DIPLOMA GUIDE

Access to Higher Education

gateway qualifications

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Access to HE Diploma (Construction and Built Environment)

Access to HE
Apprenticeships
Digital
Employability & Enterprise
English & Maths
ESOL
Personal & Social Development
Professional Development
Vocational

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About this Access to HE Diploma guide

This Access to HE Diploma specification is intended for Tutors, Assessors, Internal Quality Assurers, Quality Managers and other staff within Gateway Qualifications Access to HE approved providers/or prospective providers.

It sets out what is required of the student in order to achieve the Access to HE Diploma. It also contains information specific to managing and delivering the Access to HE Diploma (s) including specific quality assurance requirements.

The guide should be read in conjunction with the Gateway Qualifications Access to HE Provider Handbook and other publications available on the website which contain more detailed guidance on assessment and verification practice.

In order to offer this Access to HE Diploma you must be a Gateway Qualifications recognised centre and approved to offer Access to HE Diplomas.

If your centre is not yet recognised, or diploma approved, please contact our Development Team to discuss

Telephone: 01206 911211
Email: enquiries@gatewayqualifications.org.uk
Website: https://www.gatewayqualifications.org.uk/advice-guidance/delivering-our-qualifications/become-recognised-centre/

Contents

1. Diploma Information

1.1 Overview of the Access to Higher Education Diploma

The Access to Higher Education (HE) Diploma is a nationally recognised qualification with common requirements relating to the description of student achievement. The Diploma is:

- a level 3 qualification, regulated by the Quality Assurance Agency (QAA) for Higher Education
- a unitised qualification, based on units of assessment which are structured in accordance with the Access to HE unit specification
- a credit-based qualification, operated in accordance with the terms of the Access to HE credit specification
- a graded qualification, as determined by the Access to HE Grading Scheme

Details of the credit framework and requirements relating to the award of credit are provided within the Quality Assurance Agency Recognition Scheme for Access to Higher Education: The Access to Higher Education Diploma specification 2013.

Individual named Diplomas are identified by separate titles and are validated at by Gateway Qualifications as an Access Validating Agency (AVA) recognised by the Quality Assurance Agency for Higher Education (QAA). Each Diploma has its own approved set of units of assessment, governed by rules of combination, which are appropriate to the subject of the particular Diploma. The common grading requirements apply to all individual Diplomas.

1.2 About this Diploma

Provide learners with underpinning skills to support academic study and provide a level 3 qualification linked to their proposed HE study. Allows a broad range of skills to be acquired which explore the construction industry with a specific focus on the built environment.

1.3 Purpose

The primary purpose of Access to HE Diplomas is to provide higher education progression opportunities for adults who, because of social, education or individual circumstances, may have achieved few, if any, prior qualifications.

1.4 Aims

The qualification aims to:

- reintroduce learners to education recognising prior skills and experience and the particular needs of those returning to learn
- offer learners a responsive, supportive return to learn experience at a level appropriate for entry to HE
- develop the appropriate skills such as study skills that are necessary to enable learners to succeed in their HE career

- address issues of widening participation and social inclusion
- raise student awareness of the opportunities that a return to study and lifelong learning can bring.

1.5 Objectives

The objective of the Diploma is to enable learners to:

- satisfy the general academic requirements for entry to Higher Education
- prepare learners for HE level study generally and in subject areas appropriate to an intended HE course destination
- demonstrate appropriate levels of competence in subject specific skills and knowledge
- demonstrate practical, transferable and academic skills
- develop their confidence and ability to cope with a return to education at an advanced level
- enhance personal and career opportunities
- develop as independent and lifelong learners.

1.6 Sector Subject Area

5.2 Building and Construction

1.7 Target groups

Adults who, because of social, educational or individual circumstances may have achieved few, if any, prior qualifications and wish to progress to HE.
Adults who have gone straight into industry (perhaps following apprenticeship routes) who wish to progress to HE.

1.8 Delivery methods

Delivery methods for the Access to HE Diploma (Construction and Built Environment) can include:

Face to face or online.

Suggested work placements as part of the programme to allow learners to widen their understanding of construction and, in particular, the built environment, which can then influence and enhance the practical investigation unit.

Assessment Methods should include:

Essays, projects, presentations, self-evaluation, case studies, short answer questions, worksheets, production and analysis of complex spreadsheets, data analysis, practical application of skills – producing estimates and bills of quantities for specific projects.

1.9 Achievement methodology

The Diploma will be awarded to learners who successfully achieve an approved combination of units through a Portfolio of Evidence that has been successfully verified and monitored through Gateway Qualifications' Quality Assurance process.

The qualification is therefore determined by successful achievement of all required unit assessments with no further requirement for additional/terminal assessment.

1.10 Geographical Coverage

This qualification has been approved by for delivery in England.

1.11 Progression Opportunities

Following successful completion of the Access to HE Diploma (Construction and Built Environment) learners may progress to the following:

HE programmes in Construction Trades, Built Environment, Building Surveying, Management in Construction, Quantity Surveying

The qualification does not provide guaranteed entry to UK higher education.

1.12 Equality, Diversity and Inclusion

It is Gateway Qualifications' aim that there shall be equal opportunities and so meet the organisation's legal responsibilities to prevent discrimination.

In accordance it is the organisation's intention that there should be no discrimination on the grounds of a protected characteristic including age, disability, gender assignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex, sexual orientation. It is acknowledged that this is not an exhaustive list.

2. Student Entry Requirements

2.1 Age

The course is designed to meet the needs of adults who have been out of full time education for a significant period of time and who have not achieved some or any formal qualifications. This generally would apply to learners over the age of 19.

2.2 Prior Qualifications

There is no requirement for learners to have achieved prior qualifications or units prior to undertaking this qualification.

Providers may ask learners for GCSEs as a mark of ability at Level 2 as an appropriate entry requirement to a Level 3 course. This also establishes HEI destination qualifications for Nursing, teaching etc. where these are required as part of the HEI application.

2.3 Prior Skills/Knowledge/Understanding

There is no requirement for learners to have prior skills, knowledge or understanding. However, learners would be expected to be able to demonstrate the skills and ability to study at Level 3.

2.4 Access to qualifications for learners with disabilities or specific needs

Gateway Qualifications and recognised providers have a responsibility to ensure that the process of assessment is robust and fair and allows the learner to show what they know and can do without compromising the rigour of the assessment used to evidence the criteria.

Gateway Qualification has a duty to permit a reasonable adjustment where an assessment arrangement would disadvantage a student with a disability, medical condition or learning need.

The following adaptations are examples of what may be considered for the purposes of facilitating access, as long as they do not impact on any competence standards being tested:

- adapting assessment materials
- adaptation of the physical environment for access purposes
- adaptation to equipment
- assessment material in an enlarged format or Braille
- permitting readers, signers, scribe, prompter, practical assistant
- changing or adapting the assessment method
- extra time, e.g. assignment extensions
- transcript

- use of assistive software where the software does not influence the learners' ability to demonstrate the skills, knowledge or understanding eg use of spellchecker in an English assessment
- using assistive technology
- use of CCTV, coloured overlays, low vision aids
- use of a different assessment location
- use of ICT/responses using electronic devices.

It is important to note that not all of the adjustments (as above) will be reasonable, permissible or practical in particular situations. The learner may not need, nor be allowed the same adjustment for all assessments.

Learners should be fully involved in any decisions about adjustments/adaptations. This will ensure that individual needs can be met, whilst still bearing in mind the specified assessment criteria for a particular qualification.

A reasonable adjustment for a particular learner may be unique to that individual and may not be included in the list of available access arrangements specified above.

Details on how to make adjustments for learners is set out in the Reasonable Adjustment and Special Considerations Policy and Procedures.

2.5 Additional Requirements/Guidance

Learners must have a UK address (including BFO) to be registered on an Access to HE Diploma.

2.6 Recruiting Learners with Integrity

It is vital that providers recruit with integrity. Providers must ensure that learners have the correct information and advice on their selected qualification(s) and that the qualification(s) will meet their needs.

The recruitment process must include the provider undertaking the assessment of each potential student and making justifiable and professional judgements about the student's potential to successfully complete the assessment and achieve the qualification. Such an assessment must identify, where appropriate, the support that will be made available to the learner to facilitate access to the qualification.

3. Achieving the Access to HE Diploma

3.1 Qualification Specification

The generic requirements for the Access to HE Diploma are that learners must achieve a total of 60 credits of which 45 credits must be achieved at level 3 from graded units that are concerned with academic subject and the remaining 15 credits can be achieved at level 2 or level 3 from units which are ungraded. It is recommended you include no more than 6 ungraded 'academic subject content' credits. The ungraded credits can be mandatory or optional within the Diploma. The approved Rules of Combination for this qualification are detailed below.

Where there is a selection of optional units within the permitted rules of combination, the selection of units to be used to form the Diploma course must be made before the learners are registered. Learners must be registered with Gateway Qualifications within 12 weeks of the start of the course or before application to UCAS, whichever is soonest.

3.2 Rules of Combination

The structure sets out the units required to be achieved the Access to Diploma, comprising of:

- Graded Academic mandatory units – Level 3
- Graded Academic optional units - Level 3
- Graded Research units - Level 3
- Ungraded units – Level 2/3.

Learners must achieve a total of 60 credits and meet unit group requirements.

Learners must complete at total of 60 credits of which 45 credits must be achieved at level 3 from graded units which are concerned with academic subject content and the remaining 15 credits must be achieved at level 3 from units which are ungraded.

Mandatory Units: Graded Academic Subject Content

Learners must achieve 36 credits from this group.

Unit Code	Unit Title	Level	Credits	Content	Grade Descriptors	Suggested Assessment Methods	Assessment Volume
QU017048	Construction Information and Management Systems	3	6	Academic	1, 3, 7	CAD views, open book timed assessment, presentation	CAD views using at least two different scales, one hour assessment, 10 minutes presentation
QU017027	Construction Surveying and Measurement	3	6	Academic	1, 3, 7	Observed practical activities, commentary	Minimum of 3 surveys, 1500 word commentary
QU017111	Health, Safety and Welfare Systems in Construction	3	6	Academic	1, 7	Report, Case Study, practical activity with risk assessments	500 words, 500 words, practical activity with at least 10 hazards identified across work products, processes and equipment (min 2 of each)
QU017090	Introduction to the Construction Industry and Built Environment	3	3	Academic	1, 7	Short answer questions - open book controlled assessment	1500 words
QU017113	Measurement Techniques in Construction	3	3	Academic	1, 3, 7	Short answer worksheets and practical project	500 words, project including mathematical calculations and measurement techniques to produce bill of quantities

Unit Code	Unit Title	Level	Credits	Content	Grade Descriptors	Suggested Assessment Methods	Assessment Volume
QU017117	Structural Mechanics in Construction and Civil Engineering	3	6	Academic	1, 3, 7	Project including report	Practical project with a 500 word report and containing mathematical and graphical calculations
QU017092	Sustainability and the Built Environment	3	6	Academic	1, 7	Short answer questions, open book timed assessment, case study	One hour, 750 word case study
QU017120	Understand Site Documents and Producing Estimates	3	3	Academic	1, 3, 7	Project including report	750 word report, estimate of materials required, calculations

Optional Graded Units:

Learners must/may achieve 9 credits from this group.

Unit Code	Unit Title	Level	Credits	Content	Grade Descriptors	Suggested Assessment Methods	Assessment Volume
QU019995	Algebra and Trigonometry	3	3	Academic	1, 7	Closed book exam	1.5 hours closed book exam
QU017011	Knowledge of Technology used in Building Construction and Civil Engineering	3	3	Academic	1, 7	Report, Short Answer Questions	000 words, 500 words
QU019993	Project Management within Construction	3	6	Academic	1, 3, 7	Project	750 word report, project plan, project schedule, risk assessment, 500 word analysis of methods of monitoring and reviewing projects
QU018310	Research: Practical Investigation Project	3	6	Academic	2, 3, 4, 6, 7	Risk assessment, project diary, project proposal, research review, report, evaluation	500 words, 750 words, 500 words, 750 words, 1500 words, 500 words

Units: Ungraded

Learners must achieve 15 credits from this group.

Unit Code	Unit Title	Level	Credits	Content	Suggested Assessment Methods	Assessment Volume
QU025276	Academic Writing Skills	3	3	Other	Notes from a range of sources, Essay Plan, Essay	300 words 200 words 1,000 words
QU025532	Preparation for Higher Education	3	3	Other	Analysis, UCAS Statement, Preparing for interview questions, Chart	1500 words in total
QU018630	Problem Solving in the Workplace	3	3	Other	Project, Research Review, Plan, Report	Review: 500 words Report: 1500 words
QU028487	Promoting Wellbeing and Building Resilience	3	3	Other	Report	1500 words
QU011476	Spreadsheets	3	3	Other	Case Study Analysis, Spreadsheet and Report	500 words 1,000 words
QU018318	Study Skills	3	3	Other	Study Plan, Worksheets, Assignment Plan	200 words 250 words 500 words

3.3 Additional completion requirements

Learners will probably require a pass in maths and English at Level 2 / GCSE to progress onto a degree course. Delivery providers should make learners aware of HEI course entry requirements.

3.4 Recognition of Prior Learning

Recognition of prior learning is a process that considers if a learner can meet the specified assessment requirements through knowledge, understanding or skills that they already possess and that can contribute towards the attainment of a qualification for which they are undertaking.

For further information please refer Annex C, Access to HE Diploma Specification, https://www.accesstohe.ac.uk/AboutUs/Publications/Documents/Access-Diploma-Specification.pdf

4. Access to HE Units of Assessment

4.1 Unit specification

A common unit specification applies to all units with Access to HE Diplomas the unit specification follows a standard template covering the following elements:

- title
- level
- credit value
- unit code
- learning outcomes
- assessment criteria
- grade descriptors
- type of unit (academic subject content or not).

The units of assessment for this Access to HE Diploma are contained within this Access to HE Diploma Guide.

4.2 Academic subject content

A unit is classified as having academic subject content, if the unit's knowledge and skills are directly related to the subject of the name of the Access to HE Diploma. Units will not meet the academic subject content requirement if they are principally concerned with personal development, generic English or mathematics, or study skills.

4.3 Graded and ungraded units

Graded units – grading operates at unit level and only applies to units which have been approved by Gateway Qualifications within a named Access to HE Diploma. Student achievement for graded units is recorded as Pass, Merit or Distinction for each unit, as set out in the QAA Access to HE Grading Scheme, 2012. Graded units will also satisfy the criteria of academic subject content.

There is a common set of broad generic grade descriptors which are used as the basis for all grading judgements on all courses:

1 Understanding the subject
2 Application of knowledge
3 Application of skills
4 Use of knowledge
5 Communication and presentation
6 Autonomy / Independence
7 Quality.

The seven grade descriptors are not subject specific. They can, however, through careful selection and in appropriate combinations, be used on all courses, with all units and for all

assignments. The descriptors to be used with a particular unit are selected with reference to the main aspects of student performance that need to be taken into account when grading decisions are made for that unit. They are formally assigned to the unit when it is validated.

Each of the seven grade descriptors comprises two sets of components, one which describes characteristics or qualities typical of performance at merit, and a parallel set of components which describes typical performance in the same areas at distinction. (There are no components for pass, because a pass grade is gained when a student meets the learning outcomes, but does not achieve the standard required for merit.) Some of these components are more relevant to certain subjects than others and some particular terms are also more relevant for use with particular types of assessment than others. In order to ensure the grade descriptors are relevant for specific assignments, tutors identify the components of the descriptors being used that are most relevant for the particular assignment. The selected components of the descriptors (at merit and distinction) are then included in the assignment brief(s).

The grading scheme is not based on an assumed one-to-one relationship between the grade descriptors and learning outcomes (although it is possible that in some units, because of the way the learning outcomes have been structured, something close to a one-to-one relationship may emerge). In general, however, judgements about student work in relation to grading apply across the work for a unit, whether that unit is assessed through one, or more than one, assignment.

The full Grade Descriptors can be accessed by the following link, which also provides detailed information on grading:

http://www.accesstohe.ac.uk/AboutUs/Publications/Documents/Access-Grading-Scheme-Section-B.pdf

4.4 Revisions to Access to HE Units of Assessment

Gateway Qualifications reserves the right to review and amend units of assessment and will issue providers notification of the changes to the units of assessment. Gateway Qualifications undertakes regular unit reviews to ensure currency of units, providers are required to use updated versions where units are replaced.

5. Assessment and Quality Assurance

5.1 Provider Requirements

Providers must be approved by Gateway Qualifications as a centre and are required to ensure that:

- the main base is in the UK
- systems are in place to ensure that only learners with a UK address (including BFO) are registered for an Access to HE Diploma
- there are clear arrangements for the day-to-day operational management and coordination of Access to HE delivery.
- there are appropriate facilities and resources at each site, and for each mode of delivery
- staff have the professional competence and skills to teach and assess necessary to teach and assess the units available on the Diploma
- arrangements are in place to provide pre-course guidance to applicants and criteria for selection and admission to Access to HE Diplomas, and are consistent with QAA requirements with respect to admissions. https://www.accesstohe.ac.uk/AboutUs/Publications/Documents/Guidance-admission-of-learners-AHE-07.pdf.
- expertise and resources to provide information, advice and guidance on HE applications and progression opportunities.
- Systems for maintaining secure records of individual learners' registration and achievement
- internal moderation arrangements that meet Gateway Qualification requirements.
- arrangements for internal course monitoring and self-evaluation and feedback
- procedures and criteria for the recognition of prior learning that meet Gateway Qualifications requirements.
- quality assurance procedures relating to the delivery of provision, including transparent processes for handling appeals and complaints.

Providers should refer to the Gateway Qualifications' Access to HE Provider Handbook for further information on centre requirements.

5.2 Staffing Requirements

Providers are required to ensure that:

- staff have the professional competence and skills to teach and assess necessary to teach and assess the units available on the Diploma
- staff have expertise to provide information, advice and guidance on HE applications and progression opportunities.

5.3 Facilities and Resources

Computers, BIM Software, Construction Drawings or Specifications

5.4 Assessment

Recommended assessment methods for each unit within a diploma are identified in section 3.2 Rules of Combination . To provide greater flexibility for Centres to develop an assessment strategy that meets the needs of their individual learners, Centres can select an alternative assessment method for the units(s) within the diploma using the equivalence guidance published on the website.

The guidance includes the expected assessment volume for different assessment methods and should enable Centres to choose alternatives whilst ensuring that the same rigor of assessment is maintained in comparison to any other three or six credit unit.

5.5 Quality Assurance Requirements

Gateway Qualifications applies a quality assurance model to the Access to HE Diploma of:

- internal assessment and internal verification by the provider
- moderation by Gateway Qualifications comprising of centre moderation and subject moderation.

These processes are set out within Quality Assurance section of the Gateway Qualifications' Access to HE Provider Handbook.

5.6 Additional Requirements/Guidance

There are no additional requirements that Learners must satisfy in order for assessment to be undertaken and the unit/qualification to be awarded.

6. Unit Details

Mandatory Units: Graded Academic Subject Content

Access to HE Diploma Unit

Unit Code:	QU017048		
Title:	Construction Information and Management Systems		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD3-Application of skills • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 5 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand the terminology and basic concepts of Computer Aided Design (CAD) and Building Information Modelling (BIM).	1.1 Explain the terminology and basic concepts of CAD. 1.2 Explain the terminology and basic concepts of BIM. 1.3 Analyse the relationship of CAD and BIM to the stages of building projects.
2 Understand the management, organisational and legal issues affected by BIM.	2.1 Analyse how BIM impacts on: a. management issues b. organisational issues c. legal issues.
3 Understand how BIM supports the whole life cycle management of a building.	3.1 Analyse how BIM supports the whole life cycle management of a building including: a. design b. construction c. alterations d. facilities management e. demolition f. environmental clear-up. 3.2 Evaluate the effects of BIM on contract procurement and project risks.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
4 Be able to create 2d CAD drawings using the full capacity of the available software systems.	4.1 Determine, record and calculate measurements needed to prepare for required drawings. 4.2 Identify critical information relevant to the CAD process. 4.3 Create detailed views using various scales to meet job requirements.
5 Know how to implement BIM within an organisation.	5.1 Explain how to implement BIM within an organisation. 5.2 Interpret preliminary sketches/artwork as required and review these with relevant personnel. 5.3 Explain how the BIM Maturity Model is used in a construction project.

Access to HE Diploma Unit

Unit Code:	QU017027		
Title:	Construction Surveying and Measurement		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD3-Application of skills • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 4 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Be able to prepare to carry out surveys. Simple surveying techniques used for setting out should include the use of • levels • theodolites	1.1 Confirm that the survey specification and the survey method statement are accurate before starting the work. 1.2 Explain the importance of checking and confirming, before starting work, that people who will be affected have given their permission for the survey to take place. 1.3 Check and confirm that signs, arrangements for personal safety, equipment and site access conform to good practice, legislation and regulation.
2 Understand how to carry out surveys. Simple surveying techniques used for setting out should include the use of • levels • theodolites	2.1 Analyse how to conduct the survey safely. 2.2 Explain how to take accurate observations and measurements, using valid methods 2.3 Analyse methods of recording and storing survey data.
3 Be able to carry out surveys. Simple surveying techniques used for setting out should include the use of • levels • theodolites	3.1 Conduct the survey safely, using personal protective equipment and with due consideration to risks and hazards within the environment. 3.2 Take accurate observations and measurements using valid methods and equipment.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	3.3 Record survey data clearly and accurately and store it securely for later analysis. 3.4 Complete the survey in a way that maintains the level of accuracy required, balances content and cost and keeps disruption to a minimum.
4 Be able to present survey data.	4.1 Collect together recorded survey data to allow an accurate analysis to be made. 4.2 Check and verify the survey data to maintain accuracy and integrity. 4.3 Present the data, commentary and any supporting information accurately, clearly and in a format which is suitable for those who need to use it.

Access to HE Diploma Unit

Unit Code:	QU017111		
Title:	Health, Safety and Welfare Systems in Construction		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Know health and safety regulations, roles and responsibilities in construction environments.	1.1 Summarise health and safety legislation, regulations and guidelines which must be followed in construction environments. 1.2 Summarise responsibilities under health and safety legislation of the: a. employer b. employees. 1.3 Evaluate the role of organisations providing health and safety information relevant to construction environments.
2 Understand how to operate health, safety and welfare systems in the workplace.	2.1 Evaluate how to take responsibility for personal health and safety in the workplace. 2.2 Explain how to ensure that health, safety and welfare equipment and resources are maintained to meet statutory requirements. 2.3 Evaluate how to comply with systems which meet statutory requirements for a. identifying and reducing hazards b. reporting accidents and emergencies c. preventing reoccurrences of accidents and emergencies.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
3 Know how to identify hazards and assess risks in the workplace.	3.1 Analyse hazards in the workplace arising from: a. work products b. processes c. equipment. 3.2 Explain how to obtain accurate information relating to identified hazards. 3.3 Examine how to assess the significance of the hazards. 3.4 Undertake risk assessments to support the principles of prevention and protection within the workplace.

Access to HE Diploma Unit

Unit Code:	QU017090		
Title:	Introduction to the Construction Industry and the Built Environment		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 4 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand the different activities undertaken within the construction industry and built environment. The evaluation of the activities undertaken in the construction and built environment may include the construction of different types of infrastructure, e.g. domestic, commercial and industrial property as well as both external and all internal works, from fixing and finishing and installation and testing.	1.1 Evaluate the range of activities undertaken by the construction industry and built environment. 1.2 Evaluate the types of work undertaken within the construction industry. 1.3 Analyse the different types of clients within the construction industry and their needs.
2 Understand the different roles and responsibilities undertaken by workers in the construction industry and built environment. This includes consideration of roles and responsibilities under the **Construction (Design and Management) Regulations 2015.**	2.1 Analyse the different roles and responsibilities of the construction workforce. 2.2 Analyse how the different roles within the construction project team interrelate.
3 Know career opportunities within construction and built environment industries.	3.1 Describe career opportunities within construction and the built environment sectors.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
4 Know progression routes within the construction and built environment industries.	4.1 Compare and contrast the skills, experience and qualifications required to access progression opportunities within the construction and built environment industries. 4.2 Analyse the importance of personal skills, continuous professional development and experience to progression opportunities within the construction and built environment industries.

Access to HE Diploma Unit

Unit Code:	QU017113		
Title:	Measurement Techniques in Construction		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD3-Application of skills • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Know about the standard methods of measurement used in construction and civil engineering.	1.1 Explain the content of the New Rules of Measurement (NRM1, NRM2 and NRM3), analysing their use within construction projects. 1.2 Explain the content of the Civil Engineering Standard of Method and Measurement (CESMM), analysing its use in civil engineering projects. 1.3 Distinguish the differences between the two standard methods of measurement.
2 Be able to apply standard measurement techniques.	2.1 Carry out measurement techniques for: a. length b. area c. item d. volume e. number 2.2 Use dimension paper following the take off process.
3 Be able to undertake measurement tasks, applying mathematical calculations to the appropriate measurement process, implementing standard measurement rules.	3.1 Produce quantities for a simple low-rise domestic property from substructure and superstructure elements, applying the appropriate rules of measurement. 3.2 Apply mathematical calculations to the measurement process.

Access to HE Diploma Unit

Unit Code:	QU017117		
Title:	Structural Mechanics in Construction and Civil Engineering		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD3-Application of skills • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand how structural elements behave under load. This includes: • Explaining the significance and relationship between shear force and bending moments. • Explaining the significance of the point of contraflexure.	1.1 Analyse the structural qualities and behaviour of materials used within construction. This must include, as a minimum, steel, timber and concrete and may also include other materials such as plastics, glass and composites. 1.2 Analyse the behaviour of beams and columns under load.
2 Be able to solve structural mechanics problems.	2.1 Determine reactive forces and plot shear force and bending moment diagrams for: a) a simply supported beam b) a cantilever beam. 2.2 Determine the forces acting in a determinate frame, using mathematical and graphical techniques. 2.3 Determine the maximum stress in a short column under axial and eccentric loads.
3 Be able to design structures	3.1 Produce suitable section sizes for: a) axially loaded columns b) simply supported beams subject to combined loading.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	3.2 Evaluate the benefits of using computer software in structural analysis and design.

Access to HE Diploma Unit

Unit Code:	QU017092		
Title:	Sustainability and the Built Environment		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 5 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand the principles of sustainability within the construction industry and built environment.	1.1 Evaluate what is meant by the term sustainability within the construction industry and built environment. 1.2 Analyse how sustainability can be applied to construction and civil engineering projects. 1.3 Analyse the benefits of using sustainable materials and methods within construction.
2 Know about sustainable materials used in construction and the built environment.	2.1 Evaluate sustainable materials and methods used in construction and the built environment, in terms of energy efficiency and environmental impact. 2.2 Investigate the uses of sustainable materials in domestic and commercial buildings. 2.3 Evaluate how different materials coming from sustainable sources are used in domestic and commercial buildings. 2.4 Analyse how building materials are affected by deterioration over long and short periods of time.
3 Understand the physical and environmental factors to be considered when undertaking a construction project.	3.1 Evaluate the environmental factors to be considered as part of the construction planning process. 3.2 Evaluate the physical factors to be considered as part of the construction planning process.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
4 Understand how construction projects can benefit the build environment.	4.1 Analyse the different land types available for development. 4.2 Explain the advantages and disadvantages of development on different land types. 4.3 Explain the social benefits of construction development.
5 Know about sustainable strategies and renewable energy systems.	5.1 Explain the difference between active and passive sustainable strategies used in construction. 5.2 Evaluate sustainable strategies used for: a. heating b. lighting c. electricity d. water.

Access to HE Diploma Unit

Unit Code:	QU017120		
Title:	Understand Site Documents and Produce Estimates		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD3-Application of skills • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Interpret information used within a construction environment.	1.1 Analyse construction drawings. 1.2 Extract information from construction specifications to prepare method statements.
2 Understand how to produce information relevant to construction environments.	2.1 Evaluate supporting information required before being able to produce construction drawings or specifications. 2.2 Justify scales to use for producing construction drawings.
3 Know how to produce a bill of quantities and associated tender documents.	3.1 Evaluate methods used for estimating quantities of materials required when undertaking a construction project. 3.2 Analyse the importance of checking calculations related to quantities of resources required for a construction project. 3.3 Produce a bill of quantities and associated tender documents for a construction project.

Optional Units: Graded Academic Subject Content

Access to HE Diploma Unit

Unit Code:	QU019995		
Title:	Algebra and Trigonometry		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding of the Subject • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand algebraic expressions.	1.1 Distinguish the different roles played by letters, knowing what letter symbols represent in equations, formulae and identities. 1.2 Manipulate algebraic expressions by taking out common factors and factorising quadratic expressions This may include the difference of two squares, reciprocal functions and cancelling common factors in rational expressions. 1.3 Set up and solve simple equations by using inverse operations or by transforming both sides in the same way. 1.4 Solve linear equations. This includes: a. equations in one unknown, with integer or fractional coefficients, in which the unknown appears on either side or on both sides of the equation b. equations that require prior simplification of brackets, including those that have negative signs

	occurring anywhere in the equation, and those with a negative solution
2 Understand trigonometric functions.	2.1 Solve problems using Pythagoras' theorem. 2.2 Solve problems involving sine, cosine and tangent. 2.3 Solve problems involving angles of elevation or depression. 2.4 Solve problems involving 3D shapes. 2.5 Solve problems involving the sine rule. 2.6 Solve problems involving the cosine rule. 2.7 Solve problems involving circular functions.
3 Understand trigonometric identities and equations.	3.1 Prove identities using basic identities. 3.2 Prove identities using complex identities. 3.3 Simplify an expression using trigonometric identities. 3.4 Solve a trigonometric equation.

Access to HE Diploma Unit

Unit Code:	QU017011		
Title:	Knowledge of Technology used in Building Construction and Civil Engineering		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding the subject • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand the importance of site investigations prior to commencing substructure construction. .	1.1 Explain the different types of soil and their importance to construction projects. 1.2 Explain how soil investigations are conducted. 1.3 Explain the importance of setting out foundations accurately within the substructure of commercial and civil construction. This includes the different forms of foundation used: • within commercial or civil construction • within the construction of superstructures
2 Know about contemporary and historic building components and methods of construction.	2.1 Determine the type of superstructure used for: • low-rise buildings • high-rise buildings • domestic development • commercial development. 2.2 Evaluate different methods used to construct domestic and commercial buildings. 2.3 Evaluate different design methods used for domestic and commercial buildings.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	2.4 Evaluate how electrical and mechanical services are integrated within construction projects.
3 Know how to interpret building regulations.	3.1 Explain the purpose and use of building regulations. 3.2 Analyse the relevance of building regulations to historic buildings.

Access to HE Diploma Unit

Unit Code:	QU019993		
Title:	Project Management with Construction		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD1-Understanding of the Subject • GD3-Application of Skills • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 4 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand why project management skills are needed within the construction industry.	1.1 Analyse differences between routine and project work within the construction industry. 1.2 Analyse key elements of a construction project. 1.3 Evaluate the benefits of project management to the construction industry.
2 Be able to plan for a construction project.	2.1 Define clear goals for the project. 2.2 Justify resource requirements for the construction project. 2.3 Use project planning tools effectively. 2.4 Create a project schedule. 2.5 Evaluate the responsibilities of the team leader or site supervisor in: a. ensuring safety on site b. ensuring quality requirements are met c. ensuring productivity targets are met d. monitoring appropriate behavioural standards e. applying organisational procedures relating to poor performance and behaviour. 2.6 Assess potential risks to the successful completion of a construction project.

	2.7 Explain actions needed to minimise risk.
3 Understand the importance of reviewing construction projects at all stages.	3.1 Analyse different methods used for monitoring projects within the construction industry. 3.2 Justify reasons for reviewing projects during and after completion.
4 Understand the role of quality management on construction projects.	4.1 Evaluate quality standards for both internal and external customers. 4.2 Analyse the record-keeping process for maintaining quality.

Access to HE Diploma Unit

Unit Code:	QU018310		
Title:	Research: Practical Investigation Project		
Unit Level:	Level 3	**Unit Credit:**	6
Grading type:	Graded		
Grade descriptors:	• GD2-Application of knowledge • GD3-Application of skills • GD4-Use of information • GD6-Autonomy/Independence • GD7-Quality		
Academic subject content/other:	Academic Subject Content		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 4 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Be able to plan a practical investigation project.	1.1 Identify and agree a practical investigation project, located within a knowledge domain relevant to the named Diploma. 1.2 Produce a hypothesis and clear aims for the investigation project. 1.3 Identify any ethical, practical or safety issues and how these will be managed/overcome. 1.4 Produce a risk assessment. 1.5 Maintain a record of project progress through all stages of research, development and completion.
2 Be able to undertake a practical investigation.	2.1 Carry out research from a wide range of sources. 2.2 Develop an appropriate investigation. 2.3 Identify the variables and explain how they can be controlled, where necessary. 2.4 Carry out the investigation safely, using appropriate practical skills and techniques. 2.5 Analyse the results of the investigation with reference to relevant theory.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
3 Know how to present the project.	3.1 Present the body of work in a style appropriate to the knowledge domain with clear conclusions. 3.2 Use appropriate technical terminology fluently. 3.3 Reference all findings using a recommended style of referencing.
4 Be able to evaluate own research project.	4.1 Reflect on the design and methodology of the project. 4.2 Evaluate the body of work in relation to aims and hypothesis. 4.3 Identify recommendations for the future.

Units: Ungraded

Access to HE Diploma Unit

Unit Code:	QU025276		
Title:	Academic Writing Skills		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Ungraded		
Academic subject content/other:	Other		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 5 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Be able to record information from a range of sources.	1.1 Use note-taking skills to prioritise key points from a range of sources.
2 Be able to plan and develop a structured framework for extended writing, including an introduction, main body and conclusion.	2.1 Develop a detailed essay plan for an extended piece of writing, which organises meaning and ideas coherently and effectively. 2.2 Include detailed planning for an introduction, main body and conclusion to the essay.
3 Be able to proofread and edit own writing effectively.	3.1 Produce an essay draft which shows evidence of proofreading and editing.
4 Be able to present information and opinion in a written format, using language, style and conventions appropriate to academic writing.	4.1 Communicate with clarity and detail to convey meaning and ideas effectively. 4.2 Write following conventions of sentence structure, punctuation, paragraphing, spelling and grammar. 4.3 Use appropriate style and register which shows an awareness of audience.
5 Be able to understand and use a standard form of referencing.	5.1 Use accurately a standard form of referencing that reflects a range of sources.

Access to HE Diploma Unit

Unit Code:	QU025532		
Title:	Preparation for Higher Education		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Ungraded		
Academic subject content/other:	Other		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 4 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand how to identify opportunities for Higher Education.	1.1 Use information sources to research Higher Education courses. 1.2 Analyse processes and procedures necessary to gain entry to Higher Education. 1.3 Analyse information on Higher Education courses and make appropriate realistic choices. This can also include Higher and Degree Apprenticeships.
2 Understand the process of completing a Higher Education application form.	2.1 Complete an application form with excellent attention to detail, meeting a given deadline. 2.2 Summarise and evaluate personal experiences, achievement and goals, communicating these clearly in a personal statement.
3 Understand preparation required for the interview process.	3.1 Conduct further personal research into courses at relevant institutions in preparation for an interview. 3.2 Prepare provisional answers to anticipated questions, making excellent use of previous experience and recent study.
4 Understand the need to prepare for the transition to Higher Education.	4.1 Analyse the personal and academic qualities needed for successful study in Higher Education.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	4.2 Explain likely practical problems and barriers in moving to higher education and seek strategies for overcoming these. 4.3 Analyse the nature of study in Higher Education.

Access to HE Diploma Unit

Unit Code:	QU018630		
Title:	Problem Solving in the Workplace		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Ungraded		
Academic subject content/other:	Other		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 3 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Understand factors that may influence problem solving in the workplace.	1.1 Analyse factors which influence the choice of solution for problems.
2 Know how to solve problems in the workplace.	2.1 Analyse the nature of specific workplace problems. 2.2 Explain the actions that need to be taken to solve the workplace problems. 2.3 Analyse the potential consequences and impact of proposed actions.
3 Be able to apply solutions to workplace problems.	3.1 Select preferred solution to workplace problems. 3.2 Justify the choice of solution.

Access to HE Diploma Unit

Unit Code:	QU028487		
Title:	Promoting Wellbeing and Building Resilience		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Ungraded		
Academic subject content/other:	Other		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 4 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1. Understand the physical and psychological impact of pressure and stress on mental wellbeing.	1.1 Explain the physical and psychological impact of pressure and stress on mental wellbeing.
2. Understand the connection between mental wellbeing and resilience.	2.1 Analyse the connection between mental wellbeing and resilience.
3. Understand the factors that can improve wellbeing and build resilience.	3.1 Explain factors that can improve wellbeing. 3.2 Explain factors that can negatively affect wellbeing and how to avoid them. 3.3 Explain the behaviours associated with resilience. 3.4 Explain ways to build resilience.
4. Understand how to manage an individual's mental wellbeing and the support available to them.	4.1 Evaluate the methods for managing and maintaining mental wellbeing and building resilience. To include practical and theoretical methods such as breathing exercises to reduce stress, mindfulness techniques. 4.2 Analyse the types of support available from different sources.

Access to HE Diploma Unit

Unit Code:	QU011467		
Title:	Spreadsheets		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Ungraded		
Academic subject content/other:	Other		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 7 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Know how to design and store a spreadsheet.	1.1 Design a spreadsheet appropriate to a user's requirements. 1.2 Create and store the spreadsheet. 1.3 Evaluate the spreadsheet in terms of meeting the user's needs.
2 Be able to retrieve and modify an existing spreadsheet.	2.1 Modify the spreadsheet design/content in response to user feedback.
3 Know how to print a spreadsheet.	3.1 Print or display whole or part spreadsheets/formulae with a variety of print layout options.
4 Be able to enhance user readability.	4.1 Use suitable formatting options for displaying text and numeric values. 4.2 Define and use conditional formatting to limit input error and give suitable messages to users.
5 Understand spreadsheet functions.	5.1 Develop a spreadsheet solution using a range of mathematical functions.
6 Understand graphical facilities.	6.1 Use an appropriate graph type. 6.2 Draw pie, bar, line graphs with appropriate labels attached.
7 Know how to use additional features within the spreadsheet environment.	7.1 Use advanced sorting, protecting and filtering facilities on a spreadsheet. 7.2 Analyse data using pivot tables.

Access to HE Diploma Unit

Unit Code:	QU018318		
Title:	Study Skills		
Unit Level:	Level 3	**Unit Credit:**	3
Grading type:	Ungraded		
Academic subject content/other:	Other		
Suggested assessment details:	Refer to Assessment Grid		

This unit has 5 learning outcomes.

LEARNING OUTCOMES	**ASSESSMENT CRITERIA**
The learner will:	**The learner can:**
1 Know how to manage and organise study time.	1.1 Produce, revise and evaluate a personal schedule of study that accommodates own time constrains. 1.2 Where necessary, prioritise and reschedule study plan explaining changes. 1.3 Prioritise and meet assignment deadlines, negotiating new deadlines if needed. 1.4 Devise a strategy for organising coursework.
2 Know how to participate in learning activities.	2.1 Prepare efficiently for tutorials and classroom activities. 2.2 Participate appropriately in classroom activities.
3 Understand assignment requirements.	3.1 Analyse assignment effectively identifying aims and objectives. 3.2 Determine suitable format for assignment, effectively explaining decisions made.
4 Understand learning preferences.	4.1 Analyse different methods of learning. 4.2 Analyse methods of identifying own learning preferences.
5 Be able to retrieve information from a range of sources.	5.1 Retrieve information from a range of written texts using a range of reading skills. 5.2 Scan source material, critically evaluating information, selecting

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	accurate and detailed notes to suit purpose. 5.3 Demonstrate the use of a recognised referencing system for retrieved information.

7. What to do next

For existing Centres please contact your named Development Manager or Development Officer.

For organisations, not yet registered as a Gateway Qualifications Centre please contact:

Gateway Qualifications
Gateway House
3 Tollgate Business Park
Colchester
CO3 8AB

Tel: 01206 911211

Email: enquiries@gatewayqualifications.org.uk

8. Gateway Qualifications

Gateway Qualifications, a not for profit registered charity, is an Awarding Organisation and authorised Access Validating Agency based in Colchester.
We work with learning providers and industry experts to design and develop qualifications that benefit the learner and the employer.

We support flexible, responsive and quality assured learning opportunities whether it's in the classroom, at work, in the community or through distance learning.

We are recognised by Ofqual, to design, develop and submit qualifications to the Regulated Qualifications Framework (RQF) and by the Quality Assurance Agency for the development and approval of Access to Higher Education Diplomas.

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enquiries@gatewayqualifications.org.uk
www.gatewayqualifications.org.uk
Tel: 01206 911 211

Charity Registration No. 114282
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Gateway Qualifications, Gateway House,
3 Tollgate Business Park, Colchester CO3 8AB