Higher National Unit Specification

General information for centres

Unit title: Digital Imaging Project

Unit code: DX33 35

Unit purpose: This Unit is designed to apply digital and computer technology within the design process. It will enable the candidate to explore digital imaging, gain advanced technical knowledge of both vector and bitmapped digital imaging software. This unit would be suitable for candidates wishing to develop advanced competence in digital imaging as it will develop an awareness of the importance of vector and bitmapped images and when they should or should not be used in relation to design work.

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

1 Use advanced bitmapped software features to create digital imagery.
2 Use advanced vector software features to create digital imagery.
3 Understand the advantages and disadvantages of using vector and bitmapped based images.

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: Entry to this Unit is at is at the discretion of the centre, but candidates should be able to competently operate a computer and use design software applications would be an asset. It would be beneficial if candidates have undertaken the unit DV60 34 Digital Imaging prior to embarking upon this Unit.

Core Skills: There are opportunities to develop the Core Skills of Problem Solving and Information Technology 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: Outcome 1 and Outcome 2 should be assessed in relation to brief/s. The Unit could be delivered and assessed through the use of more than one design brief. Candidates should be encouraged to fully explore and utilise advanced bitmapped and vector software features in order to create digital imagery to a given brief/s.

General information for centres (cont)

Outcome 3 is focussed on understand the advantages and disadvantages of using vector and bitmapped based images in relation to producing design work.

This Unit will be assessed by means of:

- creation of digital imagery for brief/s
- finished creative solutions, which place the imagery from Outcome 1 and 2 in an appropriate context
- production of a written report on the advantages and disadvantages of using vector and bitmapped based images in the production of design work

An exemplar instrument of assessment and marking guidelines has been produced to show the national standard of achievement at HN SCQF level 8.

Higher National Unit specification: statement of standards

Unit title: Digital Imaging Project

Unit code: DX33 35

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

Use advanced bitmapped software features to create digital imagery

Knowledge and/or skills

- Layers
- Layer effects
- Special effect filters
- Masks
- Alpha channels

Evidence Requirements

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

- Manipulate two composite images incorporating at least five advanced features of bitmapped graphic software.
- Effectively organise layers within each image incorporating an appropriate naming convention.
- Control effect parameters within each image.

All work must be organised and contained in a production folder.

Assessment guidelines

At least five different advanced editing elements should be used across the entire outcome.

The editable files should be saved in a folder separate from the finished work.

Higher National Unit specification: statement of standards (cont)

Unit title: Digital Imaging Project

Outcome 2

Use advanced vector software features to create digital imagery

Knowledge and/or skills

- Text manipulation
- Perspective
- Layers
- Text to path manipulation
- Blend to path manipulation
- Interaction with other software packages

Evidence Requirements

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

- Produce vector graphic versions of two design solutions incorporating at least five editing operations.
- Save vector graphics in relevant formats.

All work must be organised and contained in a production folder.

Assessment guidelines

It is suggested that at least five different advanced editing elements be used across the entire Outcome.

Outcome 3

Understand the advantages and disadvantages of using vector and bitmapped based images

Knowledge and/or skills

- Vector graphics
- Bitmapped images

Evidence Requirements

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

- Produce a report on the advantages and disadvantages of using vector and bitmapped based images. The report must contain the reasons why it is beneficial to use vector instead of bitmapped or vice versa in relation to producing design work (approximately 500 words or equivalent).

Higher National Unit specification: statement of standards (cont)

Unit title: Digital Imaging Project

Assessment guidelines

In the report a brief background on the two image types should be established first before the advantages and disadvantages are discussed. In relation to vector images reference should be made to nodes and control handles in the report. In relation to bitmapped images, reference should be made to pixels and resolution in the report.

Administrative Information

Unit code: DX33 35

Unit title: Digital Imaging Project

Superclass category: CE

Original date of publication: August 2006

Version: 01

History of Changes:

Version	Description of change	Date

Source: SQA

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

Additional copies of this Unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre for further details, telephone 0845 279 1000.

Higher National Unit specification: support notes

Unit title: Digital Imaging Project

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 purpose of this Unit is to enable candidates to acquire software skills to effectively undertake creative projects and to work with digital imaging software applications. To understand the appropriate use of bitmap and vector file formats, the candidates should work to project brief/s.

Guidance on the delivery and assessment of this Unit

This Unit is designed to apply digital and computer technology within the design process. It will enable the candidate to explore digital imaging, and to create digital pieces of work to gain advanced technical knowledge of digital imaging software vector and bitmapped to a specified brief. Candidates should produce four digital pieces of work that cover all knowledge and skills requirements. The unit will identify the importance of vector and bitmapped images and when they should or should not be used in relation to design work.

In **Outcome 1** the candidate should use advanced bitmapped software features to create digital imagery to a given brief/s. They will manipulate composite images which should incorporate at least five advanced features of bitmapped graphic software. Effectively organised layers should be evident within each image and an appropriate naming convention should be used.

In **Outcome 2** the candidate should use advanced vector software features to create digital Imagery to a given brief/s. They will produce vector graphic versions of the design solutions incorporating at least five editing operations within the parameters of a given brief/s. Candidates should also demonstrate the ability to save vector graphics in relevant formats.

Outcome 3 is focussed on the candidate understanding the advantages and disadvantages of using vector and bitmapped based images in relation to producing design work.

Opportunities for developing Core Skills

All elements of the Core Skill of Problem Solving, Planning and Organising, Critical Thinking, and Reviewing and Evaluating, will be fully developed and enhanced in the Unit. Candidates undertake a complex practical task, where identifying and assessing the relevance of all factors and identifying and maximising all available resources in order to pre-empt potential difficulties will involve a high level of critical thinking. Designing effective strategies which allow on-going opportunities for review and modification will reflect and apply problem solving skills. Although a checklist approach to Problem Solving is not particularly useful for the level of skill needed candidates will benefit from support materials and/or personal interviews with the assessor to reinforce analytical evaluative approaches to overall achievement in order to inform any future activities and further development.

Higher National Unit specification: support notes (cont)

Unit title: Digital Imaging Project

Candidates need to produce and present materials to a standard which would be acceptable in industry and acquire software skills to effectively undertake creative projects and to work with digital imaging software applications. Working to project briefs they must understand the appropriate use of bitmap and vector file format. Some formative opportunities to create materials and designs using models with appropriate use of a range of presentation styles may be a useful way to maximise skills and the effectiveness and impact of materials created.

Open learning

This Unit is suited to open learning as evidence can be delivered digitally. Authenticity and sufficiency of candidate's evidence should be ensured and oral or on-line multiple questioning is appropriate. 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. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: **www.sqa.org.uk**.

General information for candidates

Unit title: Digital Imaging Project

This Unit will allow you to apply digital and computer technology within the design process. It will enable you to explore digital imaging, gain advanced technical knowledge of both vector and bitmapped digital imaging software to a specified brief/s. The unit will make you aware of the importance of vector and bitmapped images and when they should or should not be used in relation to design work.

In **Outcome 1** you will use advanced bitmapped software features to create digital imagery. You will learn to manipulate composite images incorporating advanced features of bitmapped graphic software.

In **Outcome 2** you will use advanced vector software features to create digital imagery. You will produce vector graphic versions of design solutions.

In **Outcome 3** you will produce a report that shows that you understand the advantages and disadvantages of using vector and bitmapped based images in relation to producing design work.