

## SQA Advanced Unit Specification

### General information for centres

**Unit title:** Product Design: Illustration

**Unit code:** HT43 47

**Unit purpose:** This Unit is designed to enable candidates to produce accurately drawn and rendered illustrations required for product design presentations. It will cover freehand, perspective drawing, orthographic drawing and the use of various rendering techniques. Candidates will gain practical experience in using a variety of media, equipment and materials.

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

- 1 Select and use a range of media and equipment.
- 2 Produce drawings using a variety of techniques.
- 3 Produce finished product design illustrations.

**Credit points and level:** 1 SQA Credit at SCQF level 7 (8 SCQF credit points at SCQF level 7\*).

*\*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.*

**Recommended prior knowledge and skills:** It would be beneficial if candidates had Higher Product Design, Higher Art or a relevant design-based NC qualification or equivalent.

**Core Skills:** There are opportunities to develop the Core Skills of Problem Solving and Numeracy at SCQF 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:** The Unit may be assessed holistically — this would require candidates to produce a portfolio of professionally presented product design illustrations based on a set design brief. Alternatively, each Outcome could be assessed separately.

Assessment should be carried out under tutor supervision.

Please note, candidates must achieve all of the minimum evidence specified for each Outcome, combination of Outcomes or for the Unit as a whole in order to pass the Unit.

## **SQA Advanced Unit Specification**

An exemplar instrument of assessment and marking guidelines has been produced to indicate the national standard of achievement required at SCQF level 7.

## **SQA Advanced Unit Specification**

### **SQA Advanced 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**

Select and use a range of media and equipment

##### **Knowledge and/or skills**

- ◆ Media and equipment
- ◆ Tone, shade, colour and texture
- ◆ Shadows and reflections
- ◆ Material finishes

##### **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 use materials and equipment
- ◆ produce rendered illustrations that communicate tone, shade and colour
- ◆ produce rendered illustrations that communicate the effect of directional light
- ◆ produce rendered illustrations that communicate a given material

Candidates should produce a minimum of two developmental pieces of work for each of the listed knowledge and/or skills items. It is recommended this evidence be presented as a portfolio of work or in the form of a sketchbook.

##### **Assessment guidelines**

The assessment of this Outcome can be combined with Outcomes 2 and 3 as part of a single assessment for the Unit, details of which are given under Outcome 3.

## SQA Advanced Unit Specification

### Outcome 2

Produce drawings using a variety of techniques

#### Knowledge and/or skills

- ◆ Freehand drawing
- ◆ Orthographic drawing
- ◆ Perspective drawing

#### Evidence Requirements

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

- ◆ produce freehand sketch drawings that communicate viewing angles and construction
- ◆ produce orthographic drawings that demonstrate accuracy of scale, detail and proportion
- ◆ produce one-, two- and three-point perspective drawings

Candidates should produce at least three pieces of work covering all the Evidence Requirements listed above. This evidence will be presented as a portfolio of work or in the form of a sketchbook.

#### Assessment guidelines

The assessment of this Outcome can be combined with Outcomes 1 and 3 as part of a single assessment for the Unit, details of which are given under Outcome 3. Where the Outcome is assessed separately an observation checklist could be used to ensure the candidate has addressed all the knowledge requirements.

### Outcome 3

Produce finished product design illustrations

#### Knowledge and/or skills

- ◆ Creation of layouts
- ◆ Background application
- ◆ Presentation techniques

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ produce layouts
- ◆ produce illustrations of the product in context
- ◆ produce illustrations that communicate the features, functions and construction of the product

## **SQA Advanced Unit Specification**

Candidates should produce at least two pieces of work for the first of the listed knowledge and/or skills items and one piece of work for the third. It is recommended this evidence be presented as a portfolio of work or in the form of a sketchbook.

### **Assessment guidelines**

The assessment of this Outcome can be combined with Outcomes 1 and 2 as a part of a single assessment for the Unit. This could be conducted as a single assessment whereby the candidate submits evidence to a given timescale.

Candidates may utilise drawings created in Outcomes 1 and 2 to produce the required Evidence Requirements for Outcome 3.

## SQA Advanced Unit Specification

### Administrative Information

<b>Unit code:</b>	HT43 47
<b>Unit title:</b>	Product Design: Illustration
<b>Superclass category:</b>	JB
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## SQA Advanced Unit Specification

### SQA Advanced Unit specification: support notes

#### Unit title: Product Design: Illustration

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

The Unit is primarily intended to provide candidates with the knowledge and practical skills to create product design illustrations. The experience gained will form the foundation for many of the design Units in the SQA Advanced Certificate/Diploma 3D Design Group Award.

Candidates will gain an understanding of the importance of illustration, as a communication tool, for a product designer through examples and demonstrations. The experience and skills gained from completing the Unit will provide candidates with the skill set to visually communicate their own design concepts with confidence using a variety of methods and techniques.

#### Outcome 1

Candidates should select and use media and equipment when producing evidence for Outcome 1. Once the candidate has grasped the fundamentals of producing drawings using a variety of techniques, other medium can then be introduced and applied to the drawings created in Outcome 2. Experimenting with a variety of techniques, materials and equipment will allow the candidates the creative freedom to render tone, shade, colour, highlights and materials. Materials and finishes that could be illustrated are: plastic, wood, glass, metal, liquid, composites, organic, matte, gloss, satin, reflective, etched, smooth, rough.

A variety of materials and equipment could be used, including ICT.

#### Outcome 2

Candidates are required to demonstrate an ability to produce three drawings using a variety of techniques. The portfolio of work should contain evidence of:

- ◆ freehand drawing through rough, preparatory, experimental, and observational drawings focusing on lines, arcs, circles, ellipses, geometrical forms and outlines
- ◆ orthographic drawing through elevations plans, construction and projection lines, sectional views and hidden detail
- ◆ one-, two- and three-point perspective drawing to make use of vanishing points, horizon line and construction lines

#### Outcome 3

Candidates may create layouts by composing illustrations produced from Outcomes 1 and 2 or from new illustrations or imagery generated or resourced.

Through exemplars and lecturer-led demonstrations, candidates may experiment with relevant graphical layouts and text for product design illustration.

## **SQA Advanced Unit Specification**

Through exemplars and lecturer-led demonstrations, candidates may apply backgrounds using a collage of images either sourced or created to superimpose with illustrations generated from Outcomes 1 and 2.

Candidates may communicate the features, functions and construction of a product by either using illustrations created for Outcomes 1 and 2 or from new illustrations. ICT or alternative materials and equipment could be used to show design conventions, for example exploded views, directional arrows, user interaction, user cycle and enlarged areas.

### **Guidance on the delivery and assessment of this Unit**

It is recommended this Unit be delivered at the beginning of the SQA Advanced Certificate/Diploma 3D Design course. A selection of exemplars will be shown to candidates to communicate the standard required.

Candidates will produce a portfolio of work which may be assessed on an Outcome by Outcome basis or holistically.

Through lecturer-led demonstrations, exemplars, tutorials, handouts and a set brief, candidates will produce evidence for each of the Outcomes. Candidates will use a variety of materials and equipment throughout the Unit to fulfil the Outcomes. Selected materials and equipment should be current with industry standard.

In order to authenticate candidate submissions, it is recommended that reviews take place throughout the Unit and candidate work is dated. Candidates' progress could be monitored and recorded through the use of checklists.

#### ***Opportunities for developing Core Skills***

As the Unit outcomes are undertaken candidates should be given support to analyse and seek solutions to theoretical and practical problems or issues relevant to their practical work. They should be encouraged to identify and consider all components, including available resources, and analyse the significance of each in order to adopt an appropriate strategic approach which will provide opportunities to develop problem solving skills to an advanced level.

Candidates should have opportunities for formative work which enables the development of skills in analysing and interpreting communications which have been presented in complex graphical format in order that they are skilled in understanding the potential impact of complex graphical information. Use of exemplar material will foster the ability to analyse and evaluate all aspects of product illustration and provide opportunities for discussing best practice in the interpretation and communication of significant data. Decisions on appropriate format and application of skills using appropriate media and techniques will develop underpinning skills in the measurement, calculation and presentation of a range of data.

### **Open learning**

This Unit may be delivered by open learning. This Unit could be delivery by distance learning. However, it would require planning by the centre to ensure the sufficiency and authenticity of candidate evidence.

## **SQA Advanced Unit Specification**

For further information and advice please refer to *Assessment and Quality Assurance for Open and Distance Learning* (SQA, February 2001 – publication code A1030).

### **Equality and inclusion**

This 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](http://www.sqa.org.uk/assessmentarrangements).

## SQA Advanced Unit Specification

### General information for candidates

#### Unit title: Product Design: Illustration

This Unit is designed to give you an understanding of how to create and present laid out design illustrations. You will use a wide selection of different materials, equipment and techniques

For Outcome 1 you will learn to:

- ◆ use design materials and equipment
- ◆ apply tone, shade, colour and texture
- ◆ create shadows and reflections
- ◆ create various material finishes

For Outcome 2 you will learn to produce:

- ◆ freehand drawing
- ◆ orthographic drawing
- ◆ perspective drawing

For Outcome 3 you will:

- ◆ create finished product design illustrations

To achieve this Unit you will have to produce a portfolio of work that contains at least six pieces covering all the Outcomes.