Prifysgol **Wrecsam**
Wrexham University

PROGRAMME SPECIFICATION

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UG Programme Directory
PG Programme Directory

Award titles
Programme Title(s)
BSc (Anrh) Technoleg Dylunio Pensaernïol
BSc (Hons) Architectural Design Technology

BSc (Anrh) Arolwg Adeiladu
BSc (Hons) Building Surveying

BSc (Anrh) Rheoli Adeiladu
BSc (Hons) Construction Management

BSc (Anrh) Mesur Meintiau
BSc (Hons) Quantity Surveying

BSc (Ord) Astudiaethau Peirianneg Sifil
BSc (Ord) Civil Engineering Studies

HNC Technoleg Adeiladu
HNC Construction Technology

Internal Programme Title(s)
BSc (Ord) Civil Engineering Studies (top-up)

Programme to be included in Graduation Ceremonies
Yes

Delivery period
September 2024 to September 2028

Intake points
September 2024 to September 2028

Regulatory details

Regulatory details
Awarding body
Wrexham University
Programme delivered by
Wrexham University
Location of delivery
Plas Coch Campus
Faculty/Department
Faculty of Art, Computing and Engineering

Regulatory details
Engineering: Built Environment
Exit awards available
BSc (Ord) Architectural Design Technology
Diploma of Higher Education in Architectural Design Technology
Certificate of Higher Education in Architectural Design Technology
BSc (Ord) Building Surveying
Diploma of Higher Education in Building Surveying
Certificate of Higher Education in Building Surveying
BSc (Ord) Construction Management
Diploma of Higher Education in Construction Management
Certificate of Higher Education in Construction Management
BSc (Ord) Quantity Surveying
Diploma of Higher Education in Quantity Surveying
Certificate of Higher Education in Quantity Surveying
Professional, Statutory or Regulatory Body (PSRB) accreditation

This information is correct at the time of validation, please refer to the PSRB register for current accreditation status.

Architectural Design Technology
The PSRB in this context is the Chartered Institute of Architectural Technologists [CIAT]. The CIAT currently accredits the BSc (Hons) Architectural Design Technology which is valid up to and including the 2026 student intake. CIAT requires that any changes resulting from re-validation in the meantime be communicated to them in order that a decision can be made as to whether a subsequent Accreditation Review will be necessary. The nature of this proposal is such that an Accreditation Review is likely to be required by the CIAT.

Successful completion of an accredited BSc (Hons) Architectural Design Technology programme will exempt graduates from Stage 1 of the CIAT Educational Standards.

Building Surveying / Construction Management / Quantity Surveying / Construction Technology
The PSRB in these contexts is intended to be the Chartered Institute of Building [CIOB]. The CIOB currently accredits BSc (Hons) Construction Management and HNC Construction Technology titles, though this expires with the September 2023 intake. It is intended that the proposed BSc (Hons) Building Surveying and BSc (Hons) Quantity Surveying programmes will be included as additional titles when an application is made for re-accreditation of existing titles upon successful completion of the re-validation process.

Successful completion of an accredited BSc (Hons) Building Surveying, BSc (Hons) Construction Management or BSc (Hons) Quantity Surveying programme will provide a route to full membership of the CIOB (MCIOB).

Civil Engineering
Whilst the BSc (Ord) Civil Engineering Studies degree in its entirety is not accredited by the PSRB, the Work Based Learning (WBL) element of the degree has been designed to reflect the requirements of the Joint Board of Moderators' [JBM] 'Employer Managed Further Learning' programme; an alternative pathway which meets the required educational base for Incorporated Engineer (I Eng) registration. This unique WBL element of the existing programme is approved by the JBM until 2027, and upon successful re-validation, the BSc (Ord) Civil Engineering Studies programme will be submitted for re-approval to the JBM should this be considered appropriate.

Successful completion of the BSc (Ord)) Civil Engineering Studies programme will meet the required educational base for Incorporated Engineer (I Eng) registration for the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, the Institute of Highway Engineers and the Permanent Way Institution, as described.

Please add details of any conditions that may affect accreditation (e.g. is it dependent on choices made by a student?) *e.g. completion of placement.*

Regulatory details
There are no conditions expected beyond those PSRB requirements already accommodated in the design of the programme titles described.

HECoS codes
100121 BSc (Hons) Architectural Design Technology
100216 BSc (Hons) Building Surveying
100148 BSc Civil Engineering Studies
100151 BSc (Hons) Construction Management
100217 BSc (Hons) Quantity Surveying
100584 HNC Construction Technology

UCAS code
K100   BSc (Hons) Architectural Design Technology
K230   BSc (Hons) Building Surveying
H200   BSc Civil Engineering Studies
K222   BSc (Hons) Construction Management
K240   BSc (Hons) Quantity Surveying
K211   HNC Construction Technology

Relevant External Reference Points
QAA Subject Benchmark Statement: Architectural Technology, March 2022
QAA Subject Benchmark Statement: Land, Construction, Real Estate and Surveying, October 2019 (under review)
QAA Subject Benchmark Statement: Engineering, March 2023
QAA Guidance on Education for Sustainable Development

List the programmes that offer the Foundation Year route
BSc (Hons) Architectural Design Technology
BSc (Hons) Building Surveying
BSc (Hons) Construction Management
BSc (Hons) Quantity Surveying

Mode of study
BSc (Hons) Architectural Design Technology: **Full & part time**
BSc (Hons) Building Surveying: **Full & part time**
BSc Civil Engineering Studies: **Online/distance learning part time**
BSc (Hons) Construction Management: **Full & part time**
BSc (Hons) Quantity Surveying: **Full & part time**
HNC Construction Technology: **Part time**

Normal length of study for each mode of study
BSc (Hons) Architectural Design Technology:
3 years full-time; 5 years part-time; 4 years part-time [HNC+3]
BSc (Hons) Building Surveying:
3 years full-time; 5 years part-time; 4 years part-time [HNC+3]
BSc Civil Engineering Studies:
2 years part-time (Levels 5 & 6 top-up)
BSc (Hons) Construction Management:
3 years full-time; 5 years part-time; 4 years part-time [HNC+3]
BSc (Hons) Quantity Surveying:
3 years full-time; 5 years part-time; 4 years part-time [HNC+3]
HNC Construction Technology:
1 year part-time

Language of study
All programmes will be delivered through the medium of English; students are entitled to submit assessments in the medium of Welsh if this is preferred.

Transitional arrangements for re-validated provision if applicable
Existing programmes will be 'taught-out', though students will be offered transfer to revalidated provision in accordance with University policy. Students who might have suspended their studies will be similarly offered transfer to the new provision; a decision as to whether the teach-out continues will be taken when the preferences of all students have been accommodated.

Regulatory details
Repeat year students
If any current level 4 students are repeating the year, they will be consulted and transferred onto the new level 4 provision, carrying with them any successfully completed modules and marks. The programme leader will advise them as to which new modules they must complete to maintain a coherent programme and to meet the progression requirement.   If a student had passed one element of assessment and needed to re-sit the other, if they remained on original module they would retain the pass mark for the element passed. If they needed to do the new module they would need to complete all elements of assessment but need to be aware this would still count as a reassessment therefore they could only achieve a maximum mark of 40%
The following University Award Regulations apply to this programme (*highlight the appropriate ones and delete the others*)
General Regulations   Regulations for Bachelor Degrees, Diplomas, Certificates and Foundation Degrees   Language Admissions Policy

OFFICE USE ONLY	
Date of validation event:	20th March 2024
Date of approval by Academic Board:	*3rd July 2024*
Approved Validation Period:	September 2024- September 2028
Transitional arrangements approved (if revalidation)	*Existing programmes will be 'taught-out', though students will be offered transfer to revalidated provision in accordance with University policy. Students who might have suspended their studies will be similarly offered transfer to the new provision; a decision as to whether the teach-out continues will be taken when the preferences of all students have been accommodated.*
Date and type of revision:	*Enter the date of any subsequent revisions (Detail the type of revision made and the implementation date)*

Criteria for admission to the programme

Standard entry criteria

Entry requirements are in accordance with the University's admissions policy, please click on the following link for more information. Admissions policies

The University's general entry requirements are;

Qualification	Entry requirements
3 year Bachelor's degree	80-112 Tariff points

These figures are intended as a general guide. Each application is considered individually.

Applicants who wish to enrol on the Higher National Certificate in Construction Technology will be required to be employed within the construction sector, and to be facilitated with 'day-release' mode of attendance.

Applicants who wish to enrol on BSc Civil Engineering Studies will be required to meet the following requirements :
- Have successfully completed an approved Higher National Certificate (HNC) or Level 4 equivalent programme in Civil Engineering

- Be a member of a professional body regulated by the Engineering Council at Incorporated Engineer level or professional bodies such as the Chartered Institute of Builders or Chartered Institute of Architectural Technologists at Chartered level will also be considered by the programme team.
- Be employed in a civil engineering discipline. Exceptional circumstances where student are out of employment for temporary period of time will be dealt with on a case-by-case basis.

International entry qualifications are outlined on the UK National Information Centre for global qualifications and skills (UK ENIC) as equivalent to the relevant UK entry qualification.

In addition to the academic entry requirements, all applicants whose first language is not English or Welsh must demonstrate English language proficiency.

European students are able to provide this evidence in a number of ways (please see academic-entry-requirements for details), including IELTS.

International students are required to provide an English Language Certificate which meets the requirements of the University *(please see English-language-requirements for details).*

Non Standard entry criteria
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. Candidates are sometimes employed within the construction industry and have sufficient appropriate experience, though diagnostic assessment prior to admission will be considered in order to measure academic capability, particularly in mathematics and English or Welsh.

Record of Prior (Experiential) learning

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

DBS Requirements

N/A

Suitability for Practice Procedure

N/A

Aims of the programme

All Higher National and degree programmes that are the subject of this Specification are 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.

Distinctive features of the programme

The design of the proposed curriculum has been developed to satisfy the requirements of the most recent professional body and Engineering Council educational frameworks, and QAA Benchmark Statements that relate to the design and implementation of those Built Environment titles described.

Such contexts range from the procedural to the technological, and so collective module content combines to facilitate a breadth of experience and depth of knowledge that will equip the Wrexham University graduate with the means to succeed in both technical and professional roles within the sector.

Practice within each of those subject disciplines described requires a good understanding of those other professional, technical and operational contributors to the development, construction and use of buildings and infrastructure, and so such perspectives have been important considerations in the design and detailing of module content.

It is expected that graduates of the programmes identified will be responsible for managing people and processes as well as the quality, cost and timeliness of outputs, and so all of these themes run through the curriculum to ensure considerate and informed graduates upon successful completion of their programme.

A further distinctive feature of all programmes is that in their delivery, unlike some subject areas, most if not all aspects of module content are informed by application in practice as well as theoretically in an academic sense. Because of this contextual significance, students are encouraged to be both innovative in developing ideas, and mindful as to their application within well-defined legislative and 'good practice' constraints that already exist within the contemporary construction and civil engineering sector.

Having established the significance of the industrial context in the development of module content, it is important that programmes exploit to the full, opportunities for engagement with industry. This will be facilitated through site visits, study tours, guest and timetabled lectures from specialists, and further direct experience of those contemporary procedural and technological developments that are shaping the industrial future through credit-bearing work-based learning, placements and continuing professional development.

Academically and experientially therefore, the Wrexham University graduate of Architectural Design Technology, Building Surveying, Civil Engineering, Construction Management and Quantity Surveying will benefit from a programme that threads formal professional body requirements, the application of processes and technologies in the modern industrial context, and the personal and academic qualities expected of built environment graduates, into competency conducive to such a vibrant and challenging industrial sector.

Credit Accumulation and exit awards

Exit Awards
Successful completion of 360 credits at Level 6 entitles the student to a Bachelor's degree with Honours as follows:

    BSc (Hons) Architectural Design Technology
    BSc (Hons) Building Surveying
    BSc (Hons) Construction Management
    BSc (Hons) Quantity Surveying

Successful completion of 300 credits at Level 6 entitles the student to an Ordinary Bachelor's degree as follows:
    BSc Architectural Design Technology
    BSc Building Surveying
    BSc Construction Management
    BSc Quantity Surveying

Successful completion of 100 credits at level 5 and 80 credits at level 6 entitles the student to an Ordinary Bachelor's degree of BSc Civil Engineering Studies taking into account 120 credits achieved at level 4 .
Successful completion of 240 credits at Level 5 entitles the student to a Diploma of Higher Education as follows:
    Dip. HE Architectural Design Technology
    Dip. HE Building Surveying
    Dip. HE Construction Management
    Dip. HE Quantity Surveying

Successful completion of 120 credits at Level 4 entitles the student to the exit award of Certificate of Higher Education as follows
    Cert. HE Architectural Design Technology
    Cert. HE Building Surveying
    Cert. HE Construction Management
    Cert. HE Quantity Surveying

Programme Structure Diagram, including delivery schedule

Table 1 identifies six proposed Built Environment programmes vertically, mapped against the modules that each comprises horizontally

A *Higher National Certificate in Construction Technology* is included as a one-year qualification for part-time students who do not qualify for degree apprenticeship funding, or might otherwise be ineligible for such a scheme.

Commonality between modules is incorporated to the extent to which PSRB accrediting bodies require their own discreet content, though where modules are complementary to more than one title they have been mapped as such. Cumulative credit totals for each of the proposed qualifications are shown vertically through Levels 4, 5 and 6.

Level & Ref.	Module	Core / Option	credits	Welsh Elmnt?	BSc (Hons) ADT	BSc (Hons) Build. Surv.	BSc Civil Eng. Stds.	BSc (Hons) Const. Man.	BSc (Hons) Quant. Surv.	HNC Const. Tech.
AUR491	Architectural Design Technology 1	C/O	10	Y	10			+1	+1	
AUR492	Building Surveying 1	C/O	10	Y		10		+1	+1	
AUR493	Construction Management 1	C/O	10	Y	+1			10		+2
AUR494	Quantity Surveying 1	C/O	10	Y		+1			10	
AUR495	Civil Engineering Design	C/O	10	Y						

Level & Ref	Module	Core / Option	Credits	Poss. Welsh Elmnt?	BSc (Hons) ADT	BSc (Hons) Build. Surv.	BSc Civil Eng. Stds.	BSc (Hons) Const. Man.	BSc (Hons) Quant. Surv.	HNC Const. Tech.
AUR496	Digital Technologies in Drawing and Modelling	C	10	Y	30	30		30	30	30
AUR4A4	Digital Technologies in Surveying	C	20	N	50	50		50	50	50
AUR497	Legal Principles, Compliance and Liability	C	20	Y	70	70		70	70	70
AUR499	Science and Materials	C	20	Y	90	90		90	90	90
AUR4A2	Construction Technology	C	20	Y	110	110		110	110	110
AUR4A2	Geotechnics	C	20	Y						
AUR4A3	Structural Mechanics	C	10	N						
ENG495	Analytical Eng. Techniques	C	20	N						
AUR4A5	Professional Practice 1	C	10	Y	120	120		120	120	120
AUR498	WBL1	C	10	Y						
AUR5B1	Architectural Design Technology 2	C	20	Y	140					
AUR599	Building Surveying 2	C	20	Y		140				
AUR5A1	Construction Management 2	C	20	Y				140		
AUR5A2	Quantity Surveying 2	C	20	Y					140	
AUR5A3	Modern Methods of Const.	C	20	y	160	160		160	160	
AUR5A5	Building Services	C	20	Y	180	180		180	180	
AUR5B3	Procurement and Contract Practice	C	20	Y	200	200		200	200	
AUR5A4	Commercial Management	C	20	Y	220	220		220	220	
AUR5A6	Civil Engineering Mathematics	C	20	N			20			
AUR5A7	Water Resource Management	C	20	Y			40			
AUR5A8	Infrastructure and the Environment	O	20	Y			60			
ENG5B2	Wind and Hydro Energy Engineering	O	20	Y			60			
ENG5A5	Mechanics, Structures & FEA	C	20	N			80			
AUR5B2	Professional Practice 2 (incl. Placement)	C	20	Y	240	240		240	240	
AUR5A9	WBL2	C	20	Y			100			
AUR697	Project Management	C	20	Y	260	260	120	260	260	
AUR699	Advanced Materials	C	10	Y						
AUR6A1	Flood Risk Management	C	10	Y						
AUR6A2	Design for Climate Resilience	C	20	Y	280	280	140	280	280	
AUR698	Individual Research Project	C	20	Y	300	300	160	300	300	
AUR6A4	Professional Practice 3	C	20	Y	320	320		320	320	
AUR6A3	Major Project (WBL DA)	C	40	Y	360	360		360	360	
AUR6A5	WBL3	C	20	Y			180			

HNC Construction Technology 1 year Part-Time delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 4	AURH496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1
Level 4	AURH499	Science and Materials	20	Core	Sem 1
Choose TWO out of 5 optional modules listed below					
Level 4	AURH491	Architectural Design Technology 1	10	Option	Sem 1
Level 4	AURH492	Building Surveying 1	10	Option	Sem 1
Level 4	AURH493	Construction Management 1	10	Option	Sem 2
Level 4	AURH494	Quantity Surveying 1	10	Option	Sem 1
Level 4	AURH495	Civil Engineering Design	10	Option	Sem 1
Level 4	AURH4A5	Professional Practice 1	10	Core	Sem 1
Level 4	AURH497	Legal Principles, Compliance and Liability	20	Core	Sem 2
Level 4	AURH4A1	Construction Technology	20	Core	Sem 2
Level 4	AURH4A4	Digital Technologies in Surveying	20	Core	Sem 1

BS (Hons) Construction Management Full-time delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1
Level 4	AUR499	Science and Materials	20	Core	Sem 1
Level 4	AUR493	Construction Management 1	10	Core	Sem 1
Choose ONE out of 4 optional modules listed below					
Level 4	AUR491	Architectural Design Technology 1	10	Option	Sem 1
Level 4	AUR492	Building Surveying 1	10	Option	Sem 1
Level 4	AUR494	Quantity Surveying 1	10	Option	Sem 1
Level 4	AUR495	Civil Engineering Design	10	Option	Sem 1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem 1
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1
Level 5	AUR5A1	Construction Management 2	20	Core	Sem 1&2
Level 5	AUR5A5	Building Services	20	Core	Sem 1&2
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1&2
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1&2
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1&2

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1&2
Level 6	AUR697	Project Management	20	Core	Sem 1
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1
Level 6	AUR698	Individual Research Project	20	Core	Sem 2
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1&2
Level 6	AUR6A3	Major Project	40	Core	Sem 1&2

BSc (Hons) Construction Management Part-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1	Y1
Level 4	AUR499	Science and Materials	20	Core	Sem 1	Y1
Choose ONE out of 4 optional modules listed below						
Level 4	AUR491	Architectural Design Technology 1	10	Option	Sem 1	Y1
Level 4	AUR492	Building Surveying 1	10	Option	Sem 1	Y1
Level 4	AUR494	Quantity Surveying 1	10	Option	Sem 1	Y1
Level 4	AUR495	Civil Engineering Design	10	Option	Sem 1	Y1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem 1	Y1
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2	Y1
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2	Y1
Level 4	AUR493	Construction Management 1	10	Core	Sem 1	Y1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1	Y2
Level 5	AUR5A1	Construction Management 2	20	Core	Sem 1&2	Y3
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1&2	Y3
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1&2	Y3
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1&2	Y3
Level 5	AUR5A5	Building Services	20	Core	Sem 1&2	Y4
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1&2	Y4
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1	Y4
Level 6	AUR697	Project Management	20	Core	Sem 1	Y4
Level 6	AUR698	Individual Research Project	20	Core	Sem 1	Y5
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1& 2	Y5
Level 6	AUR6A3	Major Project	40	Core	Sem 1& 2	Y5

BSc (Hons) Architectural Design Technology Full-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2
Level 4	AUR499	Science and Materials	20	Core	Sem 1
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2
Level 4	AUR491	Architectural Design Technology 1	10	Core	Sem 1
Choose ONE out of 4 optional modules listed below					
Level 4	AUR493	Construction Management 1	10	Option	Sem 1
Level 4	AUR492	Building Surveying 1	10	Option	Sem 1
Level 4	AUR494	Quantity Surveying 1	10	Option	Sem 1
Level 4	AUR495	Civil Engineering Design	10	Option	Sem 1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem 1
Level 5	AUR5B1	Architectural Design Technology 2	20	Core	Sem 1&2
Level 5	AUR5A5	Building Services	20	Core	Sem 1&2
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1&2
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1&2
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1&2
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1&2
Level 6	AUR697	Project Management	20	Core	Sem 1
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1
Level 6	AUR698	Individual Research Project	20	Core	Sem 2
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1&2
Level 6	AUR6A3	Major Project	40	Core	Sem 1&2

BSc (Hons) Architectural Design Technology Part-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1	Y1
Level 4	AUR499	Science and Materials	20	Core	Sem 1	Y1
Level 4	AUR491	Architectural Design Technology 1	10	Core	Sem 1	Y2
Choose ONE out of 4 optional modules listed below						
Level 4	AUR493	Construction Management 1	10	Option	Sem 1	Y2
Level 4	AUR492	Building Surveying 1	10	Option	Sem 1	Y2
Level 4	AUR494	Quantity Surveying 1	10	Option	Sem 1	Y1

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 4	AUR495	Civil Engineering Design	10	Option	Sem 1	Y1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem 1	Y2
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2	Y1
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2	Y1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1	Y2
Level 5	AUR5B1	Architectural Design Technology 2	20	Core	Sem 1&2	Y3
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1&2	Y3
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1&2	Y3
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1&2	Y3
Level 5	AUR5A5	Building Services	20	Core	Sem 1&2	Y4
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1	Y4
Level 6	AUR697	Project Management	20	Core	Sem 1	Y4
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1&2	Y4
Level 6	AUR698	Individual Research Project	20	Core	Sem 1	Y5
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1& 2	Y5
Level 6	AUR6A3	Major Project	40	Core	Sem 1& 2	Y5

BSc (Hons) Building Surveying Full-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem1
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem2
Level 4	AUR499	Science and Materials	20	Core	Sem1
Level 4	AUR4A1	Construction Technology	20	Core	Sem2
Level 4	AUR492	Building Surveying 1	10	Core	Sem1
Choose ONE out of 4 optional modules listed below					
Level 4	AUR491	Architectural Design Technology 1	10	Option	Sem1
Level 4	AUR493	Construction Management 1	10	Option	Sem1
Level 4	AUR494	Quantity Surveying 1	10	Option	Sem1
Level 4	AUR495	Civil Engineering Design	10	Option	Sem1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem1
Level 5	AUR599	Building Surveying 2	20	Core	Sem 1& 2
Level 5	AUR5A5	Building Services	20	Core	Sem 1& 2
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1& 2

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1& 2
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1& 2
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1& 2
Level 6	AUR697	Project Management	20	Core	Sem 1
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1
Level 6	AUR698	Individual Research Project	20	Core	Sem 2
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1& 2
Level 6	AUR6A3	Major Project	40	Core	Sem 1& 2

BSc (Hons) Building Surveying Part-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1	Y1
Level 4	AUR499	Science and Materials	20	Core	Sem 1	Y1
Level 4	AUR492	Building Surveying 1	10	Core	Sem 1	Y2
Choose ONE out of 4 optional modules listed below						
Level 4	AUR491	Architectural Design Technology 1	10	Option	Sem 1	Y2
Level 4	AUR493	Construction Management 1	10	Option	Sem 1	Y2
Level 4	AUR494	Quantity Surveying 1	10	Option	Sem 1	Y1
Level 4	AUR495	Civil Engineering Design	10	Option	Sem 1	Y1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem 1	Y2
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2	Y1
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2	Y1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1	Y2
Level 5	AUR599	Building Surveying 2	20	Core	Sem 1 & 2	Y3
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1 & 2	Y3
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1 & 2	Y3
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1 & 2	Y3
Level 5	AUR5A5	Building Services	20	Core	Sem 1 & 2	Y4
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1 & 2	Y4
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1	Y4
Level 6	AUR697	Project Management	20	Core	Sem 1	Y4
Level 6	AUR698	Individual Research Project	20	Core	Sem 1	Y5
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1 & 2	Y5
Level 6	AUR6A3	Major Project	40	Core	Sem 1 & 2	Y5

BSc (Hons) Quantity Surveying Full-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem1
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2
Level 4	AUR499	Science and Materials	20	Core	Sem1
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2
Level 4	AUR494	Quantity Surveying 1	10	Core	Sem1
Choose ONE out of 4 optional modules listed below					
Level 4	AUR491	Architectural Design Technology 1	10	Option	Sem1
Level 4	AUR493	Construction Management 1	10	Option	Sem1
Level 4	AUR492	Building Surveying 1	10	Option	Sem1
Level 4	AUR495	Civil Engineering Design	10	Option	Sem1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem1
Level 5	AUR5A2	Quantity Surveying 2	20	Core	Sem 1 & 2
Level 5	AUR5A5	Building Services	20	Core	Sem 1 & 2
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1 & 2
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1 & 2
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1 & 2
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1 & 2
Level 6	AUR697	Project Management	20	Core	Sem 1
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1
Level 6	AUR698	Individual Research Project	20	Core	Sem 2
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1 & 2
Level 6	AUR6A3	Major Project	40	Core	Sem 1 & 2

BSc (Hons) Quantity Surveying Part-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 4	AUR496	Digital Technologies in Drawing and Modelling	10	Core	Sem 1	Y1
Level 4	AUR499	Science and Materials	20	Core	Sem 1	Y1
Level 4	AUR494	Quantity Surveying 1	10	Core	Sem 1	Y1
Choose ONE out of 4 optional modules listed below						
Level 4	AUR491	Architectural Design Technology 1	10	Option	Sem 1	Y2
Level 4	AUR493	Construction Management 1	10	Option	Sem 1	Y2
Level 4	AUR492	Building Surveying 1	10	Option	Sem 1	Y2
Level 4	AUR495	Civil Engineering Design	10	Option	Sem 1	Y1
Level 4	AUR4A5	Professional Practice 1	10	Core	Sem 1	Y1
Level 4	AUR497	Legal Principles, Compliance and Liability	20	Core	Sem 2	Y1
Level 4	AUR4A1	Construction Technology	20	Core	Sem 2	Y1
Level 4	AUR4A4	Digital Technologies in Surveying	20	Core	Sem 1	Y2
Level 5	AUR5B2	Professional Practice 2	20	Core	Sem 1	Y2

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 5	AUR5A2	Quantity Surveying 2	20	Core	Sem 1 & 2	Y3
Level 5	AUR5A5	Building Services	20	Core	Sem 1 & 2	Y3
Level 5	AUR5A4	Commercial Management	20	Core	Sem 1 & 2	Y3
Level 5	AUR5B3	Procurement and Contract Practice	20	Core	Sem 1 & 2	Y4
Level 5	AUR5A3	Modern Methods of Construction	20	Core	Sem 1 & 2	Y4
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1	Y4
Level 6	AUR697	Project Management	20	Core	Sem 1	Y4
Level 6	AUR698	Individual Research Project	20	Core	Sem 2	Y5
Level 6	AUR6A4	Professional Practice 3	20	Core	Sem 1 & 2	Y5
Level 6	AUR6A3	Major Project	40	Core	Sem 1 & 2	Y5

BSc (Ord) Civil Engineering Studies (top-up) Part-time Delivery

Level	Module Code	Module Title	Credit Value	Core/Option	Delivery (i.e. semester 1,2)	Year of Study
Level 5	AUR5A6	Civil Engineering Mathematics	20	Core	Sem 1	Y1
Level 5	AUR5A7	Water Resource Management	20	Core	Sem 1	Y1
Level 5	ENG5A5	Mechanics, Structure & FEA	20	Core	Sem 1 & 2	Y1
Level 5	AUR5A9	Work Based Learning 2	20	Core	Sem 1 & 2	Y1
Choose ONE out of two options listed below						
Level 5	AUR5A8	Infrastructure and the Environment	20	Option	Sem 2	Y1
Level 5	ENG5B2	Wind and Hydro Energy Engineering	20	Option	Sem 2	Y1
Level 6	AUR697	Project Management	20	Core	Sem 2	Y2
Level 6	AUR6A2	Design for Climate Resilience	20	Core	Sem 1	Y2
Level 6	AUR698	Individual Research Project	20	Core	Sem 2	Y2
Level 6	AUR6A5	Work Based Learning 3	20	Core	Sem 1 & 2	Y2

Intended learning outcomes of the programme

1. **BSc (Hons) Architectural Design Technology and Higher National Certificate in Construction Technology**

Knowledge and Understanding			
	Level 4	Level 5	Level 6	Level 6 (Hons)
A1	Indicate an understanding of context, which includes the social, technological, environmental, economic, political, legal and ethical factors that inform and influence the discipline and practice of architectural technology at local, regional and global levels	Demonstrate an understanding of context, which includes the social, technological, environmental, economic, political, legal and ethical factors that inform and influence the discipline and practice of architectural technology at local, regional and global levels	Differentiate context, which includes the social, technological, environmental, economic, political, legal and ethical factors that inform and influence the discipline and practice of architectural technology at local, regional and global levels	Synthesize context, which includes the social, technological, environmental, economic, political, legal and ethical factors that inform and influence the discipline and practice of architectural technology at local, regional and global levels
A2	Indicate an understanding of professional behaviours, conduct and ethics, architectural practice, design leadership and management functions (for example, principal/lead designer, design management, information management), procurement methods and contract administration	Demonstrate an understanding of professional behaviours, conduct and ethics, architectural practice, design leadership and management functions (for example, principal/lead designer, design management, information management), procurement methods and contract administration	Demonstrate an understanding of professional behaviours, conduct and ethics, architectural practice, design leadership and management functions (for example, principal/lead designer, design management, information management), procurement methods and contract administration	Demonstrate an understanding of professional behaviours, conduct and ethics, architectural practice, design leadership and management functions (for example, principal/lead designer, design management, information management), procurement methods and contract administration
A3	Indicate an understanding of technologies and interrelation of building elements, systems, components, materials and methods used in the construction and adaptation of different building typologies, and how these contribute to the functions of buildings	Demonstrate an understanding of technologies and interrelation of building elements, systems, components, materials and methods used in the construction and adaptation of different building typologies, and how these contribute to the functions of buildings	Differentiate technologies and interrelation of building elements, systems, components, materials and methods used in the construction and adaptation of different building typologies, and how these contribute to the functions of buildings	Synthesise technologies and interrelation of building elements, systems, components, materials and methods used in the construction and adaptation of different building typologies, and how these contribute to the functions of buildings
A4	Indicate an understanding of architectural and technological design principles, science (that is, fundamentals of building physics and pathology) and	Demonstrate an understanding of architectural and technological design principles, science (that is, fundamentals of building physics and pathology) and values that drive	Differentiate architectural and technological design principles, science (that is, fundamentals of building physics and pathology) and values that drive approaches taken	Synthesise architectural and technological design principles, science (that is, fundamentals of building physics and pathology) and values that drive approaches taken in

Knowledge and Understanding				
	Level 4	Level 5	Level 6	Level 6 (Hons)
	values that drive approaches taken in works to new and existing buildings (for example, conservation, maintenance, renovation and adaptation)	approaches taken in works to new and existing buildings (for example, conservation, maintenance, renovation and adaptation)	in works to new and existing buildings (for example, conservation, maintenance, renovation and adaptation)	works to new and existing buildings (for example, conservation, maintenance, renovation and adaptation)
A5	Indicate an ability to design holistically, including the ability to detail the design from first principles, for production, performance, sustainability and better environmental performance and in response to regulatory requirements, health and safety, wellbeing and advances in sustainable technologies	Demonstrate an ability to design holistically, including the ability to detail the design from first principles, for production, performance, sustainability and better environmental performance and in response to regulatory requirements, health and safety, wellbeing and advances in sustainable technologies	Differentiate in designing holistically, including the ability to detail the design from first principles, for production, performance, sustainability and better environmental performance and in response to regulatory requirements, health and safety, wellbeing and advances in sustainable technologies	Synthesise design holistically, including the ability to detail the design from first principles, for production, performance, sustainability and better environmental performance and in response to regulatory requirements, health and safety, wellbeing and advances in sustainable technologies
A6	Indicate an understanding of client, user and stakeholder needs, analysing and interpreting the nature of a development, and evaluating context to determine the responsive scope of a project	Demonstrate an understanding of client, user and stakeholder needs, analysing and interpreting the nature of a development, and evaluating context to determine the responsive scope of a project	Differentiate client, user and stakeholder needs, analysing and interpreting the nature of a development, and evaluating context to determine the responsive scope of a project	Justify client, user and stakeholder needs, analysing and interpreting the nature of a development, and evaluating context to determine the responsive scope of a project
A7	Indicate an understanding of health and safety requirements within a regulatory system, identifying, analysing, and evaluating hazards and risks when generating solutions to ensure health, safety, welfare and security during the life cycles of buildings, including compliance and enforcement	Demonstrate an understanding of health and safety requirements within a regulatory system, identifying, analysing, and evaluating hazards and risks when generating solutions to ensure health, safety, welfare and security during the life cycles of buildings, including compliance and enforcement	Differentiate health and safety requirements within a regulatory system, identifying, analysing, and evaluating hazards and risks when generating solutions to ensure health, safety, welfare and security during the life cycles of buildings, including compliance and enforcement	Synthesise health and safety requirements within a regulatory system, identifying, analysing, and evaluating hazards and risks when generating solutions to ensure health, safety, welfare and security during the life cycles of buildings, including compliance and enforcement
A8	Indicate an ability to create resilient, sustainable and inclusive design solutions as whole systems and in detail in response to varied situations,	Demonstrate an ability to create resilient, sustainable and inclusive design solutions as whole systems and in detail in response to varied situations, which are informed by	Differentiate in creating resilient, sustainable and inclusive design solutions as whole systems and in detail in response to varied situations, which are informed by	Synthesise in creating resilient, sustainable and inclusive design solutions as whole systems and in detail in response to varied situations, which are informed by current

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	which are informed by current understandings within the discipline and wider context, including climate change	current understandings within the discipline and wider context, including climate change	current understandings within the discipline and wider context, including climate change	understandings within the discipline and wider context, including climate change
A9	Indicate an understanding of current philosophies, processes and technologies for the modelling, communication, and management of information and to apply them in a collaborative working environment to support data-driven decision-making	Demonstrate an understanding of current philosophies, processes and technologies for the modelling, communication, and management of information and to apply them in a collaborative working environment to support data-driven decision-making	Differentiate current philosophies, processes and technologies for the modelling, communication, and management of information and to apply them in a collaborative working environment to support data-driven decision-making	Synthesise current philosophies, processes and technologies for the modelling, communication, and management of information and to apply them in a collaborative working environment to support data-driven decision-making
A10	Indicate an understanding of current and emerging topics, technologies and practices (including regulations and standards) that inform the architectural technology discipline through self-reflection, identification of personal development needs, and action planning to maintain awareness and currency, and to accommodate specialisation in light of new and emerging professional environments.	Demonstrate an understanding of current and emerging topics, technologies and practices (including regulations and standards) that inform the architectural technology discipline through self-reflection, identification of personal development needs, and action planning to maintain awareness and currency, and to accommodate specialisation in light of new and emerging professional environments.	Differentiate current and emerging topics, technologies and practices (including regulations and standards) that inform the architectural technology discipline through self-reflection, identification of personal development needs, and action planning to maintain awareness and currency, and to accommodate specialisation in light of new and emerging professional environments.	Synthesise current and emerging topics, technologies and practices (including regulations and standards) that inform the architectural technology discipline through self-reflection, identification of personal development needs, and action planning to maintain awareness and currency, and to accommodate specialisation in light of new and emerging professional environments.

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
B1	Identify a strategy for using relevant key skills over an extended period of time, and plan how this will be achieved	Develop a strategy for using relevant key skills over an extended period of time, and plan how this will be achieved	Implement a strategy for using relevant key skills over an extended period of time, and plan how this will be achieved	Maintain a strategy for using relevant key skills over an extended period of time, and plan how this will be achieved

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
B2	Reflect on performance in using relevant skills, and identify a strategy, as necessary, to achieve the quality of outcomes required	Develop performance in using relevant skills, and evolve a strategy, as necessary, to achieve the quality of outcomes required	Further-develop performance in using relevant skills, and identify a strategy, as necessary, to achieve the quality of outcomes required	Maintain performance in using relevant skills, and identify a strategy, as necessary, to achieve the quality of outcomes required
B3	Identify an overall strategy and present outcomes from work, including ways of further improving skills.	Develop an overall strategy and present outcomes from work, including ways of further improving skills.	Further-develop an overall strategy and present outcomes from work, including ways of further improving skills.	Maintain an overall strategy and present outcomes from work, including ways of further improving skills.

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
C1	Indicate a systematic understanding and critical awareness of the history and context, and the political, economic, environmental, social and technological aspects that inform and influence the practice of Architectural Technology nationally and internationally	Demonstrate a systematic understanding and critical awareness of the history and context, and the political, economic, environmental, social and technological aspects that inform and influence the practice of Architectural Technology nationally and internationally	Demonstrate a systematic understanding and critical awareness of the history and context, and the political, economic, environmental, social and technological aspects that inform and influence the practice of Architectural Technology nationally and internationally	Synthesize a systematic understanding and critical awareness of the history and context, and the political, economic, environmental, social and technological aspects that inform and influence the practice of Architectural Technology nationally and internationally
C2	Indicate an awareness of the technological theories that inform and influence the practice of architectural technology	Demonstrate an awareness of the technological theories that inform and influence the practice of architectural technology	Demonstrate an awareness of the technological theories that inform and influence the practice of architectural technology	Synthesise an awareness of the technological theories that inform and influence the practice of architectural technology
C3	Indicate an ability to problem solve and to identify appropriate methodologies to deal with complex problems and realise design into built form through the generation of detailed design solutions that respond to familiar, unfamiliar and unpredictable situations	Demonstrate an ability to problem solve and to identify appropriate methodologies to deal with complex problems and realise design into built form through the generation of detailed design solutions that respond to familiar, unfamiliar and unpredictable situations	Demonstrate an ability to problem solve and to identify appropriate methodologies to deal with complex problems and realise design into built form through the generation of detailed design solutions that respond to familiar, unfamiliar and unpredictable situations	Problem solve and identify appropriate methodologies to deal with complex problems and realise design into built form through the generation of detailed design solutions that respond to familiar, unfamiliar and unpredictable situations
C4	Indicate an ability to successfully complete substantial sustainable and inclusive design and research projects, systematic	Demonstrate an ability to successfully complete substantial sustainable and inclusive design and research projects, systematic review	Demonstrate an ability to successfully complete substantial sustainable and inclusive design and research projects, systematic	Successfully complete substantial sustainable and inclusive design and research projects, systematic review or systematic case study informed by

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	review or systematic case study informed by wider current understandings in the subject;	or systematic case study informed by wider current understandings in the subject;	review or systematic case study informed by wider current understandings in the subject;	wider current understandings in the subject
C5	Recognize building elements, components, systems, and methods used for different building typologies and an ability to identify appropriate methodologies for dealing with complex problems	Differentiate building elements, components, systems, and methods used for different building typologies and identify appropriate methodologies for dealing with complex problems	Analyse building elements, components, systems, and methods used for different building typologies and identify appropriate methodologies for dealing with complex problems	Justify building elements, components, systems, and methods used for different building typologies and identify appropriate methodologies for dealing with complex problems
C6	Indicate an awareness of current topics and practices which inform the discipline of Architectural Technology including new and emerging technologies	Demonstrate an awareness of current topics and practices which inform the discipline of Architectural Technology including new and emerging technologies	Differentiate current topics and practices which inform the discipline of Architectural Technology including new and emerging technologies	Evaluate current topics and practices which inform the discipline of Architectural Technology including new and emerging technologies
C7	Indicate an awareness of project and design management, project procurement and process, construction and contract management	Demonstrate an awareness of project and design management, project procurement and process, construction and contract management	Demonstrate an awareness of project and design management, project procurement and process, construction and contract management	Employ an awareness of project and design management, project procurement and process, construction and contract management
C8	Demonstrate an ability to identify hazards and risks and develop and maintain safe systems of work and legal and relevant legislation and regulatory frameworks	Demonstrate an ability to identify hazards and risks and develop and maintain safe systems of work and legal and relevant legislation and regulatory frameworks	Identify hazards and risks and develop and maintain safe systems of work and legal and relevant legislation and regulatory frameworks	Identify hazards and risks and develop and maintain safe systems of work and legal and relevant legislation and regulatory frameworks
C9	Indicate an ability to identify relevant legislation and legal and regulatory frameworks	Demonstrate an ability to identify relevant legislation and legal and regulatory frameworks	Differentiate relevant legislation and legal and regulatory frameworks	Synthesize relevant legislation and legal and regulatory frameworks
C10	Indicate an ability to work independently and as a member of a team, developing critical discussion and analysis of complex concepts, identifying personal development needs and to plan to meet these needs	Demonstrate an ability to work independently and as a member of a team, developing critical discussion and analysis of complex concepts, identifying personal development needs and to plan to meet these needs through relevant and	Work independently and as a member of a team, developing critical discussion and analysis of complex concepts, identifying personal development needs and to plan to meet these needs through relevant and appropriate methods.	Work independently and as a member of a team, developing critical discussion and analysis of complex concepts, identifying personal development needs and to plan to meet these needs through relevant and appropriate methods.

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	through relevant and appropriate methods.	appropriate methods.		

Practical, Professional and Employability Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
D1	Indicate an ability to perform assigned tasks as part of a team	Perform assigned tasks as part of a team	Perform and differentiate assigned tasks as part of a team	Perform and self-evaluate assigned tasks as part of a team
D2	Indicate an ability to bring together information and materials from different sources	Bring together information and materials from different sources	Bring together and examine information and materials from different sources	Bring together and evaluate information and materials from different sources
D3	Indicate an ability to identify problems and questions	Identify problems and questions	Identify and examine problems and questions	Identify and evaluate problems and questions
D4	Indicate an ability to undertake the analysis of factual information	Undertake the analysis of factual information	Undertake and reflect upon the analysis of factual information	Undertake the analysis of factual information and evaluate outcomes
D5	Indicate an ability to recognise strengths and weaknesses in the arguments of others	Demonstrate an ability to recognise strengths and weaknesses in the arguments of others	Recognise and differentiate between strengths and weaknesses in the arguments of others	Recognise and evaluate strengths and weaknesses in the arguments of others
D6	Indicate an ability to produce a synthesis of the state of knowledge on a particular subject or topic	Demonstrate an ability to produce a synthesis of the state of knowledge on a particular subject or topic	Produce a synthesis of the state of knowledge on a particular subject or topic	Produce a synthesis of the state of knowledge on a particular subject or topic and evaluate outcomes
D7	Indicate an ability, with guidance, to undertake tasks independently	Demonstrate, with guidance, an ability to undertake tasks independently	With guidance, undertake tasks independently and differentiate outcomes	With guidance, undertake tasks independently and evaluate outcomes
D8	Indicate an ability to reflect on one's own progress and to make use of feedback provided	Demonstrate an ability to reflect on one's own progress and to make use of feedback provided	Reflect and differentiate in one's own progress and make use of feedback provided	Reflect upon and evaluate one's own progress and make use of feedback provided
D9	Indicate an ability express one's self effectively both verbally and/or non-verbally	Demonstrate an ability to express one's self effectively both verbally and/or non-verbally	Express one's self effectively both verbally and/or non-verbally and reflect upon results	Express one's self effectively both verbally and/or non-verbally and evaluate results
D10	Indicate an ability to present knowledge or an argument in a way that is comprehensible to others	Demonstrate an ability to present knowledge or an argument in a way that is comprehensible to others	Present knowledge or an argument in a way that is comprehensible to others and reflect upon results	Present knowledge or an argument in a way that is comprehensible to others and evaluate results
D11	Indicate an ability to use relevant digital systems to collate,	Demonstrate an ability to use relevant digital systems to collate,	Use and differentiate between relevant digital systems to collate,	Use, differentiate between and evaluate relevant digital systems to

Practical, Professional and Employability Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	analyse, select and present information	analyse, select and present information	analyse, select and present information	collate, analyse, select and present information
D12	Indicate an ability to deliver presentations utilising visual aids and multimedia	Demonstrate an ability to deliver presentations utilising visual aids and multimedia	Deliver presentations utilising visual aids and multimedia and reflect upon results	Deliver presentations utilising visual aids and multimedia and evaluate results
D13	Indicate an ability to comprehend when presented with new ideas or information	Demonstrate an ability to comprehend when presented with new ideas or information	Demonstrate an ability to comprehend when presented with new ideas or information and reflect upon the experience	Demonstrate an ability to comprehend when presented with new ideas or information and evaluate the experience
D14	Indicate skills in recognising and describing material	Demonstrate skills in recognising and describing material	Demonstrate skills in recognising and describing material and reflect upon the experience	Demonstrate skills in recognising and describing material and evaluate the experience
D15	Indicate an understanding of the importance of health and safety, and of equality, diversity and inclusiveness in the work environment	Demonstrate understanding of the importance of health and safety, and of equality, diversity and inclusiveness in the work environment	Demonstrate understanding of, and reflect upon, the importance of health and safety, and of equality, diversity and inclusiveness in the work environment	Demonstrate understand of, and evaluate the importance of health and safety, and of equality, diversity and inclusiveness in the work environment
D16	Indicate an ability to appreciate and engage in contemporary debates relating to sustainability, employability and global perspectives, including decolonisation and anti-racism	Appreciate and engage in contemporary debates relating to sustainability, employability and global perspectives, including decolonisation and anti-racism	Appreciate and engage in contemporary debates relating to sustainability, employability and global perspectives, including decolonisation and anti-racism, and reflect upon findings	Appreciate and engage in contemporary debates relating to sustainability, employability and global perspectives, including decolonisation and anti-racism, and evaluate findings
D17	Indicate an appreciation of the need to act in a sustainable manner and display ethical behaviour and conduct.	Demonstrate an appreciation of the need to act in a sustainable manner and display ethical behaviour and conduct.	Act in a sustainable manner, display and reflect upon ethical behaviour and conduct	Act in a sustainable manner, display and evaluate ethical behaviour and conduct

2. **BSc Construction Management**

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
B1	Summarise information from a variety of sources	Analyse information from a variety of sources	Critically analyse information from a variety of sources	Synthesise information from a variety of sources
B2	Recognise appropriate theories,	Use appropriate theories,	Test appropriate theories,	Use and evaluate appropriate

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	methodologies, concepts and principles from a range of subjects	methodologies, concepts and principles from a range of subjects	methodologies, concepts and principles from a range of subjects	theories, methodologies, concepts and principles from a range of subjects
B3	collect several lines of evidence to develop arguments	Collect and analyse several lines of evidence to develop balanced arguments	collect, analyse and integrate several lines of evidence to develop balanced arguments demonstrating critical thinking	Collect, analyse, integrate and evaluate several lines of evidence to develop balanced arguments demonstrating critical thinking and synthesis
B4	plan an experiment, investigation, survey or other means to test a hypothesis or proposition	plan and design an experiment, investigation, survey or other means to test a hypothesis or proposition	Plan, design and implement an experiment, investigation, survey or other means to test a hypothesis or proposition	Plan, design, implement and evaluate an experiment, investigation, survey or other means to test a hypothesis or proposition
B5	Indicate knowledge and understanding to address multidisciplinary problems within a local and global context	Demonstrate knowledge and understanding to address multidisciplinary problems within a local and global context	Apply knowledge and understanding to address multidisciplinary problems within a local and global context	Apply knowledge and understanding to address multidisciplinary problems within a local and global context and evaluate outcomes
B6	Indicate an ability to be creative and innovative	Demonstrate creativity and innovation	Demonstrate creativity and innovation and reflect upon outcomes	Demonstrate creativity and innovation and evaluate outcomes
B7	Indicate an awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence, and reflect upon associated implications	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence, and evaluate implications
B8	Suggest considered decisions in complex and unpredictable contexts	Make well considered decisions in complex and unpredictable contexts	Make well considered decisions in complex and unpredictable contexts and reflect upon outcomes	Make well considered decisions in complex and unpredictable contexts and evaluate outcomes
B9	Indicate an understanding of the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
C1	Indicate an understanding of the key concepts, theories and principles used in construction	Demonstrate an understanding of the key concepts, theories and principles used in construction and the	Differentiate the key concepts, theories and principles used in construction and the management	Differentiate between and evaluate key concepts, theories and principles used in construction and the

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	and the management of construction	management of construction	of construction	management of construction
C2	Identify the appropriate stakeholders involved in the construction process and their relevant roles and responsibilities	Describe the appropriate stakeholders involved in the construction process and their relevant roles and responsibilities	Differentiate between appropriate stakeholders involved in the construction process and their relevant roles and responsibilities	Differentiate and compare appropriate stakeholders involved in the construction process in terms of their relevant roles and responsibilities
C3	Indicate an understanding of the context in which the process of construction operates, including the legal, business, social, economic, health and safety, cultural, equality and inclusion, technological, physical, environmental and global influences, including the relationship to digital technologies	Demonstrate an understanding of the context in which the process of construction operates, including the legal, business, social, economic, health and safety, cultural, equality and inclusion, technological, physical, environmental and global influences, including the relationship to digital technologies	Demonstrate an understanding of and reflect upon the context in which the process of construction operates, including the legal, business, social, economic, health and safety, cultural, equality and inclusion, technological, physical, environmental and global influences, including the relationship to digital technologies	Evaluate the context in which the process of construction operates, including the legal, business, social, economic, health and safety, cultural, equality and inclusion, technological, physical, environmental and global influences, including the relationship to digital technologies
C4	Recognise the collaborative linkages and interdisciplinary relationships between the functions of construction and the other disciplines of the built environment	Demonstrate an understanding of the collaborative linkages and interdisciplinary relationships between the functions of construction and the other disciplines of the built environment	Demonstrate an understanding of and reflect upon the collaborative linkages and interdisciplinary relationships between the functions of construction and the other disciplines of the built environment	Evaluate the collaborative linkages and interdisciplinary relationships between the functions of construction and the other disciplines of the built environment
C5	Recognise the various construction technologies and specialisms relevant to the construction of assets for lifetime performance	Demonstrate an understanding of the various construction technologies and specialisms relevant to the construction of assets for lifetime performance	Differentiate between the various construction technologies and specialisms relevant to the construction of assets for lifetime performance	Evaluate the various construction technologies and specialisms relevant to the construction of assets for lifetime performance
C6	Recognise the appropriate generic and bespoke software that supports construction and digital construction	Use appropriate generic and bespoke software that supports construction and digital construction	Use appropriate generic and bespoke software that supports construction and digital construction, and self-develop skills through practice	Develop competency in the use of appropriate generic and bespoke software that supports construction and digital construction
C7	Recognise the regulatory systems within which construction operates, including	Demonstrate understanding of the regulatory systems within which construction operates, including	Differentiate the regulatory systems within which construction operates, including building and planning	Synthesise the requirements of regulatory systems within which construction operates, including

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	building and planning regulations	building and planning regulations	regulations	building and planning regulations
C8	Appreciate the importance of sustainability within the context of the built environment, including the quality of life theme	Demonstrate the importance of sustainability within the context of the built environment, including the quality of life theme	Demonstrate and reflect upon the importance of sustainability within the context of the built environment, including the quality of life theme	Synthesise sustainability within the context of the built environment, including the quality of life theme
C9	Recognise the importance of professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact	Demonstrate an understanding of the importance of professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact	Practice and reflect upon professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact	Practice and evaluate professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact
C10	Indicate understanding of the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the construction management process.	Demonstrate an understanding of the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the construction management process.	Demonstrate and reflect upon the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the construction management process.	Demonstrate and evaluate the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the construction management process.

Practical, Professional and Employability Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
D1	plan, conduct and present an independent investigation with significant guidance			
D2	relate investigations to some prior work and reference it appropriately			
D3	where appropriate, use laboratory and field equipment safely			
D4	apply a range of methods to solve problems			
D5	use appropriate technologies to address problems			
D6	where appropriate, describe and record in the field and laboratory			
D7	interpret practical results with guidance			
D8	present results of investigations in a number of formats			
D9	apply survey measurements and evaluation techniques as appropriate to the course			
D10	recognise and record visual information when on site or from graphical sources			
D11	apply professional judgement in drawing skills and knowledge together and applying them to real world problems			
D12	recognise when information is incomplete			

Practical, Professional and Employability Skills				
	Level 4	Level 5	Level 6	Level 6 (Hons)
D13	appreciate risk			
D14	process and interpret data and information			
D15	critically appraise spatial data			
D16	solve basic numerical problems using appropriate techniques			
D17	undertake simple statistical analysis			
D18	select and apply appropriate methods of collecting, analysing, and synthesising data			
D19	appreciate the importance of intellectual property and its role within the innovation process.			
D20	communicate to a variety of audiences in appropriate written, graphical, electronic and verbal forms			
D21	make contributions to group discussions			
D22	watch, listen and respond to others			
D23	negotiate and mediate with others			
D24	use social media for communication			
D25	use the internet for communication and information retrieval			
D26	handle electronic information with guidance, applying appropriate techniques, digital tools and applications to support key subjects			
D27	have an awareness of the safe, ethical and legal use of digital media			
D28	demonstrate the application of information technology and digital tools and techniques to support key subjects.			
D29	make a constructive contribution to teamwork			
D30	identify individual goals			
D31	recognise and respect the views of others			
D32	recognise equality, diversity and inclusion in all its forms			
D33	reflect on team performance.			
D34	recognise and be able to comment on the moral and ethical issues associated with the subject			
D35	appreciate the need for professional codes of conduct			
D36	accept responsibility for their own learning			
D37	identify targets for personal, career and academic development			
D38	be adaptable and have a flexible approach to study and work			
D39	develop skills necessary for self-managed, independent and lifelong learning			
D40	recognise personal strengths and weaknesses.			
D41 (WbL)	Present information effectively to audiences			
	Demonstrate effective meeting skills			
	Demonstrate effective interpersonal skills and informal communication			
D42 (WbL)	Identify and determine solutions to problems			
	Investigate problems, causes and effects within the job role			
D43 (WbL)	Identify and gather all necessary information required to carry out tasks within the job role			
	Process information effectively to meet work objectives			
	Identify actions to remedy incorrect or insufficient information			

Practical, Professional and Employability Skills			
	Level 4	Level 5	Level 6	Level 6 (Hons)
D44 (WbL)	Identify the various procurement procedures within your organisation		
	Demonstrate the ability to identify and manage risk		
	Demonstrate effective budget control and identify budget constraints		
	Demonstrate effective time management		
D45 (WbL)	Demonstrate effective team working		
	Demonstrate the ability to deal with conflict in teams		
D46 (WbL)	Set and review work objectives		
	Plan activities and work methods		
	Monitor and control work activities		
D47 (WbL)	Identify job responsibilities and practices under health, safety and welfare legislation		
	Identify and describe the implementation of risk control measures		
D48 (WbL)	Investigate the quality of a product, service or process		
	Undertake an investigation for the organisation		
D49 (WbL)	Identify and evaluate the company's policies and practices in sustainable building		
	Identify ways of protecting the workplace and surrounding environments		
D50 (WbL)	Identify the impact/consequences of making decisions		
	Demonstrate an understanding of construction and relevant civil law		

3. **BSc Quantity Surveying**

Knowledge and Understanding			
	Level 4	Level 5	Level 6	Level 6 (Hons)
A1	Understand the management of construction processes as they relate to the project from inception to recycling Understanding corporate organisations, industry, clients and society	Apply knowledge of the construction, maintenance and adaptation process to the management of projects and the selection of procurement methodology	Analyse and solve problems relating to the construction process.	
A2	Understand the role and responsibilities of people involved in the construction process.	Explain how human resource/people management methods affect the construction process. For example: • Employee Relations Frameworks • recruitment and selection of personnel • time management	Evaluate Organisational HRM policies to ensure fair treatment of all personnel.	

Knowledge and Understanding				
	Level 4	Level 5	Level 6	Level 6 (Hons)
		• Considerate Constructors • people, motivation and behaviour • performance management and appraisal • teams and integrated teams • leadership and leadership styles • inclusion and equality • training and development	Evaluate different leadership styles at project, organisational and national level.	
			Review HRM approaches to ensure effective harmonious working environments.	
A3	Appreciate the importance of understanding the person. Understand how the construction process impacts on individual welfare, wellbeing and inclusion.	Apply person understanding to the development of a variety of processes, including: • stress management • negotiation • individual and team conflict resolution	Evaluate the application of individual person understanding to change management in construction organisations.	
A4	Understand the importance of time, cost and resource management to complete projects effectively. Be aware of external benchmarks such as CIOB Good Practice in Management of Time in Complex Projects and Codes of Practice.	Demonstrate the ability to use a range of digital planning tools, to apply them to construction processes including: • project planning • critical path analysis • resource levelling	Evaluate and apply different project management techniques to complex projects: • progress and completion • management and decision processes • Project Evaluation and Review Technique (PERT) • risk analysis • Building Information Modelling (BIM)	

A5	Define performance management for process improvement, including definition and use of Key Performance Indicators (KPIs)	Apply Key Performance Indicators (KPIs) to a construction project.	Evaluate and apply different performance management techniques to complex projects. For example:
			    • procurement and contract performance
			    • process improvement
			    • incentivisation
			    • best practices and feedback and reflection
			    • business and market development, product development and research/ innovation management	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
A6	Appreciate the role of the Construction Manager (e.g. Bale, 2010) in an international context, including: • management, development, conservation and improvement of the built environment • role of the professional manager in construction		Recommend improvements to practice to further enhance the image and efficiency of the construction industry.	
	Demonstrate an understanding of professional Codes of Conduct and ethics, including CIOB's Rules and Regulations of Professional Competence and Conduct	Discuss the issues relating to the application of ethical behaviour and Codes of Conduct.		
	Understand the CIC Essential Principles for achieving an accessible and inclusive environment.	Apply CIC Essential Principles for achieving an accessible and inclusive environment.		
	Recognise the need for online security of personal and project-specific information.	Understand the methods used to provide online security of personal and project specific information.		
	Awareness of the intellectual property rights associated with built assets.	Understand the application of intellectual property rights to a built asset.		
A7	Demonstrate an awareness of the meaning and relevance of the nine 'Protected characteristics' defined in the Equality Act 2010. These include age, disability, gender reassignment marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex and sexual orientation.	Give examples and prepare plans for the application of ethical and inclusive practice in the built environment workplace, demonstrating consideration of people as clients, customers and consumers of built environment 'products' and services.	Analyse the role and value of openness and transparency versus confidentiality and commercial sensitivity, i.e. Whistleblowing	
			Examine company, industry or government policies for inclusivity and their value to the construction industry.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
A8	Describe the principles of fair trade and fair economy.	Apply professional standards of reporting and accountancy.	Review and recommend national and international procedures to comply with professional obligations, e.g. bribery, money laundering.	
		Demonstrate understanding of the need for honesty and accuracy in reporting.		
A9	Identify responsibilities in relation to Governance and Corporate Social Responsibility within public and private bodies and to individuals, including modern slavery such as CIOB's Modern Slavery Toolkit: http://stronger2gether.org/ construction/	Apply ethical frameworks as an aid to decision making.	Compare the Governance and Corporate Social Responsibility of organisations and the wider society.	
			Evaluate company decisions from individual and professional ethical perspectives.	
A10	Identify personal strengths, understanding of self and areas for development.	Prepare a self-development plan with provision for review and reflection.	Implement a review of and reflection on self-development and self- awareness.	
A11	Understand the legal environment and terminology of health and safety as it applies to the design and management of construction projects.	Prepare a risk assessment,	Critically evaluate health and safety legislation from a corporate perspective.	
	Understand the importance and management of construction health, safety and wellbeing.	Understand the roles of the main parties in the CDM Regulations, with particular emphasis on the Principal Contractor.		
A12	Understand the importance of and provide an overview of the duties of all persons involved in construction projects with regard to health, safety and wellbeing.	Appraise a range of case studies and statistical data regarding accidents and review impact as well as causes and effects.	Reflect on personal responsibility for health, safety and wellbeing at all levels within an organisation and the consequences of action and inaction.	
A13	Demonstrate an understanding of the various health and safety management tools and techniques, and recent developments in health, safety and wellbeing management and training.	In the context of design and construction, identify and manage both potential and actual health, safety and wellbeing hazards and risks.	Critically evaluate health and safety management procedures on a variety of projects.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
A14	Understand the issues associated with the management of wellbeing and safety culture in construction.	Identify the barriers associated with establishing and maintaining an organisation's health, safety and wellbeing culture and practices.	Analyse how the Construction Industry should enhance competence, behaviour and commitment to health, safety and wellbeing in both the design and management of construction projects.	
A15	Demonstrate an understanding of: • social sustainability and quality of life • economic sustainability • environmental sustainability For example – Brundtland Report, environmental impact, low and zero carbon, energy generation.	Explain the scale of the Built Environment's impact on the environment.	Analyse the main sustainability impacts that a building has over the duration of its life cycle, from design through construction, use, refurbishment and adaptation to demolition and disposal.	
A16	In relation to sustainable development demonstrate an understanding of: • issues • terminology • policy • legislation • design	Describe the key legislative drivers which seek to minimise the impact of construction industry activity and the built environment.	Examine the Construction Industry's challenges, opportunities and responsibilities with regards to the three themes of sustainability: • social sustainability and quality of life • economic sustainability • environmental sustainability	
A17	Recognise the impact on a building's carbon emissions of providing a comfortable and healthy internal environment through the provision of: • heating and cooling • air tightness and quality • lighting quality	Explain key principles of 'low energy', 'passive' design and 'healthy' buildings.	Undertake cost-benefit and feasibility analysis of carbon issues in relation to building design and operational management. Make comparisons between predicted and actual sustainability performance of buildings	
A18	Understand key principles of environmental impact and energy/carbon assessment methodologies.	Apply appropriate environmental impact and/or carbon/energy assessment techniques.	Carry out an impact assessment of the provision of a comfortable and healthy internal environment on a building's carbon emissions. Critically appraise carbon/energy assessment techniques.	
A19	Demonstrate an understanding of the sources of waste in the built environment including:	Develop and apply policies to establish responsible sourcing and eliminate waste within the lifecycle of a construction project.	Evaluate techniques available to reduce all waste and enhance recycling including lean construction, resource efficiency and the adoption of the circular economy for sustainability.	

Knowledge and Understanding			
	Level 4	Level 5	Level 6	Level 6 (Hons)
	• material waste and re-cycling • labour resourcing.			
A20	Identify and explain how construction sites and operations impact on the environment.	Identity and apply appropriate methods to mitigate negative sustainability impacts during the construction process.		
A21	Evaluate the importance of sustainability with regards to Clients' Corporate Social Responsibility, vision, image and Key Performance Indicators.			
A22	In relation to the national and international construction industry, understand and appreciate its: • historical development • scale, structure and output • future opportunities	Identify the appropriate stakeholders involved in the construction process and their relevant roles and responsibilities Recognise the collaborative linkages and interdisciplinary relationships between the functions of construction and the other disciplines of the built environment	Review threats and opportunities for the future development of the construction industry.	
A23	Describe the role of the construction industry in the economic and social wellbeing of a country and the provision of an inclusive society.	Understand and appreciate the social, inclusive and political issues which impact on planning, design and development of the built environment.	Appraise and evaluate the influence of current issues including, sustainability, health & safety internationalisation and inclusion on the social and economic aspects of construction activity worldwide.	
A24	Understand and describe the principles of: • the legal system related to construction activity • the law of contract and tort • statutory control of construction activity including planning regulations • insurance	Describe and characterise the legal obligations and procedures in relation to the design, construction and operation stages associated with: • contracts and their administration • planning • employment • environment • design	Analyse the impact that legal obligations have on the construction management process. Appraise and evaluate alternative dispute resolution processes.	
A25	Understand and describe the principles of: • macro and micro economics	Compare, appraise and select different procurement processes for construction activity.	Examine the opportunities and problems for a construction company operating in the global market place.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	• supply and demand • market structure and operation	Understand and appreciate the global market for construction from a commercial perspective.		
A26	Understand and describe the principles of: • finance for construction organisation and activities • cash flow	Apply financial information as it relates to the management of construction projects: • cash flow, cost and finance from inception to demolition • tender evaluation • value management /engineering • whole life costing • decision making	Implement procedures and practices associated with the settlement of final accounts, claims and dispute resolution. Appraise and evaluate the financial management of corporate enterprises and professional practices.	
A27	In relation to the development process, understand and appreciate: • stages in the process • role of construction professionals within the process • responsibility for ensuring designs are inclusive use of digital technologies and information management	Compare, appraise and select different construction materials, products and processes from both an initial cost and whole life cost perspective. Compare and appraise the use of digital technologies and information management.	Demonstrate an appreciation of property and infrastructure development in relation to financial and legal aspects including development viability and appraisal. Evaluate the importance and challenges of working in a collaborative environment and the integration of design, costing and scheduling.	
A28	Undertake the measurement of land and construction work both on plan, through the use of digital information modelling or onsite	Produce examples of price and cost estimation for construction activities from feasibility through to final accounts.	Critical appraisal of electronic measurement and estimating systems	
	Understand the principles of price and cost estimation for construction activities.	Produce detailed measurement using a range of standard methods of measurement.		
A29	Describe and illustrate the functional and performance requirements of simple buildings.	Describe and illustrate the functional and performance requirements of framed and complex buildings.	Evaluate and challenge the use of proposed technologies against the need for contemporary and innovative solutions to achieve integration, buildability, speed, cost, health and safety,	

Knowledge and Understanding				
	Level 4	Level 5	Level 6	Level 6 (Hons)
		Understand, describe, select and illustrate alternative options available for the onsite or offsite construction of primary and secondary building elements of framed and complex buildings including those with basements.	inclusion and quality criteria applied to case study buildings.	
	Understand, describe, select and illustrate alternative options available for the construction of primary and secondary building elements of simple buildings and the necessary site set-up.	Undertake design option appraisal to ensure adherence to current building legislation including the conservation of energy, carbon emissions, inclusion, accessibility, security and structural performance control.	Examine the potential and use of sustainable technologies applied to case study buildings.	
A30	Understand and appreciate the function and design of building services for a simple building to ensure human comfort.	Recognise and appreciate the function and design of complex building services including those where the whole building operates as a building services system.	Examine and select suitable solutions, including renewable technologies for building services in the context of a development project.	
A31	Demonstrate a knowledge of common defects and refurbishment technologies to restore a building for contemporary use.	Discuss the refurbishment and adaptation options applicable to the upgrading of or changing the use of a building.	Investigate and propose methods to future proof buildings.	
A32	Understand site investigation techniques. Awareness of issues surrounding contaminated land and brownfield sites.	Apply principles of site investigation to assess the suitability of sites for construction projects	Analyse the effectiveness of site investigation techniques in preventing unforeseen problems in the construction phase of a project.	
A33	Explain the basic principles of land surveying.	Demonstrate competence in geomatics.		
A34	Describe the properties of building materials and understand their performance characteristics with regard to the natural environment and their impact upon it, including hazardous materials.	Analyse the performance of materials in use, based upon their scientific properties and the environment and conditions in which they are used.	Evaluate the viability of ethically sourcing construction materials and possible effects this may have on the construction process.	
A35	Demonstrate knowledge of performance maintenance technology and maintenance	Apply and evaluate various maintenance technologies and maintenance management systems as appropriate to various building types, for example; domestic, commercial, industrial, public.		

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	management, e.g. BMS			
A36			Research a contemporary construction built environment issue.	
			Demonstrate an ability to select and apply appropriate ethical research methods.	
			Analyse, synthesise and evaluate a key issue affecting the built environment.	

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
B1	Summarise information from a variety of sources	Analyse information from a variety of sources	Critically analyse information from a variety of sources	Synthesise information from a variety of sources
B2	Recognise appropriate theories, methodologies, concepts and principles from a range of subjects	Use appropriate theories, methodologies, concepts and principles from a range of subjects	Test appropriate theories, methodologies, concepts and principles from a range of subjects	Use and evaluate appropriate theories, methodologies, concepts and principles from a range of subjects
B3	collect several lines of evidence to develop arguments	Collect and analyse several lines of evidence to develop balanced arguments	collect, analyse and integrate several lines of evidence to develop balanced arguments demonstrating critical thinking	Collect, analyse, integrate and evaluate several lines of evidence to develop balanced arguments demonstrating critical thinking and synthesis
B4	plan an experiment, investigation, survey or other means to test a hypothesis or proposition	plan and design an experiment, investigation, survey or other means to test a hypothesis or proposition	Plan, design and implement an experiment, investigation, survey or other means to test a hypothesis or proposition	Plan, design, implement and evaluate an experiment, investigation, survey or other means to test a hypothesis or proposition
B5	Indicate knowledge and understanding to address multidisciplinary problems within a local and global context	Demonstrate knowledge and understanding to address multidisciplinary problems within a local and global context	Apply knowledge and understanding to address multidisciplinary problems within a local and global context	Apply knowledge and understanding to address multidisciplinary problems within a local and global context and evaluate outcomes
B6	Indicate an ability to be creative and innovative	Demonstrate creativity and innovation	Demonstrate creativity and innovation and reflect upon outcomes	Demonstrate creativity and innovation and evaluate outcomes
B7	Indicate an awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence, and

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	sound evidence	evidence	evidence, and reflect upon associated implications	evaluate implications
B8	Suggest considered decisions in complex and unpredictable contexts	Make well considered decisions in complex and unpredictable contexts	Make well considered decisions in complex and unpredictable contexts and reflect upon outcomes	Make well considered decisions in complex and unpredictable contexts and evaluate outcomes
B9	Indicate an understanding of the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
C1	Indicate an awareness of the mainstream technology and the resources it uses for constructing domestic, industrial and commercial buildings and infrastructure	Demonstrate an awareness of the mainstream technology and the resources it uses for constructing domestic, industrial and commercial buildings and infrastructure	Differentiate mainstream technologies and the resources used for constructing domestic, industrial and commercial buildings and infrastructure	Evaluate the mainstream technology and the resources it uses for constructing domestic, industrial and commercial buildings and infrastructure
C2	Indicate an awareness of the impact development has on the environment and initiatives to minimise energy, reduce carbon emissions, protect and increase biodiversity, flood protection and increase health and well-being	Demonstrate an awareness of the impact development has on the environment and initiatives to minimise energy, reduce carbon emissions, protect and increase biodiversity, flood protection and increase health and well-being	Analyse the impact development has on the environment and initiatives to minimise energy, reduce carbon emissions, protect and increase biodiversity, flood protection and increase health and well-being	Evaluate the impact development has on the environment and initiatives to minimise energy, reduce carbon emissions, protect and increase biodiversity, flood protection and increase health and well-being
C3	Indicate an ability to measure and quantify to support the design process, production of project information and the commercial management of projects	Demonstrate an ability to measure and quantify to support the design process, production of project information and the commercial management of projects	Measure and quantify to support the design process, production of project information and the commercial management of projects and reflect upon outcomes	Measure and quantify to support the design process, production of project information and the commercial management of projects and evaluate outcomes
C4	Recognise time, cost quality and value drivers affecting the design and construction and occupancy of buildings	Describe time, cost quality and value drivers affecting the design and construction and occupancy of buildings	Analyse time, cost quality and value drivers affecting the design and construction and occupancy of buildings	Evaluate time, cost quality and value drivers affecting the design and construction and occupancy of buildings
C5	Recognise legal and regulatory frameworks and systems impacting on the design and	Demonstrate an understanding of legal and regulatory frameworks and systems impacting on the design and	Analyse legal and regulatory frameworks and systems impacting on the design and construction of	Evaluate legal and regulatory frameworks and systems impacting on the design and construction of

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	construction of buildings, and the principles of procurement and contract administration	construction of buildings, and the principles of procurement and contract administration	buildings, and the principles of procurement and contract administration	buildings, and the principles of procurement and contract administration
C6	Indicate an awareness of digital technologies that support the construction process and the management of costs	Describe digital technologies that support the construction process and the management of costs	Utilise digital technologies that support the construction process and the management of costs	Utilise and evaluate digital technologies that support the construction process and the management of costs
C7	Recognise the roles of other professionals and parties associated with construction, property and surveying throughout a building's life cycle and be aware of the benefits of collaborative practice	Describe the roles of other professionals and parties associated with construction, property and surveying throughout a building's life cycle and be aware of the benefits of collaborative practice	Differentiate the roles of other professionals and parties associated with construction, property and surveying throughout a building's life cycle and be aware of the benefits of collaborative practice	Evaluate the roles of other professionals and parties associated with construction, property and surveying throughout a building's life cycle and be aware of the benefits of collaborative practice
C8	Recognise the importance of professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact	Explain the importance of professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact	Analyse professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact	Evaluate professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance/dispute resolution, communities and the stakeholders with whom they have contact
C9	Recognise principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the commercial management and quantity surveying process.	Explain principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the commercial management and quantity surveying process.	Analyse principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the commercial management and quantity surveying process.	Evaluate principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the commercial management and quantity surveying process.

Practical, Professional and Employability Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
D1	plan, conduct and present an independent investigation with significant guidance			
D2	relate investigations to some prior work and reference it appropriately			
D3	where appropriate, use laboratory and field equipment safely			

	Practical, Professional and Employability Skills			
	Level 4	Level 5	Level 6	Level 6 (Hons)
D4	apply a range of methods to solve problems			
D5	use appropriate technologies to address problems			
D6	where appropriate, describe and record in the field and laboratory			
D7	interpret practical results with guidance			
D8	present results of investigations in a number of formats			
D9	apply survey measurements and evaluation techniques as appropriate to the course			
D10	recognise and record visual information when on site or from graphical sources			
D11	apply professional judgement in drawing skills and knowledge together and applying them to real world problems			
D12	recognise when information is incomplete			
D13	appreciate risk			
D14	process and interpret data and information			
D15	critically appraise spatial data			
D16	solve basic numerical problems using appropriate techniques			
D17	undertake simple statistical analysis			
D18	select and apply appropriate methods of collecting, analysing, and synthesising data			
D19	appreciate the importance of intellectual property and its role within the innovation process.			
D20	communicate to a variety of audiences in appropriate written, graphical, electronic and verbal forms			
D21	make contributions to group discussions			
D22	watch, listen and respond to others			
D23	negotiate and mediate with others			
D24	use social media for communication			
D25	use the internet for communication and information retrieval			
D26	handle electronic information with guidance, applying appropriate techniques, digital tools and applications to support key subjects			
D27	have an awareness of the safe, ethical and legal use of digital media			
D28	demonstrate the application of information technology and digital tools and techniques to support key subjects.			
D29	make a constructive contribution to teamwork			
D30	identify individual goals			
D31	recognise and respect the views of others			
D32	recognise equality, diversity and inclusion in all its forms			
D33	reflect on team performance.			
D34	recognise and be able to comment on the moral and ethical issues associated with the subject			
D35	appreciate the need for professional codes of conduct			
D36	accept responsibility for their own learning			
D37	identify targets for personal, career and academic development			
D38	be adaptable and have a flexible approach to study and work			
D39	develop skills necessary for self-managed, independent and lifelong learning			

Practical, Professional and Employability Skills			
	Level 4	Level 5	Level 6	Level 6 (Hons)
D40	recognise personal strengths and weaknesses.		
D41 (WbL)	Present information effectively to audiences		
	Demonstrate effective meeting skills		
	Demonstrate effective interpersonal skills and informal communication		
D42 (WbL)	Identify and determine solutions to problems		
	Investigate problems, causes and effects within the job role		
D43 (WbL)	Identify and gather all necessary information required to carry out tasks within the job role		
	Process information effectively to meet work objectives		
	Identify actions to remedy incorrect or insufficient information		
D44 (WbL)	Identify the various procurement procedures within your organisation		
	Demonstrate the ability to identify and manage risk		
	Demonstrate effective budget control and identify budget constraints		
	Demonstrate effective time management		
D45 (WbL)	Demonstrate effective team working		
	Demonstrate the ability to deal with conflict in teams		
D46 (WbL)	Set and review work objectives		
	Plan activities and work methods		
	Monitor and control work activities		
D47 (WbL)	Identify job responsibilities and practices under health, safety and welfare legislation		
	Identify and describe the implementation of risk control measures		
D48 (WbL)	Investigate the quality of a product, service or process		
	Undertake an investigation for the organisation		
D49 (WbL)	Identify and evaluate the company's policies and practices in sustainable building		
	Identify ways of protecting the workplace and surrounding environments		
D50 (WbL)	Identify the impact/consequences of making decisions		
	Demonstrate an understanding of construction and relevant civil law		

4. **Building Surveying**

Knowledge and Understanding			
	Level 4	Level 5	Level 6	Level 6 (Hons)
A1	Understand the management of construction processes as they relate to the project from inception to recycling Understanding corporate	Apply knowledge of the construction, maintenance and adaptation process to the management of projects and the selection of procurement methodology	Analyse and solve problems relating to the construction process.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	organisations, industry, clients and society			
A2	Understand the role and responsibilities of people involved in the construction process.	Explain how human resource/people management methods affect the construction process. For example: • Employee Relations Frameworks • recruitment and selection of personnel • time management • Considerate Constructors • people, motivation and behaviour • performance management and appraisal • teams and integrated teams • leadership and leadership styles • inclusion and equality • training and development	Evaluate Organisational HRM policies to ensure fair treatment of all personnel. Evaluate different leadership styles at: • Project level • Organisational level • National level Review HRM approaches to ensure effective harmonious working environments.	
A3	Appreciate the importance of understanding the person. Understand how the construction process impacts on individual welfare, wellbeing and inclusion.	Apply person understanding to the development of a variety of processes, including: • stress management • negotiation • individual and team conflict resolution	Evaluate the application of individual person understanding to change management in construction organisations.	
A4	Understand the importance of time, cost and resource management to complete projects effectively. Be aware of external benchmarks such as CIOB Good Practice in Management of Time in Complex Projects and Codes of Practice.	Demonstrate the ability to use a range of digital planning tools, to apply them to construction processes including: • project planning • critical path analysis • resource levelling	Evaluate and apply different project management techniques to complex projects: • progress and completion • management and decision processes • Project Evaluation and Review Technique (PERT) • risk analysis • Building Information Modelling (BIM)	
A5	Define performance management for process improvement, including definition and use of Key	Apply Key Performance Indicators (KPIs) to a construction project.	Evaluate and apply different performance management techniques to complex projects. For example: • procurement and contract performance • process improvement	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	Performance Indicators (KPIs)		• incentivisation • best practices and feedback and reflection • business and market development, product development and research/ innovation management	
A6	Appreciate the role of the Construction Manager (e.g. Bale, 2010) in an international context, including: • management, development, conservation and improvement of the built environment • role of the professional manager in construction		Recommend improvements to practice to further enhance the image and efficiency of the construction industry.	
	Demonstrate an understanding of professional Codes of Conduct and ethics, including CIOB's Rules and Regulations of Professional Competence and Conduct	Discuss the issues relating to the application of ethical behaviour and Codes of Conduct.		
	Understand the CIC Essential Principles for achieving an accessible and inclusive environment.	Apply CIC Essential Principles for achieving an accessible and inclusive environment.		
	Recognise the need for online security of personal and project-specific information.	Understand the methods used to provide online security of personal and project specific information.		
	Awareness of the intellectual property rights associated with built assets.	Understand the application of intellectual property rights to a built asset.		
A7	Demonstrate an awareness of the meaning and relevance of the nine 'Protected characteristics' defined in the Equality Act 2010. These	Give examples and prepare plans for the application of ethical and inclusive practice in the built environment workplace, demonstrating consideration of people as clients, customers and	Analyse the role and value of openness and transparency versus confidentiality and commercial sensitivity, i.e. Whistleblowing	

Knowledge and Understanding			
	Level 4	Level 5	Level 6	Level 6 (Hons)
	include age, disability, gender reassignment marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex and sexual orientation.	consumers of built environment 'products' and services.	Examine company, industry or government policies for inclusivity and their value to the construction industry.	
A8	Describe the principles of fair trade and fair economy.	Apply professional standards of reporting and accountancy.	Review and recommend national and international procedures to comply with professional obligations, e.g. bribery, money laundering.	
		Demonstrate understanding of the need for honesty and accuracy in reporting.		
A9	Identify responsibilities in relation to Governance and Corporate Social Responsibility within public and private bodies and to individuals, including modern slavery such as CIOB's Modern Slavery Toolkit: http://stronger2gether.org/ construction/	Apply ethical frameworks as an aid to decision making.	Compare the Governance and Corporate Social Responsibility of organisations and the wider society.	
			Evaluate company decisions from individual and professional ethical perspectives.	
A10	Identify personal strengths, understanding of self and areas for development.	Prepare a self-development plan with provision for review and reflection.	Implement a review of and reflection on self-development and self-awareness.	
A11	Understand the legal environment and terminology of health and safety as it applies to the design and management of construction projects.	Prepare a risk assessment,	Critically evaluate health and safety legislation from a corporate perspective.	
	Understand the importance and management of construction health, safety and wellbeing.	Understand the roles of the main parties in the CDM Regulations, with particular emphasis on the Principal Contractor.		
A12	Understand the importance of and provide an overview of the duties of all persons involved in construction projects with regard to health, safety and wellbeing.	Appraise a range of case studies and statistical data regarding accidents and review impact as well as causes and effects.	Reflect on personal responsibility for health, safety and wellbeing at all levels within an organisation and the consequences of action and inaction.	

Knowledge and Understanding				
	Level 4	Level 5	Level 6	Level 6 (Hons)
A13	Demonstrate an understanding of the various health and safety management tools and techniques, and recent developments in health, safety and wellbeing management and training.	In the context of design and construction, identify and manage both potential and actual health, safety and wellbeing hazards and risks.	Critically evaluate health and safety management procedures on a variety of projects.	
A14	Understand the issues associated with the management of wellbeing and safety culture in construction.	Identify the barriers associated with establishing and maintaining an organisation's health, safety and wellbeing culture and practices.	Analyse how the Construction Industry should enhance competence, behaviour and commitment to health, safety and wellbeing in both the design and management of construction projects.	
A15	Demonstrate an understanding of: • social sustainability and quality of life • economic sustainability • environmental sustainability For example – Brundtland Report, environmental impact, low and zero carbon, energy generation.	Explain the scale of the Built Environment's impact on the environment.	Analyse the main sustainability impacts that a building has over the duration of its life cycle, from design through construction, use, refurbishment and adaptation to demolition and disposal.	
A16	In relation to sustainable development demonstrate an understanding of: • issues • terminology • policy • legislation • design	Describe the key legislative drivers which seek to minimise the impact of construction industry activity and the built environment.	Examine the Construction Industry's challenges, opportunities and responsibilities with regards to the three themes of sustainability: • social sustainability and quality of life • economic sustainability • environmental sustainability	
A17	Recognise the impact on a building's carbon emissions of providing a comfortable and healthy internal environment	Explain key principles of 'low energy', 'passive' design and 'healthy' buildings.	Undertake cost-benefit and feasibility analysis of carbon issues in relation to building design and operational management.	

Knowledge and Understanding			
	Level 4	Level 5	Level 6	Level 6 (Hons)
	through the provision of: • heating and cooling • air tightness and quality • lighting quality		Make comparisons between predicted and actual sustainability performance of buildings	
A18	Understand key principles of environmental impact and energy/carbon assessment methodologies.	Apply appropriate environmental impact and/or carbon/energy assessment techniques.	Carry out an impact assessment of the provision of a comfortable and healthy internal environment on a building's carbon emissions.	
			Critically appraise carbon/energy assessment techniques.	
A19	Demonstrate an understanding of the sources of waste in the built environment including: • material waste and re-cycling • labour resourcing.	Develop and apply policies to establish responsible sourcing and eliminate waste within the lifecycle of a construction project.	Evaluate techniques available to reduce all waste and enhance recycling including lean construction, resource efficiency and the adoption of the circular economy for sustainability.	
A20	Identify and explain how construction sites and operations impact on the environment.	Identity and apply appropriate methods to mitigate negative sustainability impacts during the construction process.		
A21	Evaluate the importance of sustainability with regards to Clients' Corporate Social Responsibility, vision, image and Key Performance Indicators.			
A22	In relation to the national and international construction industry, understand and appreciate its: • historical development • scale, structure and output • future opportunities	Identify the appropriate stakeholders involved in the construction process and their relevant roles and responsibilities	Review threats and opportunities for the future development of the construction industry.	
		Recognise the collaborative linkages and interdisciplinary relationships between the functions of construction and the other disciplines of the built environment		
A23	Describe the role of the construction industry in the economic and social wellbeing of a country and the provision of an inclusive society.	Understand and appreciate the social, inclusive and political issues which impact on planning, design and development of the built environment.	Appraise and evaluate the influence of current issues including, sustainability, health & safety internationalisation and inclusion on the social and economic aspects of construction activity worldwide.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
A24	Understand and describe the principles of: • the legal system related to construction activity • the law of contract and tort • statutory control of construction activity including planning regulations • insurance	Describe and characterise the legal obligations and procedures in relation to the design, construction and operation stages associated with: • contracts and their administration • planning • employment • environment • design	Analyse the impact that legal obligations have on the construction management process. Appraise and evaluate alternative dispute resolution processes.	
A25	Understand and describe the principles of: • macro and micro economics • supply and demand • market structure and operation	Compare, appraise and select different procurement processes for construction activity. Understand and appreciate the global market for construction from a commercial perspective.	Examine the opportunities and problems for a construction company operating in the global market place.	
A26	Understand and describe the principles of: • finance for construction organisation and activities • cash flow	Apply financial information as it relates to the management of construction projects: • cash flow, cost and finance from inception to demolition • tender evaluation • value management /engineering • whole life costing • decision making	Implement procedures and practices associated with the settlement of final accounts, claims and dispute resolution. Appraise and evaluate the financial management of corporate enterprises and professional practices.	
A27	In relation to the development process, understand and appreciate: • stages in the process • role of construction	Compare, appraise and select different construction materials, products and processes from both an initial cost and whole life cost perspective.	Demonstrate an appreciation of property and infrastructure development in relation to financial and legal aspects including development viability and appraisal.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	professionals within the process • responsibility for ensuring designs are inclusive use of digital technologies and information management	Compare and appraise the use of digital technologies and information management.	Evaluate the importance and challenges of working in a collaborative environment and the integration of design, costing and scheduling.	
A28	Undertake the measurement of land and construction work both on plan, through the use of digital information modelling or onsite	Produce examples of price and cost estimation for construction activities from feasibility through to final accounts.	Critical appraisal of electronic measurement and estimating systems	
A28	Understand the principles of price and cost estimation for construction activities.	Produce detailed measurement using a range of standard methods of measurement.		
A29	Describe and illustrate the functional and performance requirements of simple buildings.	Describe and illustrate the functional and performance requirements of framed and complex buildings.	Evaluate and challenge the use of proposed technologies against the need for contemporary and innovative solutions to achieve integration, buildability, speed, cost, health and safety, inclusion and quality criteria applied to case study buildings.	
A29		Understand, describe, select and illustrate alternative options available for the onsite or offsite construction of primary and secondary building elements of framed and complex buildings including those with basements.		
A29	Understand, describe, select and illustrate alternative options available for the construction of primary and secondary building elements of simple buildings and the necessary site set-up.	Undertake design option appraisal to ensure adherence to current building legislation including the conservation of energy, carbon emissions, inclusion, accessibility, security and structural performance control.	Examine the potential and use of sustainable technologies applied to case study buildings.	
A30	Understand and appreciate the function and design of building services for a simple building to ensure human comfort.	Recognise and appreciate the function and design of complex building services including those where the whole building operates as a building services system.	Examine and select suitable solutions, including renewable technologies for building services in the context of a development project.	
A31	Demonstrate a knowledge of	Discuss the refurbishment and	Investigate and propose methods to future proof buildings.	

Knowledge and Understanding

	Level 4	Level 5	Level 6	Level 6 (Hons)
	common defects and refurbishment technologies to restore a building for contemporary use.	adaptation options applicable to the upgrading of or changing the use of a building.		
A32	Understand site investigation techniques. Awareness of issues surrounding contaminated land and brownfield sites.	Apply principles of site investigation to assess the suitability of sites for construction projects	Analyse the effectiveness of site investigation techniques in preventing unforeseen problems in the construction phase of a project.	
A33	Explain the basic principles of land surveying.	Demonstrate competence in geomatics.		
A34	Describe the properties of building materials and understand their performance characteristics with regard to the natural environment and their impact upon it, including hazardous materials.	Analyse the performance of materials in use, based upon their scientific properties and the environment and conditions in which they are used.	Evaluate the viability of ethically sourcing construction materials and possible effects this may have on the construction process.	
A35	Demonstrate knowledge of performance maintenance technology and maintenance management, e.g. BMS	Apply and evaluate various maintenance technologies and maintenance management systems as appropriate to various building types, for example; domestic, commercial, industrial, public.		
A36	N/A	N/A	Research a contemporary construction built environment issue.	
			Demonstrate an ability to select and apply appropriate ethical research methods.	
			Analyse, synthesise and evaluate a key issue affecting the built environment.	

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
B1	Summarise information from a variety of sources	Analyse information from a variety of sources	Critically analyse information from a variety of sources	Synthesise information from a variety of sources
B2	Recognise appropriate theories, methodologies, concepts and	Use appropriate theories, methodologies, concepts and	Test appropriate theories, methodologies, concepts and	Use and evaluate appropriate theories, methodologies, concepts and

Intellectual Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
	principles from a range of subjects	principles from a range of subjects	principles from a range of subjects	principles from a range of subjects
B3	collect several lines of evidence to develop arguments	Collect and analyse several lines of evidence to develop balanced arguments	collect, analyse and integrate several lines of evidence to develop balanced arguments demonstrating critical thinking	Collect, analyse, integrate and evaluate several lines of evidence to develop balanced arguments demonstrating critical thinking and synthesis
B4	plan an experiment, investigation, survey or other means to test a hypothesis or proposition	plan and design an experiment, investigation, survey or other means to test a hypothesis or proposition	Plan, design and implement an experiment, investigation, survey or other means to test a hypothesis or proposition	Plan, design, implement and evaluate an experiment, investigation, survey or other means to test a hypothesis or proposition
B5	Indicate knowledge and understanding to address multidisciplinary problems within a local and global context	Demonstrate knowledge and understanding to address multidisciplinary problems within a local and global context	Apply knowledge and understanding to address multidisciplinary problems within a local and global context	Apply knowledge and understanding to address multidisciplinary problems within a local and global context and evaluate outcomes
B6	Indicate an ability to be creative and innovative	Demonstrate creativity and innovation	Demonstrate creativity and innovation and reflect upon outcomes	Demonstrate creativity and innovation and evaluate outcomes
B7	Indicate an awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence, and reflect upon associated implications	Demonstrate awareness of the provisional nature of the facts and principles associated with a field of study with those based on opinion and not supported by sound evidence, and evaluate implications
B8	Suggest considered decisions in complex and unpredictable contexts	Make well considered decisions in complex and unpredictable contexts	Make well considered decisions in complex and unpredictable contexts and reflect upon outcomes	Make well considered decisions in complex and unpredictable contexts and evaluate outcomes
B9	Indicate an understanding of the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
C1	Recognise the performance requirements of buildings and facilities	Demonstrate an appreciation of the performance requirements of buildings and facilities	Critically appraise the performance requirements of buildings and facilities	Evaluate the performance requirements of buildings and facilities and make recommendations to enhance future performance

Subject Skills				
	Level 4	Level 5	Level 6	Level 6 (Hons)
C2	Identify the technical factors affecting the design and construction of buildings	Describe the technical factors affecting the design and construction of buildings	Analyse the technical factors affecting the design and construction of buildings	Evaluate the technical factors affecting the design and construction of buildings
C3	Recognise that differing design options may be employed in the construction of buildings	Analyse the differing design options employed in the construction of buildings	Analyse the design options that may be employed in the construction of buildings	Select and justify design options that may be employed in the construction of buildings
C4	Demonstrate an awareness of the mainstream technology for constructing domestic, industrial and commercial buildings	Describe the mainstream technology for constructing domestic, industrial and commercial buildings	Critically appraise the mainstream technology for constructing domestic, industrial and commercial buildings	Evaluate and recommend the mainstream technology for constructing domestic, industrial and commercial buildings
C5	Identify the broad categories of building components and materials together with the pathological processes resulting in their degradation and failure	Describe the broad categories of building components and materials together with the pathological processes	Analyse the broad categories of building components and materials together with the pathological processes	Select and justify the broad categories of building components and materials together with the pathological processes
C6	Recognise the broad approaches available to manage, repair and maintain buildings and facilities	Describe the broad approaches available to manage, repair and maintain buildings and facilities	Select the broad approaches available to manage, repair and maintain buildings and facilities	Analyse and evaluate the broad approaches available to manage, repair and maintain buildings and facilities
C7	Indicate an awareness of the legal and regulatory frameworks and systems impacting on the design, construction and occupancy of buildings and facilities	Demonstrate awareness of the legal and regulatory frameworks and systems impacting on the design, construction and occupancy of buildings and facilities	Analyse the legal and regulatory frameworks and systems impacting on the design, construction and occupancy of buildings and facilities	Select and justify the legal and regulatory frameworks and systems impacting on the design, construction and occupancy of buildings and facilities
C8	Recognise the socioeconomic factors influencing property development, construction and use	Describe the socioeconomic factors influencing property development, construction and use	Critically appraise the socioeconomic factors influencing property development, construction and use	Analyse and evaluate the socioeconomic factors influencing property development, construction and use
C9	Have an awareness of the environmental impact of buildings and facilities	Describe the environmental impact of buildings and facilities	Recommend mitigations to reduce the environmental impact of buildings and facilities	Analyse and evaluate the environmental impact of buildings and facilities
C10	Appreciate the nature of organisations that own and operate buildings	Articulate the nature of organisations that own and operate buildings	Critically appraise the nature of organisations that own and operate buildings	Analyse and evaluate the nature of organisations that own and operate buildings

Subject Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
C11	Be aware of the professional roles and responsibilities of key players in the property development cycle	Describe the professional roles and responsibilities of key players in the property development cycle	Analyse the professional roles and responsibilities of key players in the property development cycle	Analyse the professional roles and responsibilities of key players in the property development cycle
C12	Have an awareness of the main costs associated with the construction and use of buildings and facilities	Describe the main costs associated with the construction and use of buildings and facilities	Justify the main costs associated with the construction and use of buildings and facilities	Analyse the main costs associated with the construction and use of buildings and facilities
C13	Be aware of the professional and ethical frameworks associated with the development and use of buildings and facilities	Articulate the professional and ethical frameworks associated with the development and use of buildings and facilities	Select and justify the professional and ethical frameworks associated with the development and use of buildings and facilities	Analyse and evaluate of the professional and ethical frameworks associated with the development and use of buildings and facilities
C14	Have an understanding of the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the building surveying process.	Demonstrate an understanding of the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the building surveying process.	Critically appraise the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the building surveying process.	Analyse and evaluate of the principles and processes that deliver an inclusive environment recognising the diversity of user needs by putting people (of all ages and abilities) at the heart of the building surveying process.

Practical, Professional and Employability Skills

	Level 4	Level 5	Level 6	Level 6 (Hons)
D1	plan, conduct and present an independent investigation with significant guidance			
D2	relate investigations to some prior work and reference it appropriately			
D3	where appropriate, use laboratory and field equipment safely			
D4	apply a range of methods to solve problems			
D5	use appropriate technologies to address problems			
D6	where appropriate, describe and record in the field and laboratory			
D7	interpret practical results with guidance			
D8	present results of investigations in a number of formats			
D9	apply survey measurements and evaluation techniques as appropriate to the course			
D10	recognise and record visual information when on site or from graphical sources			
D11	apply professional judgement in drawing skills and knowledge together and applying them to real world problems			
D12	recognise when information is incomplete			
D13	appreciate risk			
D14	process and interpret data and information			

Practical, Professional and Employability Skills			
	Level 4	Level 5	Level 6	Level 6 (Hons)
D15	critically appraise spatial data			
D16	solve basic numerical problems using appropriate techniques			
D17	undertake simple statistical analysis			
D18	select and apply appropriate methods of collecting, analysing, and synthesising data			
D19	appreciate the importance of intellectual property and its role within the innovation process.			
D20	communicate to a variety of audiences in appropriate written, graphical, electronic and verbal forms			
D21	make contributions to group discussions			
D22	watch, listen and respond to others			
D23	negotiate and mediate with others			
D24	use social media for communication			
D25	use the internet for communication and information retrieval			
D26	handle electronic information with guidance, applying appropriate techniques, digital tools and applications to support key subjects			
D27	have an awareness of the safe, ethical and legal use of digital media			
D28	demonstrate the application of information technology and digital tools and techniques to support key subjects.			
D29	make a constructive contribution to teamwork			
D30	identify individual goals			
D31	recognise and respect the views of others			
D32	recognise equality, diversity and inclusion in all its forms			
D33	reflect on team performance.			
D34	recognise and be able to comment on the moral and ethical issues associated with the subject			
D35	appreciate the need for professional codes of conduct			
D36	accept responsibility for their own learning			
D37	identify targets for personal, career and academic development			
D38	be adaptable and have a flexible approach to study and work			
D39	develop skills necessary for self-managed, independent and lifelong learning			
D40	recognise personal strengths and weaknesses.			
D41 (WbL)	Present information effectively to audiences			
	Demonstrate effective meeting skills			
	Demonstrate effective interpersonal skills and informal communication			
D42 (WbL)	Identify and determine solutions to problems			
	Investigate problems, causes and effects within the job role			
D43 (WbL)	Identify and gather all necessary information required to carry out tasks within the job role			
	Process information effectively to meet work objectives			
	Identify actions to remedy incorrect or insufficient information			
D44 (WbL)	Identify the various procurement procedures within your organisation			
	Demonstrate the ability to identify and manage risk			

	Practical, Professional and Employability Skills			
	Level 4	Level 5	Level 6	Level 6 (Hons)
	Demonstrate effective budget control and identify budget constraints			
	Demonstrate effective time management			
D45 (WbL)	Demonstrate effective team working			
	Demonstrate the ability to deal with conflict in teams			
D46 (WbL)	Set and review work objectives			
	Plan activities and work methods			
	Monitor and control work activities			
D47 (WbL)	Identify job responsibilities and practices under health, safety and welfare legislation			
	Identify and describe the implementation of risk control measures			
D48 (WbL)	Investigate the quality of a product, service or process			
	Undertake an investigation for the organisation			
D49 (WbL)	Identify and evaluate the company's policies and practices in sustainable building			
	Identify ways of protecting the workplace and surrounding environments			
D50 (WbL)	Identify the impact/consequences of making decisions			
	Demonstrate an understanding of construction and relevant civil law			

5. **BSc Civil Engineering Studies**

	Knowledge and Understanding	
	Level 5	Level 6
A1	Apply mathematical concepts or principles to analyse broadly- defined civil engineering problems.	Apply mathematical principles and analytical techniques to integrated civil engineering problems.
A2	Using engineering and scientific principles, demonstrate analysis of broadly defined problems.	Apply knowledge and experience of science and engineering principles to investigate and solve civil engineering problems, reaching substantiated conclusions.
A3	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.	Select and apply current technologies and technical literature relevant to Civil Engineering and consider the impact of the United Nations Sustainable Development Goals.
A4	Select appropriate computational and analytical techniques/tools to solve civil engineering problems.	Select and apply appropriate computational and analytical techniques/tools to solve broadly- defined civil engineering problems.
A5	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.	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

Knowledge and Understanding	
Level 5	Level 6
	engineering judgement.

Intellectual Skills		
	Level 5	Level 6
B1	Work with information that may be incomplete or uncertain, identifying constraints and offering solutions.	Identify and analyse problems and use methods to recognise causes and achieve satisfactory solutions.
B2	Plan and use appropriate resources, materials, equipment, engineering technologies and processes to complete tasks or projects.	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.
B3	Apply an integrated or systems approach to the solution of broadly defined problems.	Apply an integrated or systems approach to the solution of broadly defined problems.
B4	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.	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.

Subject Skills		
	Level 5	Level 6
C1	Devise an experiment, investigation, study, or other means to test engineering principles and properties of materials, a hypothesis or proposition.	Plan, design, test and evaluate an experiment, investigation, study, or other means to test a hypothesis or proposition.
C2	Apply knowledge of project management principles and commercial risk.	Apply knowledge of engineering project management principles, commercial, risk and environmental management.
C3	Apply 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. Understand the role of regulating bodies such as Natural Resources Wales / Environment Agency.	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.
C4	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.	Evaluate relevant knowledge and information to contribute to climate resilience solutions for civil engineering projects.
C5	Identify and evaluate risks/uncertainty and environmental and societal impact associated with a project.	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.

Subject Skills		
	Level 5	Level 6
C6	Select and use technical literature, design codes and industry standards and other sources of information to address broadly defined problems.	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.
C7	Apply knowledge of control cost and budgets for engineering projects and identify commercial frameworks and contracts within own area of responsibility.	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.

Practical, Professional and Employability Skills		
	Level 5	Level 6
D1	Use appropriate procedures to explore and develop information in English and/or Welsh. Communicate with technical and non- technical audiences.	Communicate effectively in writing, verbally and through visual representations in English and/or Welsh with technical and non- technical audiences.
D2	Demonstrate teamworking skills and have an awareness of equality, diversity, and inclusion benefits and ethical choices, informed by professional codes of conduct.	Demonstrate teamworking skills and management and have an awareness of equality, diversity, and inclusion benefits and ethical choices, informed by professional codes of conduct.
D3	Recognise own academic strengths and areas for improvement, reflect on performance. Participate in relevant Professional Body activities including CPD.	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.
D4	Adopt a holistic and proportionate approach to security of people and data.	Adopt a holistic and proportionate approach to the management of security risk and the protection of Intellectual Property.
D5	Recognise the need for quality management systems and continuous improvements in the context of broadly defined problems.	Utilise quality management systems and continuous improvements in the context of broadly defined problems.
D6	Demonstrate the importance of academic and professional integrity.	Demonstrate the importance of academic and professional integrity.

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 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 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 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 students 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 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.

In embracing opportunities presented by the use of Artificial Intelligence, students 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 underpins related clauses within professional body and QAA Benchmark specifications that relate directly to the disciplines of the titles proposed. All HNC and BSc Civil Engineering Studies students will be required to be permanently employed on a full-time basis within their industrial context, and 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. All full-time students will be required to undertake a work placement of at least one week's duration in an employment setting considered appropriate by their respective Programme Leader.

The Wrexham University Skills Framework

The Wrexham University Skills Framework describes the graduate skills, knowledge and expertise students should master to build success in their studies, work, and life.

To this end, the University's Strategy for Supporting Student Learning and Achievement (SSSLA) outlines WU's priority to work with students as partners to develop a culturally embedded approach to student engagement. The strategy aims to ensure that students achieve great outcomes as a result of engaging with opportunities that are built upon the two pillars of high challenge and high support, within the Active Learning Framework (ALF)

Using the philosophies of the Active Learning Framework (ALF), ten skills are embedded within degree level programmes complementing core academic subject knowledge and understanding as follows:

Adaptability & Flexibility
Career Development
Critical Thinking
Digital Capabilities
Enterprise and Entrepreneurship
Interpersonal Skills
Personal Skills
Resilience
Teamwork

Programmes are designed to enable students to develop and enhance these skills via module content, module learning outcomes and assessment opportunities. Each module will help provide different opportunities for developing and enhancing these capabilities.

The programme has been designed using an Employability Level Descriptor in collaboration with the Careers and Employability team. The Employability Level Descriptor document is reviewed as part of validation and following approval will be published in the student programme handbook.

The Careers and Employability team are available to provide additional careers education activities for all programmes as well as individualised information, advice and guidance. Learners gain access to self-directed learning resources by logging into our careers portal. Here students can book professional careers guidance appointments and make employment and volunteering applications and learn to build and develop their CV and applications.

Work based/placement learning statement

Because the Built Environment subject area exists to serve the needs of the construction and civil engineering sector and its associated professions through education, training and research, employability is of particular significance to the structure of its provision. Not only is this important in satisfying the objectives of the University's Employment Strategy, it is also a fundamental component in professional-body accreditation and recognition within the wider industrial context. With the exception of the HNC Construction Technology and BSc Civil Engineering Studies cohorts, the remaining titles will incorporate a compulsory work-placement component of not less than 36 hours at Level 5 for all students, to be undertaken within an organisation deemed appropriate to the student's programme of study.

The identification and fulfilment of opportunities for work-placements will continue to be coordinated by the Placement Officer of the University's Work Related Learning Unit, in

liaison with Programme Leaders; a system that has worked very well in realising similar requirements in existing provision.

Welsh medium provision

The programmes will be delivered through the medium of English, though students are entitled to submit assessments in the Welsh Language.

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.

Assessment strategy

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 professional and industrial work environment. Work-based Learning, Professional Practice and work placement components in particular, will allow students 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 a student's knowledge and understanding of their subject.

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, in-class tests, examinations, coursework and viva voce 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 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.

The Table that follows identifies the assessment type and weighting associated with each module.

Level & Ref.	Module Code	Module	Assessment
L4	AUR491	**Architectural Design Technology 1**	100% coursework
L4	AUR492	**Building Surveying 1**	100% coursework
L4	AUR493	**Construction Management 1**	100% coursework
L4	AUR494	**Quantity Surveying 1**	100% coursework
L4	AUR495	**Civil Engineering Design**	100% coursework
L4	AUR496	**Digital Technologies in Drawing and Modelling**	100% practical
L4	AUR497	**Legal Principles, Compliance and Liability**	50% in-class test, 50% written assignment
L4	AUR499	**Science and Materials**	100% coursework
L4	AUR4A1	**Construction Technology**	50% in-class test, 50% written assignment
L4	AUR4A2	**Geotechnics**	50% in-class test, 50% coursework
L4	AUR4A3	**Structural Mechanics**	100% coursework
L4	ENG495	**Analytical Eng. Techniques**	50% exam, 50% coursework
L4	AUR498	**WBL1**	75% portfolio, 25% presentation
L4	AUR4A4	**Digital Technologies in Surveying**	practical 100%
L4	AUR4A5	**Professional Practice 1**	75% coursework, 25% presentation
L5	AUR599	**Building Surveying 2**	50% Practical, 50% Written Assignment
L5	AUR5A1	**Construction Management 2**	50% Practical, 50% Exam
L5	AUR5A2	**Quantity Surveying 2**	50% exam, 50% coursework
L5	AUR5A3	**Modern Methods of Construction**	50% Presentation, 50% Exam
L5	AUR5A4	**Commercial Management**	100% coursework
L5	AUR5A5	**Building Services**	50% Exam, 50% Written Assignment
L5	AUR5A6	**Civil Engineering Mathematics**	50% in-class test, 50% in-class test
L5	AUR5A7	**Water Resource Management**	50% in-class test, 50% presentation
L5	AUR5A8	**Infrastructure and the Environment**	50% coursework, 50% presentation
L5	ENG5B2	**Wind and Hydro Energy Engineering**	100% coursework
L5	AUR5A9	**WBL2**	75% portfolio, 25% presentation
L5	AUR5B1	**Architectural Design Technology 2**	75% Portfolio, 25% Presentation
L5	AUR5B2	**Professional Practice 2**	75% Coursework, 25% Presentation
L5	ENG5A5	**Mechanics, Structures & FEA**	50% Exam, 50% coursework
L5	AUR5B3	**Procurement and Contract Practice**	50% Written Assignment, 50% Exam
L6	AUR697	**Project Management**	75% Group project, 25% Written Assignment
L6	AUR698	**Individual Research Project**	75% Dissertation, 25% Oral Assessment
L6	AUR699	**Advanced Materials**	100% Coursework
L6	AUR6A1	**Flood Risk Management**	100% Coursework
L6	AUR6A2	**Design for Climate Resilience**	50% Presentation, 50% Group Project
L6	AUR6A3	**Major Project (WBL DA)**	100% Negotiated Learning
L6	AUR6A4	**Professional Practice 3**	75% Coursework, 25% Presentation

L6	AUR6A5	**Work Based Learning 3**	75% portfolio, 25% presentation

Assessment and award regulations

Derogations
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.

Credits shall be awarded by an Assessment Board for the modules listed below in which a pass mark (40%) has been achieved, with a minimum mark of 40% in each element of assessment.

- AUR5B1 Architectural Design Technology 2
- AUR599 Building Surveying 2
- AUR5A1 Construction Management 2
- AUR5A2 Quantity Surveying 2
- AUR6A3 Major Project (WBL DA)

Non Credit Bearing assessment
There are no non-credit-bearing assessments associated with the programmes described in this specification.

Borderline Classifications (Undergraduate programmes)
Substantive modules considered in borderline calculations for each programme are as follows:

BSc (Hons) Architectural Design Technology: **Major Project**
BSc (Hons) Building Surveying: **Major Project**
BSc Civil Engineering Studies: no classification
BSc (Hons) Construction Management: **Major Project**
BSc (Hons) Quantity Surveying: **Major Project**

In considering borderline cases the Assessment Board shall raise the classification to the next level if all of the following criteria are met:

- At least 50% of the credits at level 6 fall within the higher classification.
- All level 6 modules must have been passed at the first attempt.
- The mark achieved for the *substantive* module is within the higher classification.

Ordinary Degrees
BSc Civil Engineering Studies is an ordinary degree and students must pass all 180 credits to be eligible for the ordinary degree.

Restrictions for trailing modules (Taught Masters)
N/A

Prerequisites for processing to MRes research component
N/A

Accreditation

Architectural Design Technology

The PSRB in this context is the Chartered Institute of Architectural Technologists [CIAT]. The CIAT currently accredits the BSc(Hons) Architectural Design Technology which is valid up to and including the 2026 student intake. CIAT requires that any changes resulting from re-validation in the meantime be communicated to them in order that a decision can be made as to whether a subsequent Accreditation Review will be necessary; an Accreditation Review is likely to be required by the CIAT in respect of the programme proposed.

Building Surveying / Construction Management / Quantity Surveying / Construction Technology

The PSRB in these contexts is intended to be the Chartered Institute of Building [CIOB]. The CIOB currently accredits BSc(Hons) Construction Management and HNC Construction Technology titles, though this expires with the September 2023 intake. It is intended that the proposed BSc (Hons) Building Surveying and BSc (Hons) Quantity Surveying programmes will be included as additional titles when an application is made for re-accreditation of the existing titles upon successful completion of the re-validation process.

Civil Engineering

Whilst the BSc degree in its entirety is not accredited by the PSRB, the Work Based Learning (WBL) element of the degree has been designed to reflect the requirements of the Joint Board of Moderators' [JBM] 'Employer Managed Further Learning' programme; an alternative pathway, which meets the required educational base for Incorporated Engineer registration for the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, the Institute of Highway Engineers and the Permanent Way Institution. The unique WBL element of the existing programme has been approved by the JBM until 2027, and upon validation, the BSc (Ord) Civil Engineering Studies programme will be submitted for re-approval to the JBM should this be considered appropriate.

The opportunity to revalidate and re-accredit programmes across all four strands contemporaneously will ensure that technical innovation and the objectives of significant sustainable initiatives such as The Path to a Net-zero Wales, 2020 are accommodated across the breadth of Built Environment provision.

Quality Management

All provision is expected to comply with the University processes for quality assurance, the QAA Quality Code and any specific PSRB requirements to ensure the quality of the learning and teaching on the programme. The University uses the following mechanisms to help evaluate, enhance and review programmes delivery;

Student Evaluation of Module Questionnaire
Student Voice Forum
Individual student feedback
Student representatives
Continuous Programme Monitoring and Enhancement reports
Periodic review and re-validation process
External Examiner reports
PSRB requirements and accreditation activities

National Student Survey (NSS)

External review of quality and standards within programmes is provided by External Examiners appointed by Wrexham University, who are able to compare provision sanctioned by the University with that of other Universities and Colleges of Higher Education.

A Student Voice Forum (SVF) is held twice each year to provide a plenum for students, via representatives, to contribute formal commentary as to how programmes and the learning environment within which they are delivered, 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 SVFs; SVF minutes and responses subsequently inform the Continuous Programme Monitoring and Enhancement process.

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. 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

Subject Level Reviews (SLR) are prepared in respect of each programme of study by Programme Leaders at the University. SLRs 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 subsequently implemented by programme teams.

Support for Students

The University has a range of departments that offer support for students such as:
- Library & IT Resources
- Inclusion Services
- Careers Service
- Chaplaincy
- Counselling & Wellbeing
- Student Funding and Welfare
- Student Administration

Students are able to access support through the Virtual Learning Environment (VLE), Library services (including on-line access), funding, welfare, disability, careers and study skills support available at Wrexham University. New students joining programmes will be expected to participate in an induction programme at the University where practicable, to ensure that study is effectively supported in the contexts identified above

Please access the University's website at www.wrexham.ac.uk to find out more about the Departments.

The Student Union offers support for students, please access their website at to find out more. https://www.wrexhamglyndwrsu.org.uk/

All students at Wrexham University are allocated a Personal Tutor whose main responsibility is to act as the first point of contact for their personal students and to provide pastoral and academic support throughout their studies at the University.

Equality and Diversity

Wrexham University is committed to providing access to all students and promotes equal opportunities in compliance with the Equality Act 2010 legislation. This programme complies fully with the University's Equality and Diversity Policy, ensuring that everyone who has the potential to achieve in higher education is given the chance to do so. Please click on the following link for more information about <u>equality and diversity</u>.