OFFICE USE ONLY	
Date of validation event:	23 May 2018
Date of approval by Academic Board:	15 August 2018
Approved Validation Period:	*5 years from September 2018*
Date and type of revision:	Nov 18 - HNC Civil Engineering only Replace AURH463 with AURH447 with effect from Oct 2019

PART TWO PROGRAMME SPECIFICATON

Enter Programme Title(s)

Higher National Certificate in Building Studies
Higher National Certificate in Civil Engineering
Higher National Certificate in Building Services

1	**Awarding body**
	Glyndŵr University
2	**Programme delivered by**
	Glyndŵr University Coleg Cambria
3	**Location of delivery**
	Glyndŵr University - Plas Coch Campus Coleg Cambria - Bersham Rd. Campus Employer-centred delivery off-site (subject to internal approval of site proposal)
4	**Faculty/Department**
	Faculty of Arts, Science and Technology Built Environment Department
5	**Exit awards available**
	N/A
6	**Professional, Statutory or Regulatory Body (PSRB) accreditation**
	N/A
7	**Accreditation available**
	N/A
8	**Please add details of any conditions that may affect accreditation (e.g. is it dependent on choices made by a student?)**
	N/A
9	JACS3 **code**
	Higher National Certificate in Building Studies (K210) Higher National Certificate in Civil Engineering (H200) Higher National Certificate in Building Services (K210)
10	UCAS **code**
	N/A

11	**Relevant QAA subject benchmark statement/s**	
	Land, Construction, Real Estate and Surveying (October 2016) Architectural Technology (October 2014)	
12	**Other external and internal reference points used to inform the programme outcomes**	
	Whilst the programmes described in this submission are derived under Licence, content of the *Pearson 2017 Higher Nationals in Construction and the Built Environment* specification has been considered in their development.	
13	**Mode of study**	
	Full & part time	
14	**Normal length of study**	
	Typically two years part-time, though extended day attendance and delivery to bespoke requirements of employers will facilitate alternative timescales within University regulations.	
15	**Maximum length of study**	
	Three years	
16	**Language of study**	
	English	

17 Criteria for admission to the programme

Standard entry criteria

Requirements and admission procedures are in accordance with University policy and regulations for Higher National Certificate qualifications. Standard entry criteria to the proposed HNC programmes is conditional upon candidates having gained pre-requisite qualifications as follows:

GCSEs in mathematics and English or Welsh at grade 'c' or above, and one grade E pass at 'A' Level, or

a BTEC National Diploma or Certificate, or
80-120 UCAS tariff points, or

membership of a professional body at a level deemed appropriate by the programme team.

Potential students from the European Union may be admitted to Higher National Certificate programmes having achieved:

the *International Baccalaureate* (IB) with a minimum of 28 points overall, with any required subjects studied at Higher Level, or

the *European Baccalaureate* (EB) with an overall mark of 75%, with a minimum of 7.5 in any required subjects.

International candidates will be admitted to the programme through demonstrable equivalence of the above criteria against the published advice and guidance of the *National Academic Recognition and Information Centre* (NARIC).

In addition to the academic entry requirements specified, all applicants whose first language is not English or Welsh must demonstrate proficiency in the use of English by evidencing successful completion of a *UKVI Approved Secure English Language Test* (SELT) achieving an overall score of 6, with no component below 5.5.

Where programme delivery is provided by a collaborative partner organisation, that organisation shall be responsible for admitting students to Higher National Certificate programmes in accordance with the criteria identified above.

DBS Requirements

N/A

Non-standard entry criteria and programme specific requirements

Applications from candidates who do not satisfy the standard entry criteria identified in the preceding section are welcome. Such applicants will be expected to demonstrate through interview that they have the potential to succeed on the programme in respect of which they have applied. Candidates are usually employed within the construction industry and have appropriate experience. Where appropriate, the collaborating college may require formal diagnostic assessment prior to admission to the course, to ensure academic capability, particularly in mathematics and English or Welsh.

18 Recognition of Prior (Experiential) Learning

Applicants may enter the programme at various levels through Recognition of Prior Learning (RPL) or Recognition of Prior Experiential learning (RPEL) in accordance with the University General Regulations.

Programme specific restrictions

N/A

19 Aims of the programme

The Higher National Certificate is established as the principal higher technical award within construction and civil engineering, and aims to provide technical staff with a qualification that demonstrates a recognised level of knowledge and understanding in disciplines associated with the development of buildings and civil engineering infrastructure. The programmes are designed and implemented to facilitate progression to undergraduate degree programmes in building, civil engineering and building services engineering, and are delivered in anticipation of candidates seeking membership of associated professional bodies through further study and appropriate work-related experience.

Whilst the three Higher National Certificate programmes described have some subject-specific commonality to the extent set-out in the module matrix, each programme provides a qualification and progression route recognised within those discrete discipline areas differentiated by the programme titles. HNC Building Studies is an appropriate qualification for candidates engaged in what might be described as generic areas of building development, including those who design, construct and manage building projects. HNC Building Services provides similar opportunities for technologists responsible for the design, installation and maintenance of plant and equipment that modulates internal environmental conditions within buildings, such as

room temperature and humidity. HNC Civil Engineering is an appropriate higher qualification and progression route for those engaged as technologists in the design, construction, management and maintenance of civil infrastructure including the provision of highways, engineered structures, groundworks, water supply, drainage and coastal protection.

20 Distinctive features of the programme

Higher National Certificate programmes hold particular currency within construction and civil engineering, and constitute important routes towards both technical and professional membership of recognised associations within the sector. HNCs are recognised within public and private sectors alike, and collectively form an important part of the portfolio of programmes offered within the Built Environment subject area at the University. Whilst these programmes are well established on a part-time day-release basis, this mode of delivery can be restrictive and inflexible to those industrial organisations that find it difficult to release employees for one day every week, whilst activities continue at construction sites where students bear daily responsibility. With this in mind, the distinctive feature of this proposal is that whilst day-release is expected to continue to be the preference of a majority of participants, others will benefit greatly from a modular approach, where components of the qualification may be achieved in blocks of time that exist between construction projects, or in the evenings. Such a bespoke and flexible modular approach is therefore expected to allow the University to additionally respond to the specific needs of all those potential organisations that find it difficult to release technical staff on a regular basis.

Whilst most HNC Building Studies and HNC Building Services students are likely to be employed on projects that are reasonably close to centres of delivery, students employed on civil engineering projects have historically been required to travel much further afield in the provision of civil infrastructure. For employers and students engaged in this sector in particular therefore, a modular approach to delivery is expected to be an attractive proposition that will enable flexible management of staff development time between site operations that are often at some distance throughout the UK.

21 Programme structure narrative

The three discrete Higher National Certificates each comprise six mandatory modules of 20 credits each, accruing 120 credits in total. This value equates to one year of full-time undergraduate study which therefore aligns HNC programmes with current degree provision, making progression, recognised prior learning and other such processes synchronised in terms of measuring the achievement and academic progression of candidates. Such uniformity will also facilitate efficiencies in delivery at the University, within collaborative partner organisations and in respect of employer-centred provision through the use of established module structures and commensurate credit values.

In terms of delivery, it is anticipated that in accordance with University Regulations, the requirements of the Pearson Licence Agreement, Module Specifications and associated controlling documentation, the HNC programmes described may be facilitated by any of the following modes of delivery:

- ‘day-release’ over two years
- ‘day-release’ and one evening over one year, and

- on a 'modular' basis, where individual modules or combinations thereof are undertaken in short blocks of delivery in the workplace, at summer school or through other such bespoke arrangements.

All modules are Level 4 and there are no pre-requisites, and so whilst an attendance pattern that incorporates a day-release component is likely to suggest a regular matrix of module delivery year-on-year, bespoke arrangements established for particular employer organisations may develop alternative arrangements in terms of module-delivery patterns and resourcing. All modes of delivery however, will accord with established Assessment Board cycles with respect to the reporting and confirmation of results.

22 Programme structure diagram

The following table identifies modules that comprise each programme:

	HNC Building Studies		**HNC Civil Engineering**		**HNC Building Services**
Mod title	**Work-based Learning**	**Mod title**	**Mathematics**	**Mod title**	**Work-based Learning**
New Mod.	AURH463	New Mod.	AURH447	New Mod.	AURH463
Credit value	20	Credit value	20	Credit value	20
Core/Opt.	Core	Core/Opt.	Core	Core/Opt.	Core
Mod leader	Gareth Carr	Mod leader	Gareth Carr	Mod leader	Gareth Carr
Mod title	**Science and Materials**	**Mod title**	**Science and Materials**	**Mod title**	**Science and Materials**
New Mod.	AURH462	New Mod.	AURH462	New Mod.	AURH462
Credit value	20	Credit value	20	Credit value	20
Core/Opt.	core	Core/Opt.	core	Core/Opt.	core
Mod leader	Gareth Carr	Mod leader	Gareth Carr	Mod leader	Gareth Carr
Mod title	**Construction Technology 1**	**Mod title**	**Civil Engineering Construction**	**Mod title**	**Construction Technology 1**
New Mod.	AURH454	New Mod.	AURH458	New Mod.	AURH454
Credit value	20	Credit value	20	Credit value	20
Core/Opt.	Core	Core/Opt.	Core	Core/Opt.	Core
Mod leader	Gareth Carr	Mod leader	Colin Stuhlfelder	Mod leader	Gareth Carr
Mod title	**Construction Practice and Management**	**Mod title**	**Structural Analysis and Design**	**Mod title**	**Construction Practice and Management**
New Mod.	AURH461	New Mod.	AURH457	New Mod.	AURH461
Credit value	20	Credit value	20	Credit value	20
Core/Opt.	core	Core/Opt.	core	Core/Opt.	core
Mod leader	David Cheesbrough	Mod leader	Louise Duff	Mod leader	David Cheesbrough
Mod title	**Site Surveying**	**Mod title**	**Site Surveying**	**Mod title**	**Heating Design and Installation**
New Mod.	AURH405	New Mod.	AURH405	New Mod.	AURH459
Credit value	20	Credit value	20	Credit value	20
Core/Opt.	core	Core/Opt.	core	Core/Opt.	core

Mod leader	David Cheesbrough		Mod leader	David Cheesbrough		Mod leader	Colin Stuhlfelder
Mod title	**Built Environment Law**		**Mod title**	**Geology and Soil Mechanics**		**Mod title**	**Ventilation and Air-conditioning Design and Installation**
New Mod.	AURH455		New Mod.	AURH456		New Mod.	AURH460
Credit value	20		Credit value	20		Credit value	20
Core/Opt.	core		Core/Opt.	core		Core/Opt.	core
Mod leader	Gareth Carr		Mod leader	Louise Duff		Mod leader	Colin Stuhlfelder

The following tables suggest modes of delivery that incorporate 'day-release' provision:

	'day-release'		
	HNC Building Studies	**HNC Civil Engineering**	**HNC Building Services**
Year 1	AURH455 **Built Environment Law**	AURH447 **Mathematics**	AURH459 **Heating Design and Installation**
	AURH462 **Science and Materials**	AURH462 **Science and Materials**	AURH462 **Science and Materials**
	AURH454 **Construction Technology 1**	**AURH458 Civil Engineering Construction**	AURH454 **Construction Technology 1**
Year 2	AURH461 **Construction Practice and Management**	AURH457 **Structural Analysis and Design**	AURH461 **Construction Practice and Management**
	AURH405 **Site Surveying**	AURH405 **Site Surveying**	AURH460 **Ventilation and Air-conditioning Design and Installation**
	AURH463 **Work-based Learning**	AURH456 **Geology and Soil Mechanics**	AURH463 **Work-based Learning**

		'day-release and one evening'		
		HNC Building Studies	**HNC Civil Engineering**	**HNC Building Services**
Year 1	AM	AURH455 **Built Environment Law**	AURH447 **Mathematics**	AURH459 **Heating Design and Installation**
		AURH462 **Science and Materials**	AURH462 **Science and Materials**	AURH462 **Science and Materials**
	PM	AURH405 **Site Surveying**	AURH405 **Site Surveying**	AURH460 **Ventilation and Air-conditioning Design and Installation**
		AURH461 **Construction Practice and Management**	AURH457 **Structural Analysis and Design**	AURH461 **Construction Practice and Management**
	Evening	AURH454 **Construction Technology 1**	AURH458 **Civil Engineering Construction**	AURH454 **Construction Technology 1**
		AURH463 **Work-based Learning**	AURH456 **Geology and Soil Mechanics**	AURH463 **Work-based Learning**

Employer-centred modular delivery shall be subject to approval by the University in accordance with Academic Programme Subcommittee approval mechanisms, submitted for consideration by the Glyndŵr University HNC Programme Leader or Academic Link.

23 Intended learning outcomes of the programme

Higher National Certificate in Building Studies

Upon completion of a *Higher National Certificate in Building Studies*, students will be able to demonstrate **knowledge and understanding** of:	
A1	the nature and extent of the UK Construction Industry by identifying the responsible institutional and professional bodies that exist within the Built Environment
A2	the way in which the Built Environment, in its constituent parts, relates to society generally, and the central role it has to play
A3	building construction, design, management and maintenance
A4	the legislative and organisational framework within which the construction industry operates, and display an awareness of policy options
A5	the design, materials, and technological principles that underpin building technology

	Upon completion of a *Higher National Certificate in Building Studies*, students will be able to demonstrate **intellectual skills** in:
B1	the assessment and evaluation of information, theories, and concepts from various sources, and the production of reports and solutions formulated from independent ideas that challenge existing assumptions
B2	identifying the essential features of a problem and how that problem may be resolved by the creative application of technological, design, and managerial methods
B3	the application of strategic thinking beyond the immediate confines of a problem by critically evaluating current policies and practices
B4	actively seeking and using feedback as a basis for personal and professional development by taking responsibility for their learning, and increasing awareness of their own ability
B5	presenting and communicating effectively using a variety of techniques

Upon completion of a *Higher National Certificate in Building Studies*, students will be able to demonstrate **subject skills** in:	
C1	evaluating the characteristics of various materials and constructional techniques, and their effect on building production and design
C2	the integration of various technology-related issues in the development of the Built Environment
C3	appreciating the collaborative interaction between building industry professionals towards the realisation of building projects
C4	recognising current and future developments of overarching importance to the building technician, and within the wider built environment context
C5	demonstrating familiarity with IT systems that are exclusive to the construction industry

Upon completion of a *Higher National Certificate in Building Studies*, students will be able to demonstrate **practical, professional and employability** skills in:	
D1	demonstrating the ability to communicate accurately and reliably with structured and coherent written reports and oral presentations to a range of audiences
D2	making effective use of IT resources to assemble and disseminate information in support of learning and professional practice
D3	effective time management in respect of time-specific responsibilities throughout the period of the programme
D4	the application of strategies towards personal and professional development by agreeing personal learning plans and recording progress
D5	working effectively as part of a team and in appreciating the group dynamic, by taking responsibility for their own actions
D6	the application of numeracy to calculating, checking, and presenting solutions to building-related problems

Higher National Certificate in Civil Engineering

Upon completion of a *Higher National Certificate in Civil Engineering*, students will be able to demonstrate **knowledge and understanding** of:	
A1	the nature and extent of the UK Construction Industry by identifying the responsible institutional and professional bodies that exist within the Built Environment
A2	the way in which the Built Environment, in its constituent parts, relates to society generally, and the central role it has to play
A3	civil engineering construction, design, management and maintenance
A4	the legislative and organisational framework within which the civil engineering sector operates, and display an awareness of policy options
A5	the design, materials, and technological principles that underpin civil engineering technology

Upon completion of a *Higher National Certificate in Civil Engineering*, students will be able to demonstrate **intellectual skills** in:	
B1	the assessment and evaluation of information, theories, and concepts from various sources, and the production of reports and solutions formulated from independent ideas that challenge existing assumptions
B2	identifying the essential features of a problem and how that problem may be resolved by the creative application of technological, design, and managerial methods
B3	the application of strategic thinking beyond the immediate confines of a problem by critically evaluating current policies and practices
B4	actively seeking and using feedback as a basis for personal and professional development by taking responsibility for their learning, and increasing awareness of their own ability
B5	presenting and communicating effectively using a variety of techniques

Upon completion of a *Higher National Certificate in Civil Engineering*, students will be able to demonstrate **subject skills** in:	
C1	evaluating the characteristics of various materials and constructional techniques, and their effect on civil engineering design and project implementation
C2	the integration of various technology-related issues in the development of civil engineering infrastructure
C3	appreciating the collaborative interaction between design and construction professionals towards the realisation of civil engineering projects
C4	recognising current and future developments of overarching importance to the civil engineering technician, and within the wider civil engineering context
C5	demonstrating familiarity with IT systems that are exclusive to the civil engineering sector

Upon completion of a *Higher National Certificate in Civil Engineering*, students will be able to demonstrate **practical, professional and employability** skills in:	
D1	demonstrating the ability to communicate accurately and reliably with structured and coherent written reports and oral presentations to a range of audiences
D2	making effective use of IT resources to assemble and disseminate information in support of learning and professional practice
D3	effective time management in respect of time-specific responsibilities throughout the period of the programme
D4	the application of strategies towards personal and professional development by agreeing personal learning plans and recording progress
D5	working effectively as part of a team and in appreciating the group dynamic, by taking responsibility for their own actions
D6	the application of numeracy to calculating, checking, and presenting solutions to civil engineering problems

Higher National Certificate in Building Services

Upon completion of a *Higher National Certificate in Building Services*, students will be able to demonstrate **knowledge and understanding** of:	
A1	the nature and extent of the UK Construction Industry by identifying the responsible institutional and professional bodies that exist within the Built Environment
A2	the way in which the Built Environment, in its constituent parts, relates to society generally, and the central role it has to play
A3	building services engineering design, installation, management and maintenance
A4	the legislative and organisational framework within which building services engineering operates, and display an awareness of policy options
A5	the design, materials, and technological principles that underpin building services engineering

Upon completion of a *Higher National Certificate in Building Services*, students will be able to demonstrate **intellectual skills** in:	
B1	the assessment and evaluation of information, theories, and concepts from various sources, and the production of reports and solutions formulated from independent ideas that challenge existing assumptions
B2	identifying the essential features of a problem and how that problem may be resolved by the creative application of technological, design, and managerial methods
B3	the application of strategic thinking beyond the immediate confines of a problem by critically evaluating current policies and practices
B4	actively seeking and using feedback as a basis for personal and professional development by taking responsibility for their learning, and increasing awareness of their own ability
B5	presenting and communicating effectively using a variety of techniques

Upon completion of a *Higher National Certificate in Building Services*, students will be able to demonstrate **subject skills** in:	
C1	evaluating the characteristics of various materials and constructional techniques, and their effect on building services design and implementation
C2	the integration of various technology-related issues in the design and installation of building services
C3	appreciating the collaborative interaction between professionals towards the design, installation and management of building services systems
C4	recognising current and future developments of overarching importance to the building services technician, and within the wider building services engineering context
C5	demonstrating familiarity with IT systems that are exclusive to the design, installation and management of building services systems

Upon completion of a *Higher National Certificate in Building Services*, students will be able to demonstrate **practical, professional and employability** skills in:	
D1	demonstrating the ability to communicate accurately and reliably with structured and coherent written reports and oral presentations to a range of audiences
D2	making effective use of IT resources to assemble and disseminate information in support of learning and professional practice
D3	effective time management in respect of time-specific responsibilities throughout the period of the programme
D4	the application of strategies towards personal and professional development by agreeing personal learning plans and recording progress
D5	working effectively as part of a team and in appreciating the group dynamic, by taking responsibility for their own actions
D6	the application of numeracy to calculating, checking, and presenting solutions to building services problems

24 Curriculum matrix

For successful completion of the *Higher National Certificate in Building Studies* students will achieve the following learning outcomes:

	Module Title	*Core/ opt.?*	***A1***	***A2***	***A3***	***A4***	***A5***	***B1***	***B2***	***B3***	***B4***	***B5***	***C1***	***C2***	***C3***	***C4***	***C5***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 4	*AURH463* ***Work-based Learning***	Core	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	AURH462 ***Science and Materials***	Core	☐	☐	■	☐	■	■	■	☐	■	■	■	■	☐	■	☐	☐	■	■	■	☐	■
	AURH454 ***Construction Technology 1***	Core	☐	☐	■	■	■	☐	■	☐	■	■	■	■	☐	■	☐	☐	■	■	■	☐	☐
	AURH461 ***Construction Practice and Management***	Core	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	☐
	AURH405 ***Site Surveying***	Core	☐	☐	☐	☐	☐	☐	☐	☐	■	■	☐	☐	☐	■	■	☐	■	■	■	■	■
	AURH455 ***Built Environment Law***	Core	■	■	■	■	☐	☐	☐	■	■	■	☐	☐	■	■	☐	■	■	■	■	☐	☐

For successful completion of the *Higher National Certificate in Civil Engineering* students will achieve the following learning outcomes:

	Module Title	*Core/ opt.?*	***A1***	***A2***	***A3***	***A4***	***A5***	***B1***	***B2***	***B3***	***B4***	***B5***	***C1***	***C2***	***C3***	***C4***	***C5***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 4	*AURH447* ***Mathematics***	Core	☐	☐	■	☐	■	☐	■	☐	☐	■	■	☐	☐	☐	☐	☐	☐	■	☐	☐	■
	AURH462 ***Science and Materials***	Core	☐	☐	■	☐	■	■	■	☐	■	■	■	■	☐	■	☐	☐	■	■	■	☐	■
	AURH458 ***Civil Engineering Construction***	Core	■	■	■	■	■	☐	■	■	■	■	■	■	■	■	☐	■	■	■	■	☐	■
	AURH457 ***Structural Analysis and Design***	Core	☐	☐	■	■	■	■	■	☐	■	☐	■	☐	☐	☐	■	☐	☐	■	■	☐	■
	AURH405 ***Site Surveying***	Core	☐	☐	☐	☐	☐	☐	☐	☐	■	■	☐	☐	☐	■	■	☐	■	■	■	■	■
	AURH456 ***Geology and Soil Mechanics***	Core	☐	☐	■	■	■	■	■	☐	■	☐	■	☐	☐	☐	☐	☐	☐	■	■	■	■

For successful completion of the *Higher National Certificate in Building Services*, students will achieve the following learning outcomes:

	Module Title	*Core/ opt.?*	***A1***	***A2***	***A3***	***A4***	***A5***	***B1***	***B2***	***B3***	***B4***	***B5***	***C1***	***C2***	***C3***	***C4***	***C5***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 4	*AURH463* ***Work-based Learning***	Core	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	AURH462 ***Science and Materials***	Core	□	□	■	□	■	■	■	□	■	■	■	■	□	■	□	□	■	■	■	□	■
	AURH454 ***Construction Technology 1***	Core	□	□	■	■	■	□	■	□	■	■	■	■	□	■	□	□	■	■	■	□	□
	AURH461 ***Construction Practice and Management***	Core	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	□
	AURH459 ***Heating Design and Installation***	Core	□	□	■	■	■	■	■	■	■	□	■	□	■	■	■	■	■	■	■	□	■
	AURH460 ***Ventilation and Air-conditioning Design and Installation***	Core	□	□	■	■	■	■	■	■	■	□	■	□	■	■	■	■	■	■	■	□	■

25 Learning and teaching strategy

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 students, delivery will be such that a variety of recognised methods will be employed, 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. HNC cohorts have historically brought a wealth of personal industrial experience to the classroom, and opportunities to engage and extract such input will be encouraged through participatory classroom management with an emphasis on peer opinion and group discussion. In this respect, delivery will be overtly student-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 will 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. A ‘base-room’ will be established within organisations responsible for delivery, that will be utilised to its fullest extent in order to give identity to the programmes within those organisations, and to provide students with a collective space that encourages a collegiate approach to their study.

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

A range of assessment methods will be utilised to ensure that students 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 industrial work environment. The Work-based Learning module in particular, will allow students to directly connect professional and vocational aspects of their employment responsibilities with those academic components of the programme, such that in combination, academic study and occupational experience will be complementary in developing a student’s knowledge and understanding of programme content.

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 abroad is also encouraged if at all practicable in pursuit of similar objectives.

In conclusion, the learning and teaching strategy should be inclusive of every opportunity to study beyond the classroom, and should ensure that delivery is contextualised within the contemporary industrial environment to its fullest extent.

26 Work based/placement learning statement

Work-based learning is a significant component in all three HNC programme and is accommodated in the Work-based Learning module to the value of 20 credits. The purpose of work-based learning in this context is to engage the student, the employer and the academic provider in the identification, analysis and extension of understanding in a work-related aspect of the student's immediate industrial experience. Such a collaborative approach will create a three-dimensional relationship wherein the student is central in directing its course, steered by the advice and guidance of both employer and academic provider towards the completion of the learning outcomes defined by the module specification; the success of the work-based learning component will therefore depend upon the full engagement of the student, the employer organisation and the delivery team in pursuit of these objectives.

Latent benefits of an enthusiastic approach to implementing the Work-based Learning component include enhancing the relationship between the academic provider and employer organisations towards future collaboration, with students playing a central role in developing these relationships.

Though short-term industrial placements are not part of the defined HNC structures, such opportunities are to be encouraged on an extra-curricular basis, and it is hoped that closer working relationships between industry and educational providers will create such opportunities for students to extend their industrial experience.

27 Welsh medium provision

The HNC programmes will be delivered through the medium of English, though students are entitled to submit assessments in the medium of Welsh if this is preferred. Where a qualified tutor is available, students will be allocated to that tutor who will then assess the work through the medium of Welsh. Where a need for Welsh medium assessment has been identified and no appropriate Welsh speaking tutor/assessor is available, the written assessment will be translated into English. This translation will be undertaken by University qualified translators.

28 Assessment strategy

The assessment strategy will encompass a range of techniques to ensure that students are provided with diverse opportunities to demonstrate their knowledge and understanding. Written submissions, the practical use of technological equipment, visual presentations, laboratory analyses and in-class tests are all important components in a systematic approach to providing students 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 ability.

The following table sets-out the range of assessment methods in the context of the proposed modules.

Module code & title	Assessment type and weighting	Assessment loading	Indicative submission date	
			'd-r'	'd-r+e'
AURH463 **Work-based Learning**	1. Portfolio (80%) 2. Presentation (20%)	3,200 words eq. 15 min.	Y2, S1 Y2, S2	Y1, S1 Y1, S2
AURH462 **Science and Materials**	1. Essay (50%) 2. In-class Test (50%)	2,000 words 2 hrs	Y1, S1 Y1, S2	Y1, S1 Y1, S2
AURH454 **Construction Technology 1**	1. Case Study (50%) 2. Essay (50%)	2,000 words 2,000 words	Y1, S1 Y1, S2	Y1, S1 Y1, S2
AURH461 **Construction Practice and Management**	1. Essay (25%) 2. Case Study (50%) 3. Presentation (25%)	1,000 words 2,000 words 15 min.	Y2, S1 Y2, S2 Y2, S2	Y1, S1 Y1, S2 Y1, S2
AURH405 **Site Surveying**	1. Essay (25%) 2. Practical (75%)	1,000 words n/a	Y2, S1 Y2, S2	Y1, S1 Y1, S2
AURH455 **Built Environment Law**	1. In-class Test (50%) 2. Essay (50%)	2 hrs 2,000 words	Y1, S1 Y1, S2	Y1, S1 Y1, S2
AURH458 **Civil Engineering Construction**	1. In-class Test (50%) 2. Presentation (50%)	2 hrs 15 min.	Y1, S1 Y1, S2	Y1, S1 Y1, S2
AURH457 **Structural Analysis and Design**	1. Coursework (50%) 2. In-class Test (50%)	2,000 words eq. 2 hrs	Y2, S1 Y2, S2	Y1, S1 Y1, S2
AURH456 **Geology and Soil Mechanics**	1. In-class Test (40%) 2. Portfolio (60%)	2 hrs 2,400 words eq.	Y2, S1 Y2, S2	Y1, S1 Y1, S2
AURH459 **Heating Design and Installation**	1. Case Study (50%) 2. Case Study (50%)	2,000 words 2,000 words	Y1, S1 Y1, S2	Y1, S1 Y1, S2
AURH460 **Ventilation and Air-conditioning Design and Installation**	1. Case Study (50%) 2. Case Study (50%)	2,000 words 2,000 words	Y2, S1 Y2, S2	Y1, S1 Y1, S2
AURH 447 **Mathematics**	1.In-class Test (50%) 2.Report (50%)	2 hrs 2000 words	Y1, S1 Y1, S2	Y1, S1 Y1, S2

29 Assessment regulations

Glyndŵr University Regulations BTEC Higher National Certificate Qualifications.

Derogations

N/A

Non-credit bearing assessment

N/A

30 Programme Management

Programme leader

Gareth Carr

Module Leaders

Gareth Carr	https://www.glyndwr.ac.uk/en/StaffProfiles/GarethCarr/
David Cheesbrough	https://www.glyndwr.ac.uk/en/StaffProfiles/DaveCheesbrough/
Louise Duff	https://www.glyndwr.ac.uk/en/StaffProfiles/LouiseDuff/
Colin Stuhlfelder	https://www.glyndwr.ac.uk/en/StaffProfiles/ColinStuhlfelder/

31 Quality Management

The HNC programmes will be managed under the auspices of the Faculty of Arts, Sciences and Technology as part of the management of curriculum within the Faculty.

Specific Responsibilities

The Programme Leader/Academic Link at Glyndŵr University will be responsible for:

- collaborative provision at College Cambria (Bersham Road campus)
- quality assurance and standards matters on programmes, including any delivery at collaborative partner organisations and/or the premises where employer-centred provision has been sanctioned by the University
- the management and development of curriculum and programme portfolios
- prepare an Annual Report summarizing their views on the operation of the collaborative programmes at each collaborative partner and/or employer organisation

The Programme Leader at collaborative partner organisations will be responsible for:

- regular communication with the University's designated Academic Link Tutor for academic related matters
- student tracking and student records
- attending Assessment Board and confirming all module marks submitted to the Student and Programmes Centre
- quality assurance and annual monitoring, including compilation of the Annual Monitoring Report
- co-ordination of admissions and other recruitment activities, including relevant publicity activities
- liaising with the Academic Link and the Partnerships Unit at Glyndŵr University to implement and ensure compliance with university procedures for gathering student feedback, including Student Voice forums and Student Evaluation of Module processes.
- ensuring that all minutes, actions, updates and external examiner reports are accessible to students.

The Module Tutors at Collaborative Partner organisations will be responsible for:

- the maintenance and development of teaching and learning materials for all students enrolled on the module

- Internal Verification (moderation) of assessed work by another member of the team at the partner organisation or jointly moderated across all delivery sites/the University, both before assessments are set and after assessments have been marked or graded

- the setting, marking and collation of marks for all module assessments and the submission of provisional results to the Programme Leader

- tutorial support for students taking modules for which they are responsible

- quality monitoring, including processing of annual student feedback questionnaires and, where appropriate, student feedback for individual modules.

Programme team meetings

At least two cross-institutional meetings will be convened each academic year, comprising staff from teaching teams, Programme Leaders and the Academic Link Tutor. Student representatives, invited representatives of other departments (such as Learning Resources and Information Services) and colleagues from Industry will also be invited.

Quality and Standards

External review of quality and standards within the programmes described in this submission is provided by the External Examiner appointed by Glyndŵr University, who is able to compare provision sanctioned by the University with that of other Universities and Colleges of Higher Education.

A Student Voice Forum (SVF) will be held twice each year, in November and March, and by arrangement with collaborative partner organisations, which provide a plenum for students, via representatives, to contribute formal commentary as to how programmes and the learning environment within which they take place are managed; minutes and responses to SVFs are subsequently posted to the Virtual Learning Environment. Furthermore, the report of the External Examiner and associated team response is made available to students via Student Voice Fora. SVF minutes and responses subsequently inform the Academic Link Annual Report.

Students are also encouraged to approach Programme Leaders and module tutors individually, should they have any concerns in relation to their programme of study.

Formalised anonymous feedback is obtained from Student Evaluation of Module surveys which are utilised by programme teams towards informing future provision. HNC students are encouraged to complete Student Evaluation of Module surveys in respect of each module on-line via the ‘Student Voice’ Moodle folder, at mid- and end-points of module delivery

The University’s quality assurance structure is superintended by the Learning and Teaching Quality Committee, Academic Board and the Academic Partnerships Committee, which oversee all matters in relation to quality. An Academic Registrar is responsible for the coordination of processes in relation to the maintenance of quality,

whose managerial responsibilities include the facility to report any issues affecting quality to the Senior Management Team should they arise in the course of Academic Subject Team meetings.

In line with Glyndŵr University's quality assurance system an Annual Monitoring Report (AMR) is prepared in respect of each programme of study by Programme Leaders at the University or at collaborative partner organisations, depending upon where delivery takes place. AMRs are submitted in November of each academic year and are formally presented to Faculty Board for consideration. AMRs collect performance data in module and programme contexts using indicators such as mean, standard deviation, retention data and feedback from students and staff. Actions recommended through this process are then implemented by programme teams.

32 Research and scholarship activity

Research and scholarly activity is important in the development and application of expertise within the University, collaborative partners and employer organisations. Such initiatives are essential in underpinning provision through satisfying the requirements of professional membership in the context of continuing professional development (CPD), as well as in the sphere of commercial competition within industrial markets. Those engaged in managing and delivering HNC programmes will be expected to demonstrate on-going technical and professional development through both self-directed and corporately provided opportunities, in the extension of one's knowledge and understanding of their subject, to the benefit of HNC students. A current Curriculum Vitae will be maintained and presented by those engaged in delivery of HNC programmes upon the reasonable request of the University, in order to help demonstrate such scholarly activity.

33 Learning support

Institutional level support for students

The University has a range of departments that offer support to students, including:

- Library & IT Resources
- The Assessment Centre
- DisAbility Support Team
- Irlen Centre
- Careers Centre and Job Shop
- Zone Enterprise hub
- Chaplaincy
- Counselling & Wellbeing
- Student Funding and Welfare
- International Welfare
- Student Programmes Centre
- Glyndŵr Students' Union

Students will be able to access support at their site of delivery through the Virtual Learning Environment (VLE), Library services (including on-line access), funding, welfare, disability, careers and study skills support, in addition to those resources and services available at Glyndŵr University Campuses. New students joining HNC

programmes will be expected to participate in an induction programme at both collaborative partner organisations and at the University where practicable, to ensure that study is effectively supported in the contexts identified above.

All students are allocated a Personal Tutor whose main responsibility is to act as the first point of contact for their personal tutees and to provide pastoral and academic support throughout their studies. It is a vital role to support student engagement and retention, and to help every student to succeed to the best of their ability.

Faculty support for students

All students engaged in HNC programmes will be provided with a Student Handbook that provides detailed guidance on all relevant aspects of the programme essential to the support of students in their programme of study.

Student attendance will be subject to regular monitoring through the collection of class attendance registers as a means of identifying potential issues indicative of a need for student support. Upon enrolment, each student will be allocated a Personal Tutor at their place of study; the Personal Tutor will be expected to remain available to students at all reasonable times should there be a need to discuss any potential problems that might negatively affect academic performance.

Potential issues of an academic nature should first be addressed to the appropriate Module Leader at their place of study towards an appropriate and timely resolution. Where issues are not satisfactorily resolved in the first instance the Programme Leader will be informed, whereby appropriate action will be taken to ensure a satisfactory outcome. Should issues not be resolved within collaborative partner organisations through these processes, the Programme Leader or Academic Link tutor at the University should be made aware of the situation, who will act towards achieving a fair and reasonable outcome in relation to the issue at hand.

Programme specific support for students

HNC programmes benefit from industry-specific resources that replicate operational theory and practice within the construction and civil engineering sector. The use of specialist software in the design, construction and operation of buildings and infrastructure includes Computer Aided Design packages such as Revit 2018, AutoDesk Civil3D and MicroDrainage, together with packages that provide topographical information such as Edina Digimap. Familiarity with the purpose and capabilities of software packages in the virtual replication of topography, construction and infrastructure enables students engaged in HNC programmes to appreciate the significance of Building Information Modelling, and to understand the benefits that such virtual articulation brings to design, construction and operational processes.

As well as those software packages identified, the Construction Information Service, available through the University's Resource Finder facility, provides students with an industry-specific database of contemporary legal, technical and professional standards, guidance and legislation that ensures programme content, assessment preparation and contextual research is current and authoritative.

34 Equality and Diversity

Glyndŵr University is committed to providing access to all students and promotes equal opportunities in compliance with the Equality Act 2010. HNC programmes comply fully with the University's Equal Opportunities Policy (http://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Governance/TheFile,64499,en.pdf), ensuring that everyone who has the potential to achieve in higher education is given the chance to do so.

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