

Higher National Unit Specification

General information for centres

Unit title: 3D Design: Model Making

Unit code: F0MD 35

Unit purpose: This Unit is designed to enable candidates to produce an interior design model and engage in the process, planning and implementation of the construction of an interior design model.

On completion of the Unit the candidate should be able to:

- 1 Produce a production plan for the construction of a model.
- 2 Produce a model.
- 3 Present and evaluate the finished model.

Credit points and level: 1 HN Credit at SCQF level 8: (8 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 Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. Candidates should have an understanding of the 3D design process having completed HN Units in 3D Design or have similar qualifications or experience. Candidates should have an understanding of model making materials and the processes.

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

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: Outcomes can be assessed individually to a given brief. However, they may also be combined into a single holistic assessment.

For Outcome 1 annotated sketches (or equivalent) showing clearly the processes of construction should be submitted.

For Outcome 2 evidence should be presented as a scale model.

For Outcome 3 evidence should be presented in an oral, written or equivalent format.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Produce a production plan for the construction of a model

Knowledge and/or skills

- ◆ Scale
- ◆ Drawing
- ◆ Style and Form
- ◆ Construction Methods
- ◆ Finishing Materials
- ◆ Planning

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can, with reference to the given brief:

- ◆ produce a production plan for model construction
- ◆ select a suitable scale within the context of the given brief
- ◆ develop working drawings for the production of a concept model
- ◆ produce a plan detailing all stages of production

Annotated sketches (or equivalent) showing clearly the processes of construction should be submitted.

Assessment guidelines

Evidence for this Unit will be generated in response to a practical assessment. The Outcomes may be assessed on an individual basis or combined assessments can be used to cover all Outcomes.

Higher National Unit specification: statement of standards (cont)

Unit title: 3D Design: Model Making

Outcome 2

Produce a model

Knowledge and/or skills

- ◆ Materials
- ◆ Equipment
- ◆ Production techniques
- ◆ Finishes
- ◆ Time management
- ◆ Current Health and Safety legislation

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can, with reference to a given brief:

- ◆ select and prepare equipment and materials
- ◆ assemble a model as specified in the production plan
- ◆ manipulate materials
- ◆ apply finishes to meet the requirements of the given brief
- ◆ work to an agreed timescale
- ◆ adhere to current Health and Safety legislation

Evidence should be presented as a scale model.

Assessment guidelines

This Unit will be assessed by practical assignments. The Outcomes may be assessed on an individual basis or combined assessments can be used to cover all Outcomes.

The evidence will be presented, as part of a studio/workshop based project where the candidate will produce and present a scale model.

The assessment for this Outcome is product based. The model should reflect the given brief and the criteria presented in Outcomes 1 and 2. An observation checklist may be used to ensure the candidate has addressed all the knowledge and/or skills requirements.

Higher National Unit specification: statement of standards (cont)

Unit title: 3D Design: Model Making

Outcome 3

Present and evaluate the finished model

Knowledge and/or skills

- ◆ Presentation skills
- ◆ Evaluation of solution
- ◆ Evaluation of presentation
- ◆ Health and Safety

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by critically reviewing the final solution, showing that they can:

- ◆ evaluate the appropriateness of materials, construction and finishes
- ◆ identify and discuss strengths and weaknesses of the solution
- ◆ examine areas for improvement
- ◆ identify and discuss Health and Safety Issues

Evidence should be presented in an oral, written or equivalent format.

Assessment guidelines

This could take form of critique or simulated client presentation of minimum of 5 minutes.

Administrative Information

Unit code: F0MD 35
Unit title: 3D Design: Model Making
Superclass category: TD
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History of Changes:

Version	Description of change	Date

Source: SQA

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Higher National Unit specification: support notes

Unit title: 3D Design: Model Making

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit has been developed to explore the process involved in the production of a scale model. This could include a one to one scale model. This Unit should enable candidates to work to industry standards.

This Unit will give candidates an insight into the importance of collating, processing, planning and implementing the production of a model. Candidates will develop an understanding of the importance of communicating in a professional manner.

Guidance on the delivery and assessment of this Unit

This Unit has been developed as part of the HND 3D Design Award. It is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Opportunities may be taken to link or integrate with other aspects of the course and a thematic approach adopted for both delivery and assessment.

This Unit will introduce candidates to the range of tools, equipment, materials and techniques required to produce a model.

This Unit should be project based with candidates working independently when researching ideas and developing solutions.

Lectures with exemplars, class discussion, and industrial visits, could be used to provide a stimulating launch. Ongoing discussion and tutorials could be used to give candidates the chance to verbally justify and explain the development of their work in preparation for assessment. There may be an opportunity to collaborate with a real or simulated client in this project providing the Evidence Requirements can be covered.

Production of a 3D mock-up showing consideration of construction techniques and applied surface finishes should be made to visually assess the design in a 3D form.

A large portion of the contact time in this Unit must be allocated to the production of the finished model, reflecting the industry standard of work that is required. Key deadlines for stages of the process should be set allowing candidates to develop time management skills.

Higher National Unit specification: support notes (cont)

Unit title: 3D Design: Model Making

Areas to be covered include:

- ◆ the factors in selection of scale such as cost, time, level of detail
- ◆ understanding styles and form
- ◆ reading and interpreting the relevant drawings required for constructing the model
- ◆ selection of materials
- ◆ selection of construction methods

Candidates should be encouraged to keep a photographic record of all their work, in particular any work produced outwith the centre.

Candidates should present a completed model by a given timeline. The model should show:

- ◆ clean and accurate construction with minimum waste of materials
- ◆ surfaces free of blemishes and imperfections
- ◆ sturdy assembly of components

Candidates should observe safe-working practices at all times and adhere to current Health and Safety legislation.

The evaluation stage allows candidates to critically reflect on their achievement of the final design solution within the context of the given design brief and to review the effectiveness of their planning process.

Opportunities for developing Core Skills

Candidates are working in a context which requires them to design and produce a 3D model. Access to and interpretation and evaluation of examples of, complex graphic design would be of value. Candidates could make use of appropriate design software and modify or customise applications to meet identified needs of purpose and context. They could, additionally benefit from discussions with the class group and/or assessor to reinforce an analytical approach to evaluating the effectiveness of the design process.

Accuracy and effectiveness in the interpretation and communication of complex graphic information underpins the competencies developed in the Unit. Some candidates may benefit from formative opportunities to further develop skills in the analysis and application of graphic data, and the use of software packages or on-line Tutorials to enhance skills may be useful.

As they produce and develop design solutions to a given brief, candidates need to analyse and seek solutions to a range of theoretical and practical problems, and identify specific objectives. Identifying and considering the variables, including costing and all potential resources, and analysing the relative significance of each before identifying and undertaking an appropriate strategic approach to concept development will provide opportunities to develop critical thinking and general problem solving skills to an advanced level. Analysing and evaluating the potential and actual impact of their designs will apply underpinning knowledge and understanding, and candidates could be supported in identifying appropriate methods to measure achievement and progress.

Higher National Unit specification: support notes (cont)

Unit title: 3D Design: Model Making

Although skills in written and oral communication are not formally assessed, candidates would be expected to express complex ideas and information accurately, effectively and to professional standards. Candidates should be advised to ensure that they collate and organise materials effectively for presentation and checklists for self assessment may be helpful. Oral presentations should demonstrate effective verbal and non-verbal communication techniques, and could include confident responses to detailed questions.

Open learning

Due to the practical nature of this Unit, delivery by Open Learning is not recommended. Although parts of this Unit could be delivered by distance learning, it would require a considerable degree of planning by the centre to ensure the sufficiency and authenticity of candidate evidence.

For further information and advice please refer to the SQA document *Assessment and Quality Assurance for Open and Distance Learning* which is available on SQA's website: www.sqa.org.uk.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

Unit title: 3D Design: Model Making

In this Unit you will explore the process involved in the production of a model. The Unit will enable you to work professionally and to industry standard.

This Unit will give you an insight into the importance of retrieving, processing, planning and implementing information in the production of a model. You will also develop an understanding of the importance of communicating in a professional manner.

For **Outcome 1** you will:

- ◆ Produce a production plan for model construction
- ◆ Select a suitable scale
- ◆ Develop working drawings

For **Outcome 2** you will:

- ◆ Select and prepare equipment and material
- ◆ Assemble a model as specified in the production plan
- ◆ Manipulate materials
- ◆ Apply finishes to the requirements of the given brief
- ◆ Work to an agreed timescale
- ◆ Adhere to current Health and Safety legislation

For **Outcome 3** you will:

- ◆ Review the final solution
- ◆ Evaluate appropriateness of materials, construction and finishes
- ◆ Identify and discuss strengths and weaknesses of the solution
- ◆ Examine areas for improvement
- ◆ Identify and discuss health and safety issues