Programme Specification Proforma Document

GLASGOW CALEDONIAN UNIVERSITY

Programme Specification Pro-forma (PSP)

1.	GENERAL INFORMATION	
1.	**Programme Title:**	Graduate Apprenticeship in BSc (Hons) Civil Engineering (Environmental Civil Engineering)
2.	**Final Award:**	BSc (Hons) Environmental Civil Engineering (Graduate Apprenticeship)
3.	**Exit Awards:**	BSc Environmental Civil Engineering (Graduate Apprenticeship) DipHE Environmental Civil Engineering CertHE Environmental Civil Engineering
4.	**Awarding Body:**	Glasgow Caledonian University
5.	**Approval Date:**	June 2018
6.	**School:**	School of Computing, Engineering and Built Environment
7.	**Host Department:**	Department of Civil Engineering and Environmental Management
8.	**UCAS Code:**	H220
9.	**PSB Involvement:**	JBM – Joint Board of Moderators (ICE, IStructE, IHE, CIHT
10.	**Place of Delivery:**	Glasgow
11.	**Subject Benchmark Statement:**	QAA Benchmarking Statements for Engineering, UKSpec (AHEP 3rd ed)
12.	**Dates of PSP Preparation/Revision:**	November 2021

2. EDUCATIONAL AIMS OF THE PROGRAMME

2.1 Programme Philosophy

To produce multi-disciplinary professional Graduate Apprentice (GA) engineers with a bias toward environmental civil engineering, who have the required knowledge and understanding of specific civil engineering principles, integrated with an understanding of civil engineering, design, construction and business, reinforced with good personal, inter-personal, team-working and project management skills, to enable them to perform effectively in any appropriate environment. This will be reinforced through significant formal integration of Work-Based Learning opportunities and Academic Assessment as negotiated with employers at each level.

2.2 General Aims of the Programme

- To create in the student an ability to think clearly and logically.
- To equip the student with a range of analytical methods for use in civil engineering applications.
- To provide such principles and practice as will allow the student to acquire an understanding of civil engineering to cope adequately with technological change and practice development.
- To develop the students' ability to contribute to the specification, design, testing, commissioning, modification, construction and maintenance of engineering structures and systems, both generally and within the context of an employer's business.
- To develop fully the student's abilities in the use of computer aided engineering and relevant aspects of information technology.
- To make the student aware of the ethics, social, economic and environmental impact of civil engineering.

- To extend, enhance and improve the judgement of the student in decision making by extension of analytical, creative and intellectual skills.
- To integrate the expertise of staff gained from research, consultancy and scholarly activity into the programme materials where appropriate.
- To develop the students' interpersonal skills to enable effective communication, team working and operation within project management roles.
- To provide a broad education via an integrated study of both vocational and academic disciplines.
- To integrate the programme within the student's developing experiential learning and training as part of an apprenticeship with their employer.
- To integrate a Work-Based Learning culture to deepen and broaden the academic understanding within the context of employer focussed activities.

GA graduates will gain the following specialist knowledge, abilities and skills.

- Required skills, knowledge and attributes to fulfil the role of civil engineer, whichever context or discipline they choose to pursue.
- A thorough understanding of key concepts and theories and the underpinning mathematical and scientific knowledge required to be a successful civil engineer.
- The ability to analyse and evaluate the performance, life cycle and operational characteristics of a range of civil engineering activities and systems.
- A strong theoretical understanding of environmental civil engineering, enabling the student to respond positively to technological development and innovation.
- Ability to utilise modern advanced computer-aided design, simulation and analysis techniques in the solution of engineering problems in a civil engineering environment.
- A holistic appreciation of civil engineering practice, civil engineering design, analysis, specification and maintenance
- An awareness and appreciation of the practical issues involved in the design, specification, construction, maintenance and commissioning of civil engineering and associated systems, including health and safety and environmental protection.
- An awareness of the social, regulatory and environmental impact of engineering solutions on the production, distribution and utilisation of civil engineering technologies.
- Knowledge of the latest developments in the subject area through the inclusion of research material, where appropriate, based on research, consultancy and other scholarly activity.
- Draw together technical, project management and professional practice, interpersonal and business skills developed during the programme and apply them to a Work-Based design or construction project.

4. PROGRAMME STRUCTURES AND REQUIREMENTS, LEVELS, MODULES, CREDITS AND AWARDS					
Yr. 1	**Module Code**	**Module Title**	**SCQF Level**	**Credits**	**Trimester**
		Accreditation of Prior Learning, (or if not POP)		20	
	M1K225126 (Optional)	Professional Orientation and Practice (POP)	7	20	
	M1H125176	Fluid Mechanics and Thermodynamics	7	20	AB
	M1H125177	Structural Mechanics Statics and Dynamics	7	20	AB
	M1K225125	Construction Materials	7	20	AB
	M2K227081	Work Based Learning 1	8	20	C
	M1G125178	Applied Mathematics 1	7	20	AB
Notes:					
Exit with Certificate of Higher Education (CertHE) in Environmental Civil Engineering – 120 credits					
Yr. 2	**Module Code**	**Module Title**	**SCQF Level**	**Credits**	**Trimester**
	M2H225179	Structural Design and Analysis	8	20	A^2
	M2F626858	Geotechnics	8	20	AB^2
	M2K125181	Design of Structures	8	20	B^2
	M3K227082	Work Based Learning 2	9	20	C^1
	M3K225184	Structural Engineering	9	20	C
	M2N225129	Construction Process Management 1	8	20	AB
Notes: 1. This is the dedicated Work Based Learning credit for this Level and activities will be undertaken throughout the year and assessed in Trimester C. 2. The modules noted would be strongly connected to the company's requirements with Work Based Learning and Assessment strongly emphasised. This will contribute to the additional 20 credits of Work Based Learning at this Level.					
Exit with Diploma of Higher Education (DipHE) in Environmental Civil Engineering – 240 credits					

Yr. 3	Module Code	Module Title	SCQF Level	Credits	Trimester
	M2H325182	Hydraulics	8	20	A
	M2K225131	Construction Contracts 2	8	20	B[2]
	M3F625183	Geotechnical Design	9	20	B[1]
	MHH125185	Work Based Learning 3 (The Engineer in Business)	10	20	ABC[1]
	M3H125186	Public Health, Water & Wastewater Treatment	9	20	B[1]
	MHK225191	Composite Materials Performance	10	20	A
Notes 1. All technical modules will be delivered with integrated Work Based Learning and Assessment. 2. The modules noted would be strongly connected to the company's requirements with Work Based Learning and Assessment strongly emphasised.					
Exit with BSc Environmental Civil Engineering (Graduate Apprenticeship) – 360 credits					
Yr. 4	**Module Code**	**Module Title**	**SCQF Level**	**Credits**	**Trimester[1]**
	MHK226975	Dissertation	10	40	AB
	M3H227074	Transportation	9	20	A
	MHH126830	Water Resource Management	10	20	A
	MHH225189	Advanced Structural Engineering	10	20	B
	MHF725190	Waste Management & Contaminated Land	10	20	B
Notes 1. The order of modules will be fixed for the fourth and final year, with the dissertation completed over 24 part-time weeks in the work place. Suitable consideration will be given to account for annual vacation periods.					
Exit with BSc (Hons) Environmental Civil Engineering (Graduate Apprenticeship) – 480 credits					

NB: The programme is developed in line with the Scottish Credit and Qualifications Framework (SCQF); more information can be found at: https://scqf.org.uk/about-the-framework/

8. ASSESSMENT REGULATIONS

Students should expect to complete their programme of study under the Regulations that were in place at the commencement of their studies on that programme, unless proposed changes to University Regulations are advantageous to students.

The Glasgow Caledonian University Assessment Regulations which apply to this programme, dependent on the year of entry and with the following approved exceptions can be found at :
GCU Assessment Regulations

From September 2022 there will be an exception to the current Assessment Regulations to align with the Compensation and Condonement requirements of the Engineering Council. This has been approved by the University's Exceptions committee. These new rules will apply to:

- 1st Year students starting in September 2022
- 2nd Year direct entry students starting in September 2023
- 3rd Year direct entry students starting in 2024.

Existing compensation rules will continue to apply to students already on the course by these dates.