

## Programme Specification

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Section 1 – regulatory details		
1.1	Awarding body	Wrexham University
1.2	Teaching institution	Wrexham University Coleg Cambria
1.3	Final award and programme title (Welsh and English)	BEng (Anrh) Peirianeg Sifil (Prentisiaeth Gradd) BEng (Hons) Civil Engineering (Degree Apprenticeship)
1.4	Exit awards and titles	BSc (Ord) Civil Engineering Diploma of Higher Education in Civil Engineering Certificate of Higher Education in Civil Engineering
1.5	Credit requirements	Successful completion of 360 credits at Level 6 entitles the student to a Bachelor’s degree with Honours as follows: BEng (Hons) Civil Engineering Successful completion of 300 credits at Level 6 entitles the student to an Ordinary Bachelor’s degree as follows: BEng Civil Engineering Successful completion of 240 credits at Level 5 entitles the student to a Diploma of Higher Education as follows: Dip. HE Civil Engineering Successful completion of 120 credits at Level 4 entitles the student to the exit award of Certificate of Higher Education as follows: Cert. HE Civil Engineering.
1.6	Intake points	September
1.7	Mode of study	Part time
1.8	Length of delivery	Four years
1.9	Location of delivery	<b>Wrexham University:</b> Plas Coch Campus, Mold Road, Wrexham LL11 2AW <b>Coleg Cambria:</b> Bersham Road, Wrexham, LL13 7UH

Section 1 – regulatory details		
1.10	Language of delivery	English
1.11	Faculty	Faculty of Arts, Computing and Engineering (FACE)
1.12	Subject area	Built Environment
1.13	HECoS Code	100148
1.14	Suitable for applicants requiring a student visa?	N/A
1.15	Is DBS check required on entry?	No
1.16	Professional, Statutory or Regulatory Body (PSRB) accreditation	N/A <b>This information is correct at the time of validation, please refer to the PSRB register for current accreditation status.</b>
1.17	Welsh Medium Provision	<p>The programmes will be delivered through the medium of English, though students are entitled to submit assessments in the Welsh Language.</p> <p>In the context of the University’s Reaching Wider Initiative and its work with Coleg Cymraeg Cenedlaethol towards developing the use of the Welsh Language, both teaching material and assessment opportunities will be facilitated in the Welsh Language as far as possible. Whilst the technical and mathematical nature of some built environment content might compromise such efforts to an extent, the regularity with which programmes attract first-language Welsh candidates, makes this approach an important component of future provision. First-language Welsh students are often employed in managing property and infrastructure where the use of the Language is fundamental, such as in areas of local authority responsibility, housing association work and where construction and civil engineering projects are undertaken in predominantly Welsh-speaking areas of North Wales. In the spirit of legislative provision in this respect therefore, provision will seek equality in the use of Welsh and English as far as can be practicable, which is best facilitated through careful and conscious inclusivity in the preparation of teaching and learning materials.</p>
1.18	External reference points	<ul style="list-style-type: none"> <li>• QAA Subject Benchmark Statement: Engineering, March 2023</li> <li>• QAA Characteristics Statement for Higher Education in Apprenticeships</li> <li>• 0730 Welsh Construction Degree Apprenticeship Pathway</li> </ul>
1.19	Derogation to Academic Regulations	Subject to meeting the criteria of compensation as specified in general academic regulations E10, compensation will be applied for up to a maximum of 30 credits across all levels of the programme. Major individual and group-based project modules must not be compensated.

Section 1 – regulatory details		
		Modules with a minimum of 40% pass requirement on each assessment element: AUR6A3 Major Project (WBL DA).
1.20	Foundation Year route	No.
1.21	Placement / Work based learning	N/A – no placement
1.22	Length and level of the placement	N/A
1.23	Collaborative arrangement	Coleg Cambria Joint Delivery

## Section 2 – programme details

### 2.1 Aims of the programme

This Degree Apprenticeship programme is intended to provide a qualification that is recognised within the construction and civil engineering sector and its associated professions as a comprehensive, informed and valuable qualification to have achieved in the contexts of those disciplines described by the titles identified.

For the Wrexham University student, all programmes are intended to provide a challenging, rewarding and valuable experience in the development of knowledge, skills and behaviours in the context of those disciplines identified, as they relate to the processes and technologies that exist within the contemporary construction and civil engineering sector

### 2.2 Programme structure and diagram, including delivery schedule

#### Part-time Programme Structure

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery	Year of Study	Delivery Team
Level 4	AUR499	Science and Materials	20	Core	Sem 1	Y1	CC
Level 4	AUR495	Civil Engineering Design	10	Core	Sem 1	Y1	CC
Level 4	AUR4A2	Geotechnics	20	Core	Sem 2	Y1	CC
Level 4	ENG495	Analytical Engineering Techniques	20	Core	Sem 1 & 2	Y1	CC
Level 4	AUR4A3	Structural Mechanics	10	Core	Sem 2	Y1	CC
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1	Y1	CC
Level 4	AUR498	Work Based Learning 1	10	Core	Sem 1 & 2	Y1	WU
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1	Y2	CC
Level 5	AUR5A6	Civil Engineering Mathematics	20	Core	Sem 1	Y2	CC
Level 5	AUR5A7	Water Resource Management	20	Core	Sem 1	Y2	CC
Level 5	AUR5A9	Work Based Learning 2	20	Core	Sem 1 & 2	Y2	WU
Choose ONE out of 2 optional modules listed below							
Level 5	AUR5A8	Infrastructure and the Environment	20	Option	Sem 2	Y3	WU
Level 5	ENG5B2	Wind and Hydro Energy Engineering	20	Option	Sem 2	Y3	WU
Level 5	ENG5A5	Mechanics, Structures & FEA	20	Core	Sem 1 & 2	Y3	WU
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1 & 2	Y2	CC
Level 6	AUR697	Project Management	20	Core	Sem 1	Y3	WU
Level 6	AUR6A6	Geotechnical Design and Temporary Works	20	Core	Sem 2	Y3	WU
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1	Y4	WU
Level 6	AUR699	Advanced Materials	10	Core	Sem 1	Y4	WU
Level 6	AUR6A1	Flood Risk Management	10	Core	Sem 2	Y4	WU
Level 6	AUR6A3	Major Project	40	Core	Sem 1 & 2	Y4	WU

2.3 Programme Learning Outcomes											
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)	
1	Develop an understanding of mathematics and statistics relevant to civil engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	Identify and explain natural science and engineering principles relevant to Civil Engineering.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	Develop an awareness of current technologies, technical literature, and other sources of information relevant to Civil Engineering.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	Use appropriate computational and analytical techniques/tools to solve engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5	Develop an awareness of conceptual options and design solutions through generating ideas and sketching.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	Apply mathematical concepts or principles to analyse broadly-defined civil engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7	Using engineering and scientific principles, demonstrate analysis of broadly defined problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8	Apply current technologies and technical literature relevant to Civil Engineering and develop an awareness of the sustainability implications with respect to United Nations Sustainable Development Goals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9	Select appropriate computational and analytical techniques/tools to solve civil engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10	Produce sustainable design solutions/options that meet user, business, and client. This will include consideration of technical, social, cultural, environmental and health and safety aspects.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
11	Apply mathematical principles and analytical techniques to integrated civil engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
12	Apply knowledge and experience of science and engineering principles to investigate and solve civil engineering problems, reaching substantiated conclusions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
13	Select and apply current technologies and technical literature relevant to Civil Engineering and consider the impact of the United Nations Sustainable Development Goals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
14	Select and apply appropriate computational and analytical techniques/tools to solve broadly- defined civil engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
15	Produce sustainable design solutions/options that meet user, business and client. This will include consideration of technical, economic, social, cultural, environmental and health and safety aspects. Demonstrate engineering judgement.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
16	Apply mathematical and engineering principles to analyse broadly- defined problems, reaching substantiated conclusions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
17	Demonstrate a wide knowledge and a comprehensive understanding of civil engineering principles to solve broadly defined problems, reaching substantiated conclusions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
18	Display a critical awareness of current issues and prospects at the forefront of the discipline, recognizing the limitations of technologies employed and the implications on the Climate Emergency and Decarbonisation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
19	Select and evaluate appropriate computational and analytical techniques/tools to solve broadly- defined civil engineering problems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
20	Produce sustainable design solutions/options that meet user, business and client. This will include consideration of technical, economic, social, cultural, environmental and health and safety aspects. Demonstrate engineering judgement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
21	Work with information that may be incomplete or uncertain, identifying constraints.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22	Demonstrate knowledge of appropriate resources, materials, equipment, engineering technologies and processes for tasks or projects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
23	Apply a systematic approach to the solution of broadly defined problems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
24	Demonstrate the ability to apply qualitative and quantitative methods to understand the performance of materials, systems and components.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
25	Work with information that may be incomplete or uncertain, identifying constraints and offering solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
26	Plan and use appropriate resources, materials, equipment, engineering technologies and processes to complete tasks or projects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
27	Apply an integrated or systems approach to the solution of broadly defined problems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28	Demonstrate the ability to apply qualitative and quantitative methods to understand the performance of materials, systems, and components to offer carbon critical design and construction solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
29	Identify and analyse problems and use methods to recognise causes and achieve satisfactory solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
30	Select and apply appropriate resources, materials, equipment, engineering technologies and processes to meet the project brief and achieve safe, resilient, and sustainable engineering solutions. Demonstrate the ability to challenge norms.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
31	Apply an integrated or systems approach to the solution of broadly defined problems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
32	Demonstrate the ability to apply qualitative and quantitative methods to understand the performance of materials, systems and components to offer carbon critical design and construction solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
33	Critically evaluate problem solving and justify and reflect on solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
34	Critically assess the resources and techniques used to meet project brief and achieve resilient and sustainable engineering solutions. Challenge norms and recommend new techniques or use of resources to client/stakeholders.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
35	Apply an integrated or systems approach to the solution of broadly defined problems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
36	Demonstrate the ability to apply qualitative and quantitative methods to offer carbon critical design and construction solutions and give consideration to deconstruction and adaptability.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
37	Conduct a given experiment, investigation, study, or other means to test engineering principles and properties of materials, a hypothesis or proposition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
38	Develop an understanding of engineering project management principles.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
39	Demonstrate knowledge of relevant legislation and contractual requirements specifically safety, health, well-being and environmental legislation such as Climate Change Act and Well-being of Future Generations (Wales) Act 2015.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
40	Undertake laboratory/fieldwork, gather, assimilate, and apply relevant knowledge and information for environmental and planning issues to include survey work and ground investigation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
41	Identify risks/ uncertainty and environmental and societal impact associated with a project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
42	Use technical literature, design codes and standards and other sources of information to address broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
43	Appreciate control cost and budgets for engineering projects. Be aware of commercial frameworks and contracts within own area of responsibility.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
44	Devise an experiment, investigation, study, or other means to test engineering principles and properties of materials, a hypothesis or proposition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
45	Apply knowledge of project management principles and commercial risk.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
46	Apply knowledge of relevant legislation and contractual requirements specifically safety, health, well-being and environmental legislation such as Climate Change Act and Well-	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
	being of Future Generations (Wales) Act 2015. Understand the role of regulating bodies such as Natural Resources Wales / Environment Agency.									
47	Undertake workshop/laboratory/fieldwork, gather, assimilate, and apply relevant knowledge and information for environmental and planning issues to include flood risk assessment, sustainable urban drainage, wind and hydro energy generation and Infrastructure design.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
48	Identify and evaluate risks/uncertainty and environmental and societal impact associated with a project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
49	Select and use technical literature, design codes and industry standards and other sources of information to address broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
50	Apply knowledge of control cost and budgets for engineering projects and identify commercial frameworks and contracts within own area of responsibility.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
51	Plan, design, test and evaluate an experiment, investigation, study, or other means to test a hypothesis or proposition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
52	Apply knowledge of engineering project management principles, commercial, risk and environmental management.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
53	Apply knowledge of relevant legislation and contractual requirements specifically safety, health, well-being and environmental legislation to a civil engineering project and consider the requirements of regulating bodies on the design, construction and operation of projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
54	Evaluate relevant knowledge and information to contribute to climate resilience solutions for civil engineering projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
55	Use a management process to identify, evaluate and mitigate risk and to evaluate societal and environmental impacts (Life Cycle Analysis) for a project or activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
56	Select and evaluate technical literature, design codes and industry standards and other sources of information and tools such as carbon databases to address broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
57	Demonstrate how to manage, prepare, and control cost and budgets for engineering projects. Evidence knowledge of commercial frameworks and contracts within own area of responsibility.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
58	Conduct and analyse experiments, investigation, study, or other means to test a hypothesis or proposition and analyse results, drawing comprehensive conclusions.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
59	Apply knowledge of engineering project management principles, commercial, risk and environmental management.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
60	Apply knowledge of relevant legislation and contractual requirements specifically safety, health, well-being and environmental legislation to a civil engineering project and consider the requirements of regulating bodies on the design, construction and operation of projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
61	Evaluate relevant knowledge and information to contribute to climate resilience solutions for civil engineering projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
62	Use a management process to identify, evaluate and mitigate risk and to evaluate societal and environmental impacts (Life Cycle Analysis) for a project or activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
63	Select and evaluate technical literature, design codes and industry standards and other sources of information and tools such as carbon databases to support decision making.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
64	Demonstrate how to manage, prepare, and control cost and / budgets for engineering projects. Evidence knowledge of commercial frameworks and contracts within own area of responsibility.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
65	Identify basic information and suitable sources, and bring information together in a way that ensures work is accurate and concise, in English and/or Welsh.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
66	Demonstrate teamworking skills and have an awareness of equality, diversity, and inclusion benefits and ethical choices, informed by professional codes of conduct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
67	Plan and record self- learning and development. Participate in relevant Professional Body activities including CPD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
68	Adopt a holistic and proportionate approach to security of people and data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
69	Recognise the need for quality management systems and continuous improvements in the context of broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
70	Understanding of the importance of academic and professional integrity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
71	Use appropriate procedures to explore and develop information in English and/or Welsh. Communicate with technical and non-technical audiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
72	Demonstrate teamworking skills and have an awareness of equality, diversity, and inclusion benefits and ethical choices, informed by professional codes of conduct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
73	Recognise own academic strengths and areas for improvement, reflect on performance. Participate in relevant Professional Body activities including CPD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
74	Adopt a holistic and proportionate approach to security of people and data.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
75	Recognise the need for quality management systems and continuous improvements in the context of broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
76	Demonstrate the importance of academic and professional integrity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
77	Communicate effectively in writing, verbally and through visual representations in English and/or Welsh with technical and non-technical audiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

2.3 Programme Learning Outcomes										
No.	Learning Outcome	K	I	S	P	Cert HE (L4)	Dip HE (L5)	Ordinary (L6)	Honours (L6)	Optional Ref (PSRB standards)
78	Demonstrate teamworking skills and management and have an awareness of equality, diversity, and inclusion benefits and ethical choices, informed by professional codes of conduct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
79	Recognise own academic strengths and areas for improvement, reflect on performance and self- management and management of others. Participate in relevant Professional Body activities including CPD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
80	Adopt a holistic and proportionate approach to the management of security risk and the protection of Intellectual Property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
81	Utilise quality management systems and continuous improvements in the context of broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
82	Demonstrate the importance of academic and professional integrity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
83	Communicate effectively in writing, verbally and through visual representations in English and/or Welsh with technical and non-technical audiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
84	Demonstrate teamworking skills and management and have an awareness of equality, diversity, and inclusion benefits and ethical choices, informed by professional codes of conduct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
85	Evaluate and reflect on own performance and self-management and management of others. Participate in relevant Professional Body activities including CPD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
86	Adopt a holistic and proportionate approach to the management of security risk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
87	Utilise quality management systems and continuous improvements in the context of broadly defined problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
88	Demonstrate the importance of academic and professional integrity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

## 2.4 Learning and teaching strategy

Degree Apprenticeship programmes recognise the workplace as the primary source of learning, and the Learning and Teaching Strategy will therefore be overtly workplace-centred in facilitating opportunities for apprentices to successfully complete the specified Learning Outcomes that are associated with the programme.

The learning and teaching experience will benefit from a variety of approaches that ensure content is considered against a broad contextual background commensurate with the diverse nature of industrial practice. Candidates will develop academic skills and associated competencies in an environment that encourages original thought and personal development through the interpretation and analysis of technical content.

In exploiting opportunities to encourage the interest and engagement of degree apprentices, delivery will be such that a variety of recognised methods will be employed using the University's Active Learning Framework (ALF), both instructive and exploratory, towards appropriate coverage and depth in the consideration of module content. Wherever possible, scenario-based opportunities will be utilised to explore both general principles and specific issues in context, and traditional didactic methods will be limited to those areas of the curriculum that necessitate such an instructive approach. In this respect, delivery will be overtly apprentice-centred, and all who participate should be given the opportunity to feel comfortable and confident in contributing to the learning process, within an environment of mutual respect and learning.

In terms of resourcing the programmes, cohorts will be provided with all that is necessary to ensure that knowledge and understanding is developed in the use of facilities and equipment that best-reflect current industrial practice. Such resources include technological equipment, computational software and electronic databases that might be expected to be utilised in the design, construction and use of buildings and infrastructure in contemporary development processes. 'Base-rooms' are already established in the University which are utilised to their fullest extent in order to give identity to the programmes of study, and to provide degree apprentices with shared spaces that encourage a collegiate approach to study.

In resourcing academic aspects of the provision, digital platforms such as Moodle, Digimap and the Construction Information Service will enable apprentices to access programme documentation, lecture content and research material in order that they are fully served by such resources in the preparation and submission of assessments.

In embracing opportunities presented by the use of Artificial Intelligence, degree apprentices will be encouraged to utilise such tools overtly in the development of knowledge and understanding but will be expected to corroborate how such technologies have been used towards the production of original assessment submissions.

Every opportunity will be taken to maximise industrial engagement within programmes through contributions from guest speakers, visits to live construction and civil engineering projects and through attendance at seminars, conferences and exhibitions that are often promoted within the sector. Travel in the UK and abroad is also encouraged if at all practicable in pursuit of similar objectives.

Because of the prevailing industrial contexts, learning opportunities will be informed by the Key Skills for Employment which underpin related clauses within those professional body, Welsh Government and QAA Benchmark specifications that relate directly to the disciplines of the titles proposed. All Degree Apprenticeship students will be required to be permanently employed on a full-time basis within their industrial context, and to be provided with a facility to attend on a 'day-release' basis, or such other agreed mode of attendance should aspects of the provision be delivered in blocks.

## 2.5 Assessment strategy

Programme delivery will provide sufficient opportunities for apprentices to use their workplace and work experiences to meet assessment requirements. This process will be supported by both the employer and the University in the identification and negotiation of potential opportunities that might satisfy the Learning Outcomes associated with the assessment regime. In these respects, Programme Leaders will support the apprentice and their employer to identify relevant and appropriate projects, and to ensure that employer and apprentice needs are met.

## 2.5 Assessment strategy

A 'tripartite' relationship will be developed between the apprentice, an identified and competent mentor on behalf of the employer organisation and the University, in order to help signpost learning opportunities, to support the apprentice in the generation of work-based evidence, and to work towards the satisfactory completion of specified Learning Outcomes.

'Tripartite' Progress Review Meetings will be held in respect of each individual apprentice at least every two months, and will be evidenced through appropriate authoritative administrative systems, and within the Portfolios that are associated with Work-based Learning modules.

Where appropriate, the apprentice should identify and take account of any relevant professional-body educational framework requirement that might help facilitate future professional membership and should be encouraged to structure Work-based Learning Portfolios accordingly. Access to such educational frameworks is facilitated through student membership of the respective professional body organisation, and apprentices should be encouraged to join on this basis to ensure that resources and any associated recording of progress mechanisms become available to the apprentice at the earliest opportunity.

A range of assessment methods will be utilised to ensure that apprentices are able to express themselves in a variety of different ways, in order to simulate the sorts of written, practical, visual and oral communication mediums that might be expected to take place within the professional and industrial work environment; to this end, employer organisations will be encouraged to engage in the development of assessment material where such an approach lends itself to an enhanced industrial focus. Work-based Learning, Professional Practice and work placement components in particular, will allow apprentices to directly connect professional and vocational aspects of their chosen sector with those academic components of the programme, such that in combination, academic study and occupational experience will be complementary in developing knowledge and understanding within the subject discipline.

The assessment strategy will encompass a range of techniques to ensure that apprentices are provided with diverse opportunities to demonstrate their knowledge and understanding. Written submissions, the practical use of technological equipment, visual presentations, laboratory analyses, in-class tests, examinations, coursework and viva voce are all important components in a systematic approach to providing apprentices with opportunities to express themselves. Types of assessment have been selected to best-suit the nature of the technical content of each module, and collectively constitute a balanced and coherent whole in pursuit of an inclusive and broad-based approach to the measurement of knowledge, skills and behaviours.

In order to help corroborate authenticity and originality in the provision of assessment work that might be subject to the inappropriate use of Artificial Intelligence, all 'presentations' will incorporate an oral 'question and answer' component.

## 2.6 Disclaimer

Throughout quality assurance processes we have ensured that this programme engages with and is aligned to:

- [Academic Regulations](#)
- [The University Skills Framework](#)
- [Welsh Language Policy](#)
- [Equality and Diversity Policy](#)
- [The Student Union offers support for students](#)

Section 3 – Programme set up (office use only)		
3.1	Framework	23
3.2	Board dates (progression)	June
3.3	Cost centre	GABE Built Environment
3.4	Course type (HESA)	FULLYFLEX - fully flexible; delivery led by learner's needs
3.5	Fee model	Standard full time UG
3.6	In-year resits	Yes
3.7	Are any modules taught over either multiple periods or across the HESA year (defined as running 1st August - 31st July)	Choose an item.
3.8	Progression points	
3.9	Semesters per intake	2
3.10	Semesters per progression point	Choose an item. If other, please specify
3.11	Start and end dates	Standard September
3.12	Student funding model	
3.13	Does the Suitability for Practice Procedure apply to the programme?	N/A
3.14	Programme Leader	Louise Duff
3.15	Date of Approval	Validation event: 20.03.2024 / Academic Board 03.07.2024
3.16	Date and type of Revision	25.01.2025: Addition of day/block release appendix 18.11.2025: Change the delivery semester for two modules (AUR5A8 Infrastructure and the Environment and AUR5B3 Procurement and Contract Practice). 02/04/2026 removal of AUR494; AUR496 changed to core; AUR698 replaced with AUR6A6 (AM2)