICT as appropriate to the subject(s).
  - o Communication of the results of their own and other work accurately and reliably in a range of different contexts using the main specialist concepts, constructs and techniques of the subject(s);
  - o Identifying and addressing their own learning needs including being able to draw on a range of current research, development and professional materials;
  - o Interpreting, using and evaluating numerical and graphical data to achieve goals targets
  - o Making formal and informal presentations on standard/mainstream topics in the subject/discipline to a range of audiences
  - o Work under the guidance of qualified practitioners
  - o Practice in ways which take account of own and others' roles and responsibilities
  - o Take some responsibility for the work or others and for a range of resources
- Personal capabilities (creativity, decisiveness, initiative, adaptability/flexibility, achievement orientation, tolerance for stress and leadership)
  - o Application of their subject and transferable skills to contexts where criteria for decisions and the scope of the task may be well defined but where personal responsibility, initiative and decision-making is also required.
  - o Exercising autonomy and initiative in some activities at a professional level
- Technical ability (knowledge of key trends in modern technology and experience of using modern technology)
  - o Use of a range of IT applications to support and enhance work
- Practical and professional elements (professional expertise, process operation and image)
  - o Show familiarity and competence in the use of routine materials, practices and skills and of a few that are more specialised, advanced and complex.
  - o Practise in a range of professional-level contexts which include a degree of unpredictability;
  - o Deal with ethical and professional issues in accordance with current professional and/or ethical codes or practices, seeking guidance where appropriate

### Work Based Learning/Placement Details

The Programme includes periods of Workplace Learning from May to mid-September. If a student completes at least 36 weeks of Workplace Learning the student is eligible for the 'sandwich award' title. The academic credit given for the successful completion of the Workplace Learning is 40 additional credits.

The requirements for Workplace Learning are described in the Module Descriptor ENGG00001 Sandwich Placement: Engineering. Please refer to this Module Descriptor for further details. Students are responsible for applying for Civil Engineering jobs and these are obtained competitively, so they cannot be guaranteed. However, help and support in finding a job are provided by staff.

### Engagement

In line with the **Academic Engagement Procedure**, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time.

Where a programme has Professional, Statutory or Regulatory Body requirements these will be listed here:

Students are expected to attend all timetabled sessions and to engage with all formative and summative assessment elements of all the modules that are included in the programme specification as core modules as well as any optional

module when applicable.

## Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: [UWS Equality and Diversity Policy](#)

Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice in accordance with the University's policies and regulations. More information on the University's EDI policies can be accessed at: <https://www.uws.ac.uk/about-uws/uws-commitments/equality-diversity-inclusion/> (N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School).

## Programme structures and requirements, SCQF level, term, module name and code, credits and awards ( Chapter 1, Regulatory Framework )

### A. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Demonstrate knowledge and understanding of essential facts and principles of civil engineering, and its underpinning science and mathematics.
<b>A2</b>	Basic knowledge and understanding of the wider multidisciplinary engineering context and its underlying principles together with the commercial context and sustainability of engineering activities.
<b>A3</b>	Knowledge and understanding of the scientific principles underpinning relevant current technologies, and their evolution.
<b>A4</b>	Knowledge and understanding of mathematics necessary to support application of key engineering principles.
<b>A5</b>	Basic knowledge and understanding of the use of relevant materials, equipment and processes.
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Develop a basic knowledge, understanding and practical engineering skills acquired through work carried out in laboratories and workshops.
<b>B2</b>	Develop practical engineering skills acquired through individual and group project work.
<b>B3</b>	Basic knowledge and understanding of the use and application of technical literature and other information sources.
<b>B4</b>	Awareness of quality issues within engineering.
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Develop basic transferable skills in communication, the use of IT facilities and information retrieval skills.
<b>C2</b>	Be able to apply computer software relevant to civil engineering.
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Develop transferable skills that will be of value in problem solving.
<b>D2</b>	Be able to apply appropriate quantitative mathematics, science and engineering tools to the analysis of simple problems.
<b>Autonomy, Accountability and Working With Others</b>	

<b>E1</b>	Develop an initial understanding of the social, environmental, ethical, economic and commercial considerations affecting the exercise of engineering judgement.
<b>E2</b>	Develop transferable skills that will be of value in working with others.
<b>E3</b>	Develop basic skills in planning, self-learning and improving performance, as the foundation for lifelong learning/CPD.
<b>E4</b>	Understand the need for a high level of professional and ethical conduct in engineering.

### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	ENGG07002	Applied Engineering Science	20	✓	✓		
7	ENGG07003	Engineering Industry	20	✓			
7	ENGG07004	Technical Communications	20	✓			
7		Mathematics for Engineering 1 *	20	✓	✓		
7	ENGG07001	Engineering Mechanics	20		✓		
7	ENGG07007	Stress Strain & Struct Design	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

### Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

Footnotes

### Criteria for Progression and Award

To progress from SCQF 7 to SCQF 8 in this programme, students are normally required to obtain 120 credits at SCQF 7 from the above programme.

Refer to Regulation 3.13 regarding progression with credit deficit, note, the decision to permit a proceed with carrying is not automatic but is subject to detailed discussion at the School Board of Examiners (SBE). In the case of Civil Engineering, students may only carry 20 credits between levels.

Students obtaining 120 credits at SCQF 7, with a minimum of 100 credits from the above programme, are eligible for the exit award of the Certificate of Higher Education in Engineering Science. The award of distinction can be made to a student obtaining a certificate as stated in the University Regulations.

### B. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Demonstrate more detailed knowledge and understanding of essential facts, concepts, theories and principles of civil engineering.
<b>A2</b>	Knowledge and understanding of and ability to use relevant materials, equipment and processes.
<b>A3</b>	Develop an initial knowledge and understanding of commercial and economic context of civil engineering processes.
<b>A4</b>	Understanding of the requirement for engineering activities to promote sustainable development.
<b>Practice - Applied Knowledge and Understanding</b>	

<b>B1</b>	Develop knowledge, understanding and practical civil engineering skills acquired through individual and group project work and through design work.
<b>B2</b>	Knowledge and understanding of laboratory and workshop practice and construction processes.
<b>B3</b>	Awareness of quality issues and their application to continuous improvement.
<b>B4</b>	Understanding use and application of technical literature and other information sources
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Possess practical civil engineering skills acquired through the use of computer software.
<b>C2</b>	Possess transferable skills in communication, the use of IT facilities and information retrieval skills.
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Be able to apply appropriate quantitative science and engineering tools to the analysis of basic civil engineering problems.
<b>D2</b>	Ability to monitor, interpret and apply the results of analysis.
<b>D3</b>	Ability to apply basic quantitative methods relevant to civil engineering problems.
<b>D4</b>	Ability to define a problem and identify constraints.
<b>D5</b>	Introduce the use of appropriate codes of practice and industry standards.
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Possess transferable skills that will be of value in working with others
<b>E2</b>	Develop skills in planning, self-learning and improving performance, as the foundation for lifelong learning/CPD.
<b>E3</b>	Develop an appreciation of the social, environmental, ethical, economic and commercial considerations affecting the exercise of engineering judgement.
<b>E4</b>	Develop an awareness of the framework of relevant legal requirements governing civil engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.

### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	ENGG08011	Design of Structural Elements	20	✓			
8	ENGG08013	Sustainable Construction	20	✓			
8	MATH08001	Mathematics For Design	20	✓			
8	ENGG08012	Hydraulics	20		✓		
8	ENGG08016	Civil Engineering Materials	20		✓		
8	ENGG08015	Digital Surveying & Field Experience	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

### Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

Footnotes

### Criteria for Progression and Award

To progress from SCQF 8 to SCQF 9 in this programme, students are normally required to obtain 240 credits, of which 120 credits are at SCQF 8 from the above programme.

Refer to Regulation 3.13 regarding progression with credit deficit, note, the decision to permit a proceed with carrying is not automatic but is subject to detailed discussion at the School Board of Examiners. In the case of Civil Engineering, students may only carry 20 credits between levels.

Students obtaining 240 credits of which a minimum of 100 are at SCQF 8 or above from the programme are eligible for the exit award of the Diploma of Higher Education in Engineering. The award of distinction can be made to a student obtaining a diploma as stated in the University Regulations.

**C. Learning Outcomes (Maximum of 5 per heading)**

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Demonstrate broad, integrated and detailed knowledge and critical understanding of essential facts, concepts, theories and principles of civil engineering.
<b>A2</b>	Knowledge and understanding of the wider multidisciplinary engineering context and its underlying principles.
<b>A3</b>	Knowledge and understanding of the social, environmental, ethical, economic and commercial considerations affecting the exercise of engineering judgement.
<b>A4</b>	Knowledge of management techniques, which may be used to achieve engineering objectives within civil engineering.
<b>A5</b>	Demonstrate the capacity to critically reflect on the nature of workplace learning from a personal perspective.
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Be able to comprehend the broad picture and thus work with an appropriate level of design detail.
<b>B2</b>	Possess detailed knowledge, understanding and practical civil engineering skills acquired through work carried out in laboratories, through individual and group project work, through design work and through Workplace Learning.
<b>B3</b>	Use creativity and innovation in a civil engineering context.
<b>B4</b>	Relate elements of the work experience to themes and issues of academic study relevant to the programme of study and the student's prior experience.
<b>B5</b>	Demonstrate an awareness and understanding of organisational structures and employee roles in an applied setting.
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Broaden civil engineering skills acquired through use of computer software in design and analysis.
<b>C2</b>	Ability to apply computer software to solve civil engineering problems.
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Be able to demonstrate creative and innovative ability in the synthesis of solutions.
<b>D2</b>	Be able to monitor, interpret and apply the results of analysis and modelling in order to solve civil engineering problems, apply technology and implement engineering design.
<b>D3</b>	Be able to apply a systems approach to civil engineering problems through know-how of the application of the relevant technologies.
<b>D4</b>	Be able to define a design problem, identify constraints and design solutions according to customer and user needs.
<b>D5</b>	Be able to use appropriate design codes of practice and industry standards and ensure fitness for purpose for a design.
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Possess skills in planning self-learning and improving performance, as the foundation for lifelong learning/CPD.
<b>E2</b>	Work with others to develop civil engineering solutions.
<b>E3</b>	Understanding of the framework of relevant legal requirements governing civil engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.
<b>E4</b>	Outline the importance of working relationships and interpersonal skills in attaining the objectives of the employer.



## Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	ENGG09004	Project Management	20	✓			
9	ENGG09013	Structural Engineering 1	20	✓			
9	ENGG09014	Water Resources Engineering	20	✓			
9	ENGG09016	Applied Soil Mechanics	20		✓		
9	ENGG09015	Construction & Structural Engineering 2	20		✓		
9	ENGG09017	Group Project - Interact	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

## Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

Footnotes

## Criteria for Progression and Award

To progress from SCQF 9 to SCQF 10 in this programme, students are normally required to obtain 360 credits of which 120 credits are at SCQF 9 from the above programme.

Students obtaining 360 credits of which 120 credits are at SCQF 9 from the above programme are eligible for the exit award of BEng Civil Engineering.

### BSc Civil Engineering

Students who would like to obtain the exit award of BSc Civil Engineering should discuss a suitable selection of modules with Civil Engineering staff. The exit award of BSc Civil Engineering allows a wider selection of modules as follows:

#### Core Modules

SCQF Level 9, ENGG09013, Structural Engineering 1, 20 Credit, Trimester 1

SCQF Level 9, ENGG09018, Independent Study, 20 Credit, Trimester 2

#### Optional Modules

SCQF Level 9, ENGG09004, Project Management, 20 Credit, Trimester 1

SCQF Level 9, ENGG09014, Water Resources Engineering, 20 Credit, Trimester 1

SCQF Level 9, ENGG09016, Applied Soil Mechanics, 20 Credit, Trimester 2

SCQF Level 9, ENGG09015, Construction & Structural Engineering 2, 20 Credit, Trimester 2

SCQF Level 9, ENGG09017, Group Project - Interact, 20 Credit, Trimester 2

A maximum of two Level 10 modules can be chosen from:

SCQF Level 10, ENGG10014, Ground & Highway Engineering, 20 Credit, Trimester 1

SCQF Level 10, ENGG10013, Structural Engineering 3, 20 Credit, Trimester 1

SCQF Level 10, ENGG10016, Advanced Construction Materials, 20 Credit, Trimester 2

SCQF Level 10, ENGG10015, Modern Practice in Construction Management, 20 Credit, Trimester 2

Students obtaining 360 credits, of which a minimum of 100 credits are at SCQF 9 or 10 from the above list, are eligible for the exit award of BSc Civil Engineering.

Students obtaining 360 credits with a minimum of 100 credits at SCQF 9 or above, 300 credits being in Engineering, and not as laid out above, may be entitled to exit with BSc Engineering, at the discretion of the SBE.

The award of distinction can be made to a student obtaining a pass degree as stated in the University Regulations.

To be eligible for the Award in the sandwich mode students must satisfy the Workplace Learning requirements as specified in Section 29. Students who have satisfied the requirements for a Sandwich Award will graduate in that rather than in the full-time mode.

## D. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<b>Knowledge and Understanding</b>	
<b>A1</b>	Knowledge that integrates the principal areas of civil engineering.
<b>A2</b>	Detailed knowledge and critical understanding of some more advanced aspects of civil engineering.
<b>A3</b>	Detailed knowledge and understanding of the wider multidisciplinary engineering context.
<b>Practice - Applied Knowledge and Understanding</b>	
<b>B1</b>	Detailed knowledge and understanding of contexts in which engineering knowledge can be applied.
<b>B2</b>	Possess a broad range of practical engineering skills acquired through individual and group project work, through design work and in the development and use of computer software in design and analysis.
<b>B3</b>	Use creativity and innovation in a multi-disciplinary design team.
<b>B4</b>	Understanding and application of the use of technical literature and other information sources.
<b>B5</b>	Execute a defined project of research, development or investigation.
<b>Communication, ICT and Numeracy Skills</b>	
<b>C1</b>	Possess a range of practical civil engineering skills acquired through design work and in the development and use of computer software in design and analysis.
<b>C2</b>	Ability to apply computer software in order to solve more complex civil engineering problems.
<b>C3</b>	Make formal presentation about a specialized topic to peers and academic staff.
<b>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</b>	
<b>D1</b>	Be able to demonstrate creative and innovative ability in the synthesis of civil engineering solutions and to apply appropriate quantitative methods to the critical analysis and solution of problems.
<b>D2</b>	Investigate and define a design problem and identify constraints including environmental and sustainability limitations, health and safety and risk assessment issues.
<b>D3</b>	Be able to understand design needs and the importance of considerations such as aesthetics.
<b>D4</b>	Understanding of appropriate design codes of practice and industry standards and ensure fitness for purpose for all aspects of the design.
<b>Autonomy, Accountability and Working With Others</b>	
<b>E1</b>	Take significant responsibility for individual project work.
<b>E2</b>	Work effectively under guidance in a peer relationship with academic staff

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	ENGG10014	Ground and Highway Engineering	20	✓			
10	ENGG10012	Civil Engineering Honours Project	40	✓	✓		
10	ENGG10013	Structural Engineering 3	20	✓			
10	ENGG10015	Modern Practice in Construction Management	20		✓		
10	ENGG10016	Adv Construction Materials	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

#### Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

\* Indicates that module descriptor is not published.

Footnotes

### Criteria for Award

To be eligible for the award of BEng Honours degree a candidate must hold 480 credits, including 120 at SCQF 10 from the above programme.

Students who have satisfied the requirements for a Sandwich Award (as stated in section 29) will graduate in that rather than in the full-time mode.

The Classification of Honours will be determined by University Regulation 3.20-3.24.

### Regulations of Assessment

Candidates will be bound by the general assessment regulations of the University as specified in the [University Regulatory Framework](#).

An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.

To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.

### Combined Studies

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for an exit award of CertHE / DipHE or BA / BSc in Combined Studies.

For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.

For students studying BEng or BSc awards, the award will be BSc Combined Studies.

### Changes

#### Changes made to the programme since it was last published:

v1.15

Admissions criteria updated to reflect current requirements.

Engagement text updated to reflect current institutional position.

EDI text updated to reflect current institutional position.

Level 7

Mathematics for Engineering 1 (T1 & T2) added in lieu of Engineering Mathematics 1 (T1) & 2 (T2).

Level 8

Hydraulics moved to T2 from T1, Sustainable Construction moved to T1 from T2.

V 1.11

The maximum period of registration was stated.

Wording to the progression requirements from L7 to L8 has been amended.

The structure of L8 has been changed to include the new 20-credit modules Mathematics for Design (MATH08001) replacing withdrawn Industrial Studies (ENGG08014).

Additional modules from Level 9 were approved to be delivered in the Hong Kong College of Engineering (HKCE).

V.1.12

In regards to the name of the accreditation body, only the 'Joint Board of Moderators' is used without listing all of the members' institutions.

In Section 20 'Other requirements' part was updated as follows:

'Applicants may also be considered with other academic, vocational or professional qualifications deemed to be equivalent. We welcome applications from international students with an equivalency of qualifications.'

Development of the UWS Graduate Attributes is clearly identified in the Programme Spec.

References to the University regulations were updated.

All of the references to the suspended Civil Engineering programme delivered in Hong Kong College of Engineering (HKCE) were removed.

References to the Progression and the Award Board (PAB) were replaced by the School Board of Examiners (SBE).

V.1.14

The Programme Leader was changed to Dr George Papavasileiou

The delivery terms were updated to T1 and T2 for the proposed module ENGG07002 Applied Engineering Science.

