Higher National Graded Unit specification

General information for centres

This Graded Unit has been validated as part of the HND Computer Aided Architectural Design and Technology award. Centres are required to develop the assessment instrument in accordance with this validated specification. Centres wishing to use another type of Graded Unit or assessment instrument are required to submit proposals detailing the justification for change for validation.

Graded Unit title: Computer Aided Architectural Design and Technology: Graded Unit 2

Graded Unit code: F52R 35

Type of Graded Unit: Project

Assessment Instrument: Practical Assignment

Credit points and level: 2 HN credits at SCQF level 8: (16 SCQF credit points at SCQF level 8*)

*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from National 1 to Doctorates.

Purpose: This Unit is designed to provide evidence that the candidate has achieved the following principal aims of the HND Computer Aided Architectural Design and Technology award.

General aims:

♦   develop knowledge, understanding and skills across a range of core Architectural CAD principles and technologies at SCQF level 8
♦   develop a range of Communication and Information Technology knowledge and skills relevant to the needs of Architectural CAD specialists at SCQF level 8
♦   develop knowledge, understanding and skills in applying a structured approach to advanced Architectural CAD principles in the production of complex drawings at SCQF level 8
♦   develop an ability to apply analysis and synthesis to the solution of Architectural CAD related problems
♦   develop skills of study, research, analysis and resource management
♦   develop skills of evaluation, organisation and problem solving
♦   develop responsibility for individual learning and progression
♦   develop skills, knowledge and motivation towards progression to Higher Education routes

General information for centres (cont)

Specific aims:

♦ develop skills and prepare candidates for employment as Architectural Technicians in private or public practice, working with a range of associated professional disciplines
♦ develop and build on previous learning and transferable skills
♦ develop candidates' responsibility for independent learning
♦ develop candidates' resource management skills
♦ prepare candidates with a range of the most contemporary vocational skills, including the preparation, co-ordination and communication of technical information relevant to the Architectural industry, using the most advanced CAD and IT platforms available
♦ prepare candidates with underpinning knowledge and skills contributing to the efficient operation and management of architectural design projects through control of specified regulatory, quality or management standards
♦ alert the candidate to the possibility for professional recognition, particularly, but not exclusively, with the Chartered Institute of Architectural Technology (CIAT)

Recommended prior knowledge and skills: It is recommended that the candidate
should have completed or be in the process of completing the following Units relating to the above specific aims prior to undertaking this Graded Unit:

Unit code	Unit title
F32A 34	Architectural CADT: Principles and Practice
DW14 34	CAD: User Systems
F329 34	Architectural CADT: Residential Design
F3G5 34	Architectural CADT: Construction Detailing
F39H 34	Architecture: Form, Order and Composition
F39F 34	Architectural Professional Practice: Design Management
F3SV 34	Computer Aided Architectural Design & Technology: Graded Unit 1
DW3W 34	Statutory Control of Buildings
DW4L 34	Site Administration
DW18 34	CAD: Visualisation, Rendering & Presentation
DE3R 34	Personal Development Planning
F4NJ 35	Architectural CADT: Structural Design & Detailing
F4NH 35	Architectural CADT: Commercial Building Systems
F4NF 35	Architectural CADT: Advanced Digital Media
F32B 35	Energy Performance in Buildings
DW3T 35	Conversion and Adaptation of Buildings

Additionally, it would be beneficial to acquire supporting skills by completing a range of Units from the HND Computer Aided Architectural Design & Technology Optional Units.

Core Skills: There are opportunities to develop the Core Skills of *Communication, Problem Solving, Literacy, Numeracy and Information Technology* all at SCQF level 6, although there is no automatic certification of Core Skills or Core Skills components.

Assessment: This Graded Unit will be assessed by use of a practical assignment. This will take
the form of a CAD-centred Architectural design assignment. The developed practical assignment will provide the candidate with the opportunity to provide evidence that demonstrates he/she has met the aims of the Graded Unit that it covers.

Administrative Information

Graded Unit code: F52R 35

Graded Unit title: Computer Aided Architectural Design and Technology: Graded Unit 2

Original date of publication: August 2008

Version: 02

History of changes:

Version	Description of change	Date
02	Update of Conditions of Assessment	31/07/18

Source: SQA

FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates

Graded Unit title: Computer Aided Architectural Design and Technology: Graded Unit 2

Conditions of assessment

The candidate should be given a date for the completion of the Practical Assignment. However, the instructions for the assessment task should be distributed to allow the candidates sufficient time to assimilate the details and carry out the assessment task. During the time between the distribution of the assessment task instructions and the completion date, assessors may answer questions, provide clarification, guidance and reasonable assistance.

Reasonable assistance is the term used by SQA to describe the difference between providing candidates with some direction to generate the required evidence for assessment and providing too much support, which would compromise the integrity of the assessment. Reasonable assistance is part of all learning and teaching processes. In relation to the assessment of Higher National Project-based Graded Units, assessors may provide advice, clarification, and guidance during the time between the distribution of the project instructions and the completion date, ie at each stage of the project.

Remediation allows an assessor to clarify candidate responses, either by requiring a written amendment or by oral questioning, where there is a minor shortfall or omission in evidence requirements. In either case, such instances must be formally noted by the assessor, either in writing or recording, and be made available to the internal and external verifier. In relation to Higher National Project-based Graded Units, candidates must be given the opportunity for remediation at each stage of the project.

The evidence for a Higher National Project-based Graded Unit is generated over time and involves three distinct stages, each of which has to be achieved before the next is undertaken. This means that any re-assessment of stages must be undertaken before proceeding to the next stage. The overall grade is derived from the total number of marks *across all* sections, and should reflect the ability of the candidate to work autonomously and the amount of support required. In relation to Higher National Project-based Graded Units, candidates who have failed any stage of the project and have been unable to provide the necessary evidence through remediation must be given the opportunity for re-assessment of that stage.

Any candidate who has failed their graded unit or wishes to upgrade their award must be given a re-assessment opportunity, or in exceptional circumstances, two re-assessment opportunities. In the case of project-based graded units, this must be done using a substantially different project.

The final grading given must reflect the quality of the candidate's evidence at the time of the completion of the graded unit. Candidates must be awarded the highest grade achieved — whether through first submission or through any re-assessment, remediation, and/or reasonable assistance provided.

To ensure authentication of work, candidates must complete a log diary recording progress and tasks completed. There should be regular meetings between the tutor and candidate(s) to review progress and these meetings should be recorded.

The final evaluation should include questioning of each candidate's understanding of the evidence submitted. Where possible, the involvement of an employer in the questioning is encouraged.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Instructions for designing the assessment task

The assessment task is a project. The project undertaken by the candidate must be a complex task which involves:

♦ variables which are complex or unfamiliar
♦ relationships which need to be clarified
♦ a context which may be familiar or unfamiliar to the candidate

The assessment task must require the candidate to:

♦ analyse the task and decide on a course of action for undertaking the project
♦ plan and organise work and carry it through to completion
♦ reflect on what has been done and draw conclusions for the future
♦ produce evidence of meeting the aims which this Graded Unit has been designed to cover

The assessment task should be a Practical Assignment based upon a design project brief within the context of building development. Such a building project might be that of a significant commercial building, or a residential project. Where residential is the preferred choice, this should be of a scale comparable to that of a significant commercial project, and might be a large apartment block, hotel or other communal residence. Good examples of commercial project types might include (but not be limited to):

♦ Corporate buildings (office blocks or similar)
♦ Industrial buildings (factory, warehouse, or similar)
♦ Health care buildings (cottage hospitals, multi-purpose health centre)
♦ Airport buildings (provincial, single terminal only)
♦ Leisure buildings (sports centres, auditoria, other recreational)

The output eventually produced from the project activity should be relative to the scale and extent of the original concept. The project information should be presented in such a way that candidates are presented with principal design criteria, client needs, stylistic influences, accommodation requirements or sustainable imperatives. The issues selected for consideration in the design brief criteria should focus on the principal aims of the HND award, and the requirement to demonstrate an ability to integrate a positive design response across the mandatory Units in the award. From the mandatory section of the award, the submitted output of the project activity should address the following broad aims:

♦ Structural recommendations and details
♦ Construction recommendations and details
♦ Buildings aesthetics and form
♦ Environmental performance requirements
♦ Building services recommendations and details
♦ Spatial planning and organisation
♦ Site implications
♦ Regulatory (planning and building) referencing

Given the nature of the activity and the general and specific aims of the award, candidates are expected to address all of the above issues within the resolution of the project and produce

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

sophisticated, industry standard CAD drawings and graphics, fully communicating all extents of the project, in terms of:

♦ 2-dimensional plans, elevations and sections
♦ Location, site and area plans
♦ Planometric and axonometric views
♦ 3D pictorial views
♦ Wireframe and hidden line 3D pictorial views
♦ Rendered 3D pictorial views

The range of tasks undertaken by candidates should be defined in relation to original design brief criteria and the context of the building project, and be focused on the design response required at the various stages across the timeline of the project activity. The analysis and synthesis of the project should allow the candidates to demonstrate valid, realistic and interesting responses to the needs of the client group identified. The candidate is required to produce the following evidence types:

♦ a timeline action planning document
♦ a project brief response document
♦ log book recordings
♦ a portfolio of solutions with the necessary CAD details
♦ responses to questioning about the authenticity of the design choices
♦ evaluation of the candidate's solutions against the action planning document and the project brief specification
♦ present final design recommendations to client

Guidance on grading candidates

Candidates who meet the minimum Evidence Requirements will have their achievement graded as C — competent, or A — highly competent or B somewhere between A and C. The grade related criteria to be used to judge candidate performance for this Graded Unit is specified in the following table.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Grade A	Grade C
Is a seamless, coherent piece of work which has many more strengths than weaknesses and for a significant building project:	Is a co-ordinated piece of work which has a balance of strengths and weakness and for a significant commercial building project:
♦ accurately details the project objectives and fully reflects the key long term project targets and goals in a consistent and fully comprehensive manner	♦ identifies the project objectives and long term project targets
♦ contains a project schedule detailing a comprehensive timeline of activities and critical events/targets	♦ contains a project schedule containing essential project activities and timings
♦ the project schedule is used consistently and monitored on an ongoing basis to inform project planning and development	♦ the project schedule has been monitored on at least three occasions during the project lifespan
♦ provides considerably more than the minimum evidence for each of the three essential phases of the project	♦ provides the evidence for each of three essential phases of the project at a basic level
♦ summarises conceptual development and details concepts for early client approval, supported by strengths and weakness in each instance	♦ summarises conceptual development and details a minimum of THREE concepts for early client approval
♦ determines a solution from conceptual activities, supported by a clear, well justified rationale	♦ determines proposed solutions from conceptual activities without justification
♦ evidence is produced to a high standard, is clearly inter-related and demonstrates an accurate and particularly insightful interpretation of the project brief	♦ evidence provided demonstrates an acceptable interpretation of the project brief
♦ has continuously accessed available research/data/trends in arriving at the evidence submitted and this has resulted in solutions which embody non-traditional and innovative solutions	♦ has not amplified the initial project brief in arriving at the evidence submitted and solutions embody only routine and traditional solutions
♦ provides feedback to supervisor on a regular basis, updating on progress made and actions for next stages of project	♦ provides feedback to supervisor on at least three occasions, providing indication of progress made

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Grade A	Grade C
♦ contains a regularly maintained, detailed informal record of critical thinking, including reflective comments as a logged record	♦ contains an acceptable level of detail about project development and ideas, and evidence that logged record made on at least six occasions during the project lifespan
♦ demonstrates clear, explicit links between the three stages of the investigation	♦ demonstrates links between the three stages of the investigation
♦ drawings and language used are of a high standard in terms of level, accuracy and technical content	♦ drawings and language used are adequate in terms of level, accuracy and technical content
♦ demonstrates independence in management of time, effort and resources	♦ seeks additional tutor support
♦ visual information produced is of a high standard in terms of impact, clarity and expression	♦ visual information produced is of an acceptable standard
♦ contains extensive, accurate and comprehensive construction drawings of the building design	♦ contains construction drawings for the key elements of the building design
♦ supporting graphics are produced to a presentation standard	♦ supporting graphics are produced
♦ effectively consolidates and integrates required knowledge and skills and considers possible conflicts in integrating solutions in relation to constraints imposed	♦ consolidates and integrates knowledge and skills proposing system solutions in isolation
♦ contains only well-structured, relevant information - has clear and accurate conclusions and recommendations and uses language of high standard in terms of accuracy and technical content	♦ contains the project report, written to acceptable standards in terms of structure, use of English and clarity, and has accurate conclusions and recommendations
♦ includes rationale and justification and clearly addresses a 'fit for purpose' objective, when answering questions regarding the evidence produced	♦ presents proposed solutions with justification when answering questions regarding the evidence produced
♦ identifies clear and full details of the new knowledge and skills developed as a result of completing the project	♦ identifies some details of new knowledge and skills developed as a result of doing the project

Grade A	Grade C
♦ demonstrates a high level of candidate's self-motivation throughout the project	♦ demonstrates an acceptable level of motivation throughout the project
♦ details the additional research undertaken by the candidate well beyond that demanded by the project	♦ none
♦ key areas for improvement when undertaking the work to the defined time line action plan and clearly identifies key areas for improvement when reflecting on the technical solutions chosen compared with the initial objectives	♦ achieves Outcomes with minimum evaluation against the time line plan and assumes the technical solutions chosen as the 'most appropriate' with minimal retrospective comparison with initial brief objectives

The project will be marked out of 100. Assessors will mark each stage of the project, taking into account the criteria outlined. The marks will then be aggregated to arrive at an overall mark for the project. Assessors will then assign an overall grade to the candidate for this Graded Unit based on the following grade boundaries.

A   =   70%   —   100%
B   =   60%   —   69%
C   =   50%   —   59%

Note: the candidate must achieve all of the minimum evidence specified below for each stage of the project in order to achieve the Graded Unit.

Important Note:

Centres **must** complete the included Grading Checklist for each Project. Completed checklists will be used as part of the external verification process to ensure the accuracy and consistency of grading between candidates in a centre and across centres.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Evidence Requirements

The project consists of three stages: planning; developing; and evaluating. The following table specifies the minimum evidence required to pass each stage.

Note: The candidate must achieve **all of the minimum evidence** specified below for each stage of the project in order to pass the Graded Unit.

Project stage	Minimum Evidence Requirements

Stage 1 —
 	
 Planning
 	
 Maximum 20 marks
	♦ develop a time line action plan (project schedule)
	 ♦ creation/commencement of log book recording
	 ♦ considered project primary data/influences
	 ♦ project aims, objectives and targets (output of Stage 2)
	 ♦ establishment of verification strategy
	 ♦ the project primary data/influences should provide an **outline** of:
	   — identification of resource sources
	   — client requirements/preferences
	   — site information and constraint identification
	   — design influences
	   — regulatory constraints
	   — other constraints
	
	 Such requirements **might** consider and include accommodation types and needs, stylistic and aesthetic factors pertaining to client preferences or other local factors, as well as technical restraints imposed by site conditions, regulatory bodies, anticipated engineering limitations, and other design restrictions relating to environment, material, financial or administrative constraints.
	
	 A word count for project brief document of 1,200 words or equivalent.
	
	 The candidate must achieve all of the minimum evidence specified above in order to pass the Planning stage.

Project stage	Minimum Evidence Requirements

Stage 2 —
 	
 Developing
 	
 Maximum 60 marks
 	
 50 marks portfolio:
 	
 40 design details
 10 documentation
 	
 +
 	
 10 presentation
	♦ create project portfolio for proposed solution, incorporating:
	
	 ♦ **Illustrative output**
	     — conceptual design ideas
	     — concept evaluation / selection
	     — scheme design development:
	         – 2-dimensional (floor plans, area plans, elevations and sections)
	         – 3-dimensional (pictorial, axonometric, planometric, hidden detail, shaded details, rendered details, interiors, exteriors)
	         – construction drawings
	         – presentation graphics
	
	 ♦ **Written output**
	     — executive summary or abstract
	     — rationale and justification for concept and scheme design proposals submitted
	     — justification of processes underpinning the project recommendations
	     — additional supporting evidence (schedules, references, regulations, calculations, specifications)
	
	 ♦ **Presentation**
	     — oral presentation of solutions
	     — presentation graphics (visual aids)
	     — questioning of design solutions and project recommendations by simulated client/client group
	
	 ♦ maintenance of log book recording
	
	 ♦ demonstrated independence in management of project
	
	 A word count for portfolio document 2,500 words or equivalent is suggested.
	
	 The candidate must achieve all of the minimum evidence specified above in order to pass the Planning stage.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Project stage	Minimum Evidence Requirements
Stage 3 — Evaluating *Maximum 20 marks*	♦ critical reflection and analysis of evidence achieved compared with project schedule time lines — review of the project progress ♦ reflective comparison of submitted solutions against initial brief objectives — review of the project implementation ♦ analysis of decisions in determining project progression ♦ action taken to overcome unforeseen circumstances, if any ♦ assessment on strength and weakness of practical output (CAD, visuals, details, graphics) ♦ evaluation of extent to which project brief and objectives have been overtaken, if at all ♦ reflection on response to questioning ♦ identification of knowledge and skills gained by candidate ♦ determination to what extent original project brief has been met A word count of 1,000 words or equivalent is suggested. *The candidate must achieve all of the minimum evidence specified above in order to pass the Planning stage.*

Scottish Qualifications Authority

Computer Aided Architectural Design and Technology: Graded Unit 2

Grading Unit Checklist

Centre Name: _____

Centre Number: _____

Candidate Name: _____

Candidate Number: _____

No	Grade C Criteria	Grade C	Grade B	Grade A	Grade A Criteria
Stage 1 — Planning					
	The project brief includes sufficient information to identify the client's principal requirements	Yes	Yes	Yes	The project brief includes all relevant information, is clearly presented and has been agreed fully with the client
	The initial project schedule or timeline (likely a Gantt Chart) shows all essential project activities. Some evidence of monitoring the schedule to inform project development is available	Yes	Yes	Yes	The initial project schedule or timeline (likely a Gantt Chart) contains a comprehensive list of project activities and timings. The information in the initial schedule is used to assess if the project can be completed within timescales. The schedule is monitored on a regular basis to inform ongoing project planning and development
	The project brief includes sufficient information to identify principal design influences	Yes	Yes	Yes	The project brief includes an extensive range of design stimuli appropriate to the preferences of the client
	The project brief considers the range of data and constraints from the site	Yes	Yes	Yes	The project brief develops key design influences from the range of site data constraints
	The project brief outlines principal statutory constraints for the planned project	Yes	Yes	Yes	The project brief identifies and evaluates specific statutory constraints for the planned project
	The logbook contains essential details of project development and there is evidence that it is maintained	Yes	Yes	Yes	The logbook is regularly maintained and provides a detailed, informal record of the candidate's thinking as the project develops including reflective commentary
	The candidate develops an adequate knowledge base to support the demands of the project	Yes	Yes	Yes	The candidate develops a substantial knowledge base to support the demands of the project
	The candidate assesses a range of hardware and software options to meet the demands of the project	Yes	Yes	Yes	The candidate fully justifies the selection of hardware and software options suitable to the demands of the project

Stage2 — Developing					
	The candidate feeds back to his/her supervisor on at least three occasions, providing an indication of progress made	Yes	Yes	Yes	The candidate feeds back to his /her supervisor on a regular basis, updating the supervisor on progress made and actions for the next stage of the project
	The candidate outlines additional design constraints for the planned project	Yes	Yes	Yes	The candidate develops substantial ideas for consideration in the planned project
	Practical activities are carried out to an acceptable level of health and safety	Yes	Yes	Yes	Practical activities are carried out in a totally safe and healthy manner
	The design solutions explored are functional, adequate and sufficient to meet the needs of the client	Yes	Yes	Yes	The design solutions explored are aesthetically and technically well observed, of consistently high quality and exceed the minimum client requirements
	The proposed solution meets all the principal objectives laid down by the project brief.	Yes	Yes	Yes	The proposed solution exceeds all the principal objectives laid down by the project brief and considers additional unforeseen factors
	The CAD details produced for the proposed solution are well organised, correctly detailed and adequate to illustrate the principal aims of the solution.	Yes	Yes	Yes	The CAD details produced for the proposed solution are well organised, correctly detailed and referenced and communicate a range of ideas through the production of enhanced details
	The portfolio document meets acceptable standards in terms of structure, use of English and clarity, and has accurate conclusions and recommendations.	Yes	Yes	Yes	The portfolio document is well structured, contains only relevant information, has clear and accurate conclusions and recommendations
	None	Yes	Yes	Yes	The candidate introduces a significant novel feature into the project
	The candidate demonstrates an acceptable level of motivation throughout the project	Yes	Yes	Yes	The candidate demonstrates a high level of self-motivation throughout the project
	None	Yes	Yes	Yes	The candidate undertakes additional research well beyond that demanded by the project

Stage2 — Developing (continued)				
	The project includes an evaluation of the project strategy and activities and includes an evaluation of what the candidate has learnt from undertaking the project	Yes	Yes	Yes	The project report includes a clear and comprehensive evaluation of the project strategy and activities and includes clear evaluation of what the candidate has learnt from undertaking the project
	The question responses contain broad responses	Yes	Yes	Yes	The question responses are well structured, confirm relevance and integrity of information,
	The candidate provides technically correct answers to questions raised	Yes	Yes	Yes	The candidate provides clear, concise and technically correct answers to questions raised
	The candidate includes some reflection of the success, or otherwise, of the project in response to questioning	Yes	Yes	Yes	The candidate includes a clear reflective account of the success, or otherwise, of project activities against project objectives in response to questioning
	The candidate undertakes the project with an acceptable level of supervision	Yes	Yes	Yes	The candidate undertakes the project with the minimum of supervision
	The candidate provides some details of the new knowledge and skills he/she has developed as a result of doing the project	Yes	Yes	Yes	The candidate identifies clear and full details of the new knowledge and skills he/she has developed as a result of doing the project

Guidance on the Completion of the Checklist

Centre staff are asked to read the following guidance notes before completing the Grading Checklist.

The Checklist for the Practical Assignment has been designed to help the assessor(s) decide what grade should be awarded to a candidate for the Design Project. It will also be used by external moderators as part of the external verification of project work. **A Grading Checklist form should be completed for each candidate who has been entered for the Computer Aided Architectural Design and Technology: Graded Unit 2 (Design Project).**

In completing the Practical Assignment checklist assessor(s) should take note of the following points:

1   For each item shown in the checklist, the 'Yes', which most closely reflects the candidate's performance, should be circled. It can be seen from the checklist that the grade criteria for Grade C and Grade A have been included in the checklist.

2   A Grade B should be awarded where the candidate's performance lies approximately mid-way between a Grade C and a Grade A (ie, better than a Grade C (competent), but not good enough to be a Grade A (highly competent).

3   No grade should be awarded where a candidate's performance is not good enough to satisfy a Grade C pass (ie competent level of performance).

4   Once centre assessors have completed the twenty-one items, they should then apply their own professional judgement to decide what grade to award a candidate.

5   In arriving at the grade, due account should be taken of the distribution of circles around 'Yes'. For example, if 17 out of 21 items have been circled under the Grade B column and the other four have been circled under the Grade C column, then it is likely that the assessor(s) will award the candidate a Grade B. Professional judgement is much more involved where, for example, if 'Yes' is circled 11 times under the Grade A column, and 10 times under the Grade B column. The assessor's first-hand knowledge of the candidate's performance will influence whether the candidate is awarded a Grade A or Grade B. External moderators are unlikely to overturn the grading awarded by the centre assessor(s) unless they are not happy that grading judgements have been awarded in a fair, consistent and rigorous manner.

6   Centres may provide additional comments and/or evidence in support of their grading decisions.

Equality and inclusion

This graded unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

General information for candidates

This Unit has been designed to help you achieve the principal aims of the HND Computer Aided Architectural Design and Technology award, and to assess your knowledge and skills relative to the mandatory subjects of the course framework. This will be achieved typically by the resolution of an architectural design problem, allowing you to explore a range of solutions, arrive at an appropriate and effective resolution, and communicate the solutions in an effective manner.

The Unit will be taught with your Lecturer in the role of facilitator, and at times, engaging you as Client, Local Authority or other professional routinely involved in an architectural design project. The nature of the project would nominally be that of a residential, or small commercial, building.

There are three distinct phases to the project, Planning, Developing and Evaluating, worth respectively 20%, 60% and 20% of the total marks awarded for the Unit. In the Planning stage of the Project, you will be expected to consider the nature of the design brief set, including factors related to a wide variety of aesthetic, administrative and technical constraints, and in response to these, prepare an Action Plan and a Project Brief setting the parameters of the Project.

In the Developing stage of the Project, you will be expected to adhere to the Action Plan, explore and consider possible solutions, and using computer aided technological approaches, arrive at an appropriate design solution for the Project Brief set. The solutions will be communicated visually, pictorially and in hard copy format, and substantiated by clear, support documentation, including the rationale for the solutions reached.

In the Evaluating stage of the Project, you will be expected to consider the success and efficacy of your solution, providing a presentation of your final solutions and recommendations, and reflect upon the experience.

The Unit is graded, and this Grade (A–C) quantifies and qualifies the quality of your HND award.

The Unit is largely practical in nature, requiring you to have individual access to a CAD system. A CAD system is defined as hardware and software, which will enable an operator to generate (and regenerate) drawings at an acceptable processor speed. A typical minimum hardware configuration would be a current single user PC fitted with suitable peripherals attached such as a printer/plotter to produce hard copies of your work. Alternatively, other configurations such as networked CAD stations are acceptable provided they can satisfy the Unit's criteria.

Additionally, because you will be working continuously with CAD systems and manipulating numerical and graphical data, and responding to a design brief, and liaising with external stimuli, you will have the opportunity within this Unit to develop Core Skills in *Information Technology, Numeracy, Communication,* and *Problem Solving*, all at SCQF level 6.