

University of the West of Scotland
Undergraduate Programme Specification

Session: 2024/25

1	Named Award Title:	BEng (Hons) GA Civil Engineering Single	
2	Award Title for Each Award: ¹	BEng (Hons) GA Civil Engineering BEng GA Civil Engineering BSc Civil Engineering Dip HE Engineering Cert HE Engineering	
3	Date of Validation / Approval:	April 2018	
4	Details of Cohorts Applies to:	All students from session 2024-2025	
5	Awarding Institution/Body:	University of the West of Scotland	
6	Teaching Institution(s)²:	University of the West of Scotland	
7	Language of Instruction & Examination:	English	
8	Award Accredited By:	Joint Board of Moderators (JBM)	
9a	Maximum Period of Registration:	Full-time - 6 years <u>Authorised Interruption Guidance notes (uws.ac.uk)</u>	
9b	Duration of Study:	Full Time – 4 years	
10	Mode of Study:	Full-time	
11	Campus:	Paisley	
12	School:	School of Computing, Engineering and Physical Sciences	
13	Programme Board:	Engineering	
14	Programme Leader:	Dr Ashwini Konanahalli	

15. 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:

¹ Include main award and all exit awards e.g. BA / BSc / BEng / DipHE / CertHE

² University of the West of Scotland and include any collaborative partner institutions involved in delivery.

Standard Entry Requirements: BCCC (90 UCAS Tariff points) including Higher Mathematics, plus SQA National 5 Physics (Grade B, or above).

Minimum Entry Requirements: CCCC (84 UCAS Tariff points) including Mathematics, plus National 5 Physics at B.

or GCE

CCD (88 UCAS Tarriff Points) including Maths and Physics.

or SQA National Qualifications/Edexcel Foundation

An appropriate Foundation Apprenticeship, Modern Apprenticeship or HNC/D award with the level of entry and/or credit awarded being subject to the content of the programme.

For Advanced Entry apprentices are required to have completed a relevant MA or have a minimum of 1 year of sector specific work experience at a level equivalent to the point of entry.

Other Required Qualifications/Experience

Considering the relevance of the programmes to industry, applicants can apply for admission based on Accreditation of Prior Learning / Accreditation of Prior Experiential Learning in accordance with the University's RPL guidelines.

Further desirable skills pre-application (i.e. to satisfy additional PSRB requirements or other)

It is a requirement that the applicant is employed by a company able and committed to supporting the Work Based aspects of the programme and has the right to live and work in Scotland.

16

General Overview

The BEng (Hons) GA Civil Engineering programme covers broad-based civil engineering subjects to equip students with knowledge and skills to plan, design and implement major civil engineering projects.

The degree is accredited by the Joint Board of Moderators (JBM) comprising the Institution of Civil Engineers, Institution of Structural Engineers, Institute of Highway Engineers, the Chartered Institution of Highways and Transportation and the Permanent Way Institution on behalf of the Engineering Council for the purposes of partially meeting the academic requirement for registration as a Chartered Engineer (CEng). Candidates must hold a master's or doctorate accredited as further learning for CEng to hold accredited qualifications for CEng registration. See www.jbm.org.uk for further information and details of Further Learning programmes for CEng.

One of the most important aspects of the Graduate Apprenticeship (GA) programme is the mode of learning being Work-Based. GA combines academic learning with real-time practical experience in the workplace, the GA programme will deliver industry-relevant skills and qualifications. GAs are developed in collaboration with employers and Skills Development Scotland Civil Engineering framework to ensure that the learning is relevant to industry and that apprentices can apply their learning in the workplace immediately. GA could provide apprentices with good means for skills development and career progression within their organisation. A third of the programme is delivered through WBL mode where the learning is dictated by the apprentice's work activities.

All Graduate Apprenticeship (GA) degrees require that applicants are employed in a relevant role in Scotland, and they have the right to live and work in Scotland. The course focuses on cultivating professional development skills in project management, enquiry-based research, and problem-based learning. As such, the programme is aligned with the Engineering Council's AHEP4 learning outcomes.

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.

A variety of assessment methods are used throughout the programme. These range from class tests, laboratory reports, design assignments, individual and group presentations and formal examinations. Both group project work and individual project work are incorporated into the curriculum to allow students to develop the learning skills associated with a group and independent working as well as giving presentations on their work. Mixtures of formative

	<p>and summative methods are used in the assessment of student performance within Civil Engineering. A VLE (Virtual Learning Environment) system is used for the dissemination of materials, assessments and information regarding modules in the course.</p> <p>While most of the assessments are summative in nature, informal formative feedback is frequently provided to the 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. Applied Research projects and group projects are double marked.</p>
17	<p>Graduate Attributes, Employability & Personal Development Planning</p>
	<p>UWS' Graduate Attributes focus on academic, personal and professional skills and throughout the programmes that these skills develop graduates who are universally prepared, work-ready and successful. The Civil Engineering Graduate Apprenticeship programme provides opportunities throughout the levels to enable these skills to be developed and focussed appropriately.</p> <p>The apprentices on this programme will all be in relevant employment therefore the programme will build on their existing employability skills.</p> <p>The Graduate Apprentices (GAs) will be productive members of their companies from an early stage. Their learning will be embedded with their workplace activities and their learning and skills are applied in a professional environment right from day one.</p> <p>As the GA progresses through the course, they will gain a higher level of understanding of academic learning in a workplace environment. Their learning will be applied to their workplace environment rather than theoretical or artificial.</p> <p>The GA will develop their critical thinking skills, creativity and leadership skills within the workplace environment. It is expected that they will become change agents.</p> <p>The GAs will be able to reflect on their work and develop their skills through their workplace experiences. GAs will have the confidence and qualifications needed to succeed when they graduate and beyond. GAs will be uniquely placed to integrate their academic skills, knowledge and practice with workplace practice. GAs will be fully billable professionals, integrated into the professional environment on graduation. GAs will have an understanding of the broader profession.</p> <p>The programme offers a thorough grounding in principles of civil engineering and develops the lifelong learning skills that apprentices will need to stay abreast of the rapidly evolving technologies in engineering.</p> <p>Every apprentice will have an academic/link tutor and workplace mentor to support them. The apprentice will have regular meetings with their academic/link tutor and mentor to discuss their progress including issues relating to PDP as well as their development goals and aspirations.</p> <p>There are work-based learning modules at each level of the programme which encourage the apprentice to reflect on their personal development and they are expected to use an e-portfolio to record their PDP.</p>

	<p>Civil Engineering knowledge is assembled throughout the programme and wherever possible digital literacy skills and ability to provide effective solutions is enhanced utilising industry standard appropriate technologies.</p> <p>The programme promotes cultural awareness and emotional intelligence with a variety of group exercises developing resilient, ambitious and enterprising leadership qualities whilst ensuring that group members are emotionally, and culturally aware and respectful communication and behaviours are the norm.</p> <p>Commercial awareness is embedded through group activities ensuring that costs associated with staff, materials, construction, maintenance and decommissioning are considered when developing transformational/innovative solutions with commercial potential.</p> <p>Ethical awareness and social responsibility is developed throughout and is formalised in final year project studies where School/University ethical approval is sought if required.</p> <p>Links to current University and programme research are promoted through the programme with opportunities for students to become involved in aspects of the research from the earliest opportunity either discretely or as part of an assessment.</p> <p>PDP and Employability</p> <p>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;</p> <ul style="list-style-type: none"> - 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. <p>The school has set up a group to co-ordinate and improve the effectiveness of the delivery of PDP and students are encouraged to maintain an effective PDP record using e-portfolios.</p>
18	<p>Work Based Learning/Placement Details</p>
	<p>Work Based Learning (WBL) is central to the delivery of the GA programme to ensure the alignment to the employer's needs as well as the personal development needs of the apprentice. There is a 40-credit WBL module at each level. The WBL modules ensure that the content being delivered is contextualised in the workplace in order to maximise the impact of learning for the benefit of both the company and the student. Moreover, students will be encouraged to think about their learning in the context of the workplace throughout the programme. 'Learning in a context' is the ethos of the GA programme. In addition, many University delivered core modules will include some elements of Work based Assessment. Each employer will have different capabilities in supporting the broad range of WBL opportunities, but it is anticipated that apprentices in an organisation may undertake most of their learning and assessment in the workplace. It has to be noted that a Project-Based Learning (PBL) approach will be emphasised throughout the programme</p>

	to enable students to gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge.
19	Attendance and Engagement
	<p>In line with the <u>Student Attendance and Engagement Procedure</u>, 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 VLE, and complete assessments and submit these on time.</p> <p>For the purposes of this programme, academic engagement equates to the following:</p> <p>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.</p>
20	Equality and Diversity
	<p>The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: <u>UWS Equality, Diversity and Human Rights Code</u>.</p> <p>Please detail any specific arrangements for this programme. This should be considered and not just refer the reader to the UWS Equality and Diversity policy.</p> <p>Aligned with the University's commitment to equality and diversity, this programme 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 programme 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).</p>

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

21	Learning Outcomes (Maximum of 5 per heading)
	<p>Outcomes should incorporate those applicable in the relevant QAA Benchmark statements.</p> <p>Please ensure that Learning Outcomes are appropriate for the level of study. Further information is available via SCQF: https://scqf.org.uk/support/support-for-educators-and-advisers/support-for-colleges-heis/ and a Level Descriptors tool is available (<u>SCQF Level Descriptors Tool Scottish Credit and Qualifications Framework</u>) and ensure appropriate cognisance of Chapter 1, Regulatory Framework. https://www.uws.ac.uk/media/6514/regulatory-framework-2023-2024.pdf</p>

SCQF LEVEL 7 Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Demonstrate knowledge and understanding of essential facts and principles of civil engineering, and its underpinning science and mathematics.
A2	Basic knowledge and understanding of the wider multidisciplinary engineering context and its underlying principles together with the commercial context and sustainability of engineering activities.
A3	Knowledge and understanding of the scientific principles underpinning relevant current technologies, and their evolution.
A4	Knowledge and understanding of mathematics necessary to support application of key engineering principles.
A5	Basic knowledge and understanding of the use of relevant materials, equipment and processes. In addition to basic knowledge of occupational health and safety, innovation, and sustainability.
Practice - Applied Knowledge and Understanding	
B1	Develop a basic knowledge, understanding and practical engineering skills acquired through work carried out in laboratories and workshops.
B2	Develop practical engineering skills acquired through individual and group project work.
B3	Basic knowledge and understanding of the use and application of technical literature and other information sources.
B4	Awareness of quality, performance, and occupational health & safety issues within engineering.
Communication, ICT and Numeracy Skills	
C1	Develop basic transferable skills in communication, the use of IT facilities and information retrieval skills.
C2	Be able to apply computer software relevant to civil engineering.
C3	Develop an understanding of emerging digital technologies to support learning and industry practice.
C4	Develop professional presentation skills.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Develop transferable skills that will be of value in problem solving.
D2	Be able to apply appropriate quantitative mathematics, science and engineering tools to the analysis of simple problems.

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

Learning Outcomes - Level 7 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	ENGG07004	Technical Communications	20	✓			
7	MATH07011	Applied Mathematics 1	20	✓			
7	ENGG07001	Engineering Mechanics	20		✓		
7	ENGG07002	Applied Engineering Science	20		✓		
7	ENGG07017	WBL1: Introduction to Engineering	40	✓	✓		

Footnotes for Core Modules:

N/A

Learning Outcomes - Level 7 Optional Modules

22 a	Level 7 Criteria for Progression and Award
	<p>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.</p> <p>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.</p>

	<p>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.</p> <p>Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.35 & 3.26)</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
--	---

Level 8 Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Demonstrate more detailed knowledge and understanding of essential facts, concepts, theories and principles of civil engineering.
A2	Knowledge and understanding of and ability to use relevant materials, equipment and processes.
A3	Develop an initial knowledge and understanding of commercial and economic context of civil engineering processes.
A4	Understanding of the requirement for engineering activities to promote sustainable development, occupational health and safety, and innovation.
Practice - Applied Knowledge and Understanding	
B1	Develop knowledge, understanding and practical civil engineering skills acquired through individual and group project work and through design work.
B2	Knowledge and understanding of laboratory and workshop practice and construction processes.
B3	Awareness of quality issues and their application to continuous improvement.
B4	Understanding use and application of technical literature and other information sources
Communication, ICT and Numeracy Skills	
C1	Possess practical civil engineering skills acquired through the use of computer software.
C2	Possess transferable skills in communication, the use of IT facilities and information retrieval skills.
C3	Possess skills in emerging digital technologies.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Be able to apply appropriate quantitative science and engineering tools to the analysis of basic civil engineering problems.

D2	Ability to monitor, interpret and apply the results of analysis
D3	Ability to apply basic quantitative methods relevant to civil engineering problems.
D4	Ability to define a problem and identify constraints.
D5	Introduce the use of appropriate codes of practice and industry standards.
Autonomy, Accountability and Working With Others	
E1	Possess transferable skills that will be of value in working with others.
E2	Develop skills in planning, self-learning and improving performance, as the foundation for lifelong learning/CPD.
E3	Develop an appreciation of the social, environmental, ethical, economic and commercial considerations affecting the exercise of engineering judgement.
E4	Develop an awareness of the framework of relevant legal requirements governing civil engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.

Learning Outcomes - Level 8 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	ENGG08011	Design of Structural Elements	20	✓			
8	MATH08001	Mathematics for Design	20	✓			
8	ENGG08012	Hydraulics	20		✓		
8	ENGG08016	Civil Engineering Materials	20		✓		
8	WRKB08001	WBL 2 - Work based Learning (40 Point)	40	✓	✓		

Footnotes for Core Modules:

N/A

22b	Level 8 Criteria for Progression and Award
	Refer to Guidance note.

	<p>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.</p> <p>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.</p> <p>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.</p> <p>Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.35 & 3.26)</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
--	---

SCQF LEVEL 9 Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Demonstrate broad, integrated and detailed knowledge and critical understanding of essential facts, concepts, theories and principles of civil engineering.
A2	Knowledge and understanding of the wider multidisciplinary engineering context and its underlying principles.
A3	Knowledge and understanding of the social, environmental, ethical, economic and commercial considerations affecting the exercise of engineering judgement.
A4	Knowledge of management techniques, which may be used to achieve engineering objectives within civil engineering.
A5	Demonstrate the capacity to critically reflect on the nature of workplace learning from a personal perspective.
Practice - Applied Knowledge and Understanding	
B1	Be able to comprehend the broad picture and thus work with an appropriate level of design detail.
B2	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.
B3	Use creativity and innovation in a civil engineering context.
B4	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.
B5	Demonstrate an awareness and understanding of organisational structures and employee roles in an applied setting.
Communication, ICT and Numeracy Skills	

C1	Broaden civil engineering skills acquired through use of computer software in design and analysis.
C2	Ability to apply computer software to solve civil engineering problems.
C3	Advanced specialised skills in support of established practices.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Be able to demonstrate creative and innovative ability in the synthesis of solutions through critical analysis
D2	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.
D3	Be able to apply a systems approach to civil engineering problems through know-how of the application of the relevant technologies.
D4	Be able to define a design problem, identify constraints and design solutions according to customer and user needs.
D5	Be able to use appropriate design codes of practice and industry standards and ensure fitness for purpose for a design.
Autonomy, Accountability and Working With Others	
E1	Possess skills in planning self-learning and improving performance, as the foundation for lifelong learning/CPD.
E2	Work with others to develop civil engineering solutions.
E3	Understanding of the framework of relevant legal requirements governing civil engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.
E4	Outline the importance of working relationships and interpersonal skills in attaining the objectives of the employer.

Learning Outcomes - Level 9 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	ENGG09013	Structural Engineering 1	20	✓			
9	ENGG09014	Water Resources Engineering	20	✓			
9	ENGG09016	Applied Soil Mechanics	20		✓		
9	GRLA09010	GA- Group Project	20		✓		
9	ENGG09050	WBL 3: Project Management	40	✓	✓		

Footnotes for Core Modules:

N/A

Learning Outcomes - Level 9 Optional Modules

22c	Level 9 Criteria for Progression and Award
	<p>Refer to Guidance note.</p> <p>Criteria for Progression and Award</p> <p>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.</p> <p>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.</p> <p>BSc Civil Engineering</p> <p>Students who are not eligible for the BEng may be able to obtain the exit award of BSc Civil Engineering and 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:</p> <p>Core Modules: SCQF Level 9, ENGG09013, Structural Engineering 1, 20 Credit, Trimester 1 SCQF Level 9, ENGG09018, Independent Study, 20 Credit, Trimester 2</p> <p>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, ENGG09050, WBL3- Project Management, 40 Credit, Trimester 1 and 2 SCQF Level 9, GRLA09010, GA - Group Project, 20 Credit, Trimester 2</p> <p>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, ENGG10041 GA-Structural Engineering 2, 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.</p> <p>Students obtaining 360 credits, of which 120 credits are from the above list, are eligible for the exit award of BSc Civil Engineering.</p> <p>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.</p>

	<p>Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.35 & 3.26)</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
--	---

SCQF LEVEL 10 Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Knowledge that integrates the principal areas of civil engineering.
A2	Detailed knowledge and critical understanding of some more advanced aspects of civil engineering.
A3	Detailed knowledge and critical understanding of the wider multidisciplinary engineering context.
Practice - Applied Knowledge and Understanding	
B1	Detailed knowledge and understanding of contexts in which engineering knowledge can be applied.
B2	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.
B3	Use creativity and innovation in a multi-disciplinary design team.
B4	Understanding and application of the use of technical literature and other information sources.
B5	Execute a defined project of research, development or investigation.
Communication, ICT and Numeracy Skills	
C1	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
C2	Ability to apply computer software in order to solve more complex civil engineering problems.
C3	Make formal presentation about a specialized topic to peers and academic staff.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	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.

D2	Investigate and define a design problem and identify constraints including environmental and sustainability limitations, health and safety and risk assessment issues.
D3	Critical understanding of design needs and the importance of considerations such as aesthetics.
D4	Understanding of appropriate design codes of practice and industry standards and ensure fitness for purpose for all aspects of the design.
Autonomy, Accountability and Working With Others	
E1	Take significant responsibility for individual project work.
E2	Work effectively under guidance in a peer relationship with academic staff.

Learning Outcomes - Level 10 Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	ENGG10014	Ground and Highway Engineering	20	✓			
10	ENGG10041	GA-Structural Engineering 2	20	✓			
10	ENGG10015	Modern Practices in Construction Management	20		✓		
10	ENGG10016	Advanced Construction Materials	20		✓		
10	ENGG10042	WBL 4 - Applied research project	40	✓	✓		

Footnotes for Core Modules:

WBL 4 is a long and thin module that relates to an applied research topic that **MUST** be of relevance to the apprentice's employer.

22d	Level 10 Criteria for Award (<i>normal UG – delete as applicable</i>) OR Criteria for Progression and Award (<i>Integrated Masters Only – delete as applicable</i>)
	Refer to Guidance note. To be eligible for the award of BEng (Hons) GA Civil Engineering degree a candidate must hold 480 credits, including 120 at SCQF 10 from the above programme.

	<p>No Distinction is awarded at Honours level (Regulation 3.25).</p> <p>The Classification of Honours will be determined by University Regulation 3.20-3.24.</p> <p>Links: UWS Regulatory Framework; and Student Experience Policy Statement.</p>
--	---

23	Regulations of Assessment
<p>Candidates will be bound by the general assessment regulations of the University as specified in the University Regulatory Framework .</p> <p>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.</p> <p>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.</p>	

24	Combined Studies
<p>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 a Combined Studies award (please see Regulation 1.61).</p> <p>For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.</p> <p>For students studying BEng or BSc awards, the award will be BSc Combined Studies.</p>	

Change/Version Control

Changes made to the programme since it was last published:

What	When	Who
<p><u>Updated Links:</u></p> <ul style="list-style-type: none"> • Academic Engagement Procedure • Equality and Diversity • University Regulatory Framework • Removed invalid links 	19/10/2023	C Winter
Guidance Note 2023-24 provided	12/12/23	D Taylor
General housekeeping to text across sections and addition of	12/12/23	D Taylor

links and some specific guidance.		
Addition of Duration of Study and some other text – for CMA.		

Version Number: UG 1 (2023-24)

- Changes made to the wordings of Level 7, 8, 9, and 10 outcomes. The changes are to incorporate the following learning themes: Occupational health, safety, sustainability, and innovation.

- Changes include, Programme Leader; Amendment to Level 8 Le. Replaced WBL2: Digital Surveying and Sustainability (ENGG08034) with Work based Learning 2 (WRKB08001); Amendments to Level 9 - Changed Negotiated Learning from Core module to Optional Module. A new module GA-Group Project has been introduced which is listed as recommended option (This amendment will offer students choice between two optional modules - GRLA09008: Negotiated Learning 3 and GA-Group Project); Also, some specific terminology listing digital tools like AR, VR, thermography, drone surveying, and cloud computing has been removed. Broader/generic terminology like 'digital tools' is retained.

Changes made 21/04/21 include;

LEVEL 8

Replace ENGG08033 GA-Structural Design with ENGG08011 Design of Structural Elements
 Replace ENGG08031 GA-Hydraulics with ENGG08012 Hydraulics.

Replace ENGG08032 GA- Civil Engineering Materials module with ENGG08016 Civil Engineering Materials module. This will change the Assessment schedule from 100% Coursework to 50% Examination and 50% Coursework and update the Learning Outcomes

LEVEL 9

Replace ENGG09044 GA-Structural Engineering 1 with ENGG09013 Structural Engineering 1.

Replace ENGG09045 GA- Water Resources Engineering with ENGG09014 Water Resources Engineering

Replace ENGG09043 GA - Applied Soil Mechanics with ENGG09016 Applied Soil Mechanics. This will change the Assessment schedule from 100% Coursework to 60% Examination and 40% Coursework and update the Learning Outcomes. LEVEL10

Replace ENGG10040 GA- Ground and Highway Engineering with ENGG10014 Ground and Highway Engineering.

Align ENGG10041 GA - Structural Engineering 2 with ENGG10013 Structural Engineering 3. This will change the Assessment schedule from 100% Coursework to 60% Examination and 40% Coursework and update the Learning Outcomes. Replace ENGG10039 GA- Construction Management with ENGG10015 Modern Practice in Construction Management. This will change the Assessment schedule from 100% Coursework to 60% Examination and 40% Coursework and update the Learning Outcomes.

Replace ENGG10043 GA-Advanced Construction Materials with ENGG10016 Adv Construction Materials. This will change the Assessment schedule from 100% Coursework to 60% Examination and 40% Coursework and update Learning outcomes Replaced GA-Introduction to Engineering Design with ENGG07002 Applied Engineering Science and ENGG07001 Engineering Mechanics.

V1.06

GRLA07005 GA-Mathematics for Engineering 1 (20 Credits) replaced with MATH07006 Engineering Mathematics 1 (10 Credits) and, MATH07007 Engineering Mathematics 2. GRLA07006 GA-Technical Communication (20 Credits) replaced with ENGG07004 Technical Communication (20 Credits).

JBM Accreditation is updated.

V1.07

Information on Exit award for Level 9 specified.

Version Number: 1.08 19/07/24

Section 15 - Admissions Criteria updated to reflect the current standard entry qualifications for 2025.

(New Module Code) Applied Mathematics 1 (T1) replaces MATH07010-Mathematics for Engineering (T1 & T2).

ENGG07002 Applied Engineering Science delivery changed to T2 was T1 & T2.

Programme description is updated, along with graduate attributes.

Minimum credit requirement for BSc Engineering exit award is updated.