Higher National Unit specification: general information

Unit title: Computer Arts and Design: Theory and Practice

Unit code: FD65 35

Superclass:	CE
Publication date:	August 2011
Source:	Scottish Qualifications Authority
Version:	01

Unit purpose

This Unit is designed to prepare the candidate for working within the disciplines of Computer Art and Design by providing the underpinning theoretical knowledge and language used in their discipline. It is intended that the candidate will, as part of this process, develop research and analytical skills within a chosen area of Computer Arts and Design.

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

1 Research and identify the key theories used in the production of Computer Arts and Design.
2 Evaluate the key theories used in the production of Computer Arts and Design.
3 Apply the key theories used in the production of Computer Arts and Design to a given brief.

Recommended prior knowledge and skills

Access to this Unit is at the discretion of the centre. However, it would be beneficial if candidates were proficient in the use of a computer, and had experience of an Art and/or Design project. This may be evidenced by the possession of relevant National Units such as Technologies for Computer Arts and Design, Basic Web Design or Screen Design, or by prior experience, Higher Art and Design and/or Craft Design and Technology. It is also recommended that candidates have either completed, or are currently undertaking HN Unit, Digital Imaging if completing this Unit as part of the Group Award Computer Arts and Design.

General information (cont)

Credit points and level

1 Higher National Unit 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.

Core Skills

There are opportunities to develop the Core Skills of *Information and Communication Technology* and *Problem Solving* 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

A number of product-based assessment instruments will be required which will include work/sketchbooks of gathered evidence, illustrated report writing and evidence of practical work. Outcomes 1, 2 and 3 can be assessed holistically. Combined assessment should be encouraged across a range of Art and Design Units as appropriate to the framework in which the Unit is offered. If this approach is taken, then a matrix for assessment should be devised.

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

Research and identify the key theories used in the production of Computer Arts and Design

Knowledge and/or Skills

♦ Interactivity
♦ Engagement
♦ Information structures
♦ Navigation
♦ Dynamics
♦ Compositing and layering
♦ Computer networks

Evidence Requirements

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

♦ investigate all the key technologies identified in the Knowledge and/or Skills
♦ assemble a written and illustrative research portfolio for each of the Knowledge and/or Skills, including explanatory notes
♦ prepare key texts and images.

Work produced outwith controlled conditions must be subject to authentication by the Tutor.

Assessment Guidelines

All evidence should be contextualised with both contemporary and historical social, philosophical and artistic ideas where appropriate. The candidate should demonstrate that they have developed research skills within their chosen area of Computer Arts and Design. They must demonstrate that they can identify and collate appropriate material that shows an understanding of the key theories used in the production/practice of Computer Arts and Design.

Higher National Unit specification: statement of standards (cont)

Unit title: Computer Arts and Design: Theory and Practice

There is an opportunity for this Outcome to be assessed with Outcome 2 as one learning activity or it could form part of a set project brief that requires specific research. There is a major opportunity, therefore, for integration of this Outcome with a number of existing design projects throughout a variety of Art and Design, Craft and Design, Multimedia, Web, Television and Broadcast Media and Creative Industries frameworks.

Outcome 2

Evaluate the key theories used in the production of Computer Arts and Design.

Knowledge and/or Skills

♦ Interactivity
♦ Engagement
♦ Information structures
♦ Navigation
♦ Dynamics
♦ Compositing and Layering
♦ Computer networks

Evidence Requirements

Candidates will need to provide product evidence to demonstrate their Knowledge and/or Skills by showing that they can:

♦ evaluate the key theories identified in the Knowledge and/or Skills, within a specific chosen Computer Arts and Design discipline
♦ produce an illustrative and written portfolio of evaluative research.

Assessment Guidelines

The candidate should demonstrate that they have developed evaluation skills within their chosen area of Computer Arts and Design. Candidates are expected to choose examples of a range of work and/or artefacts within their chosen area of study.

There is an opportunity for this Outcome to be assessed with Outcome 1 as one learning activity or it could form part of a set project brief that requires a specific research end product. There is a major opportunity, therefore, for integration of this Outcome with a number of existing design projects throughout a variety of Art and Design, Craft and Design, Multimedia, Web, Television and Broadcast Media and Creative Industries frameworks.

If used in this manner, an assessment matrix should be devised.

Unit title: Computer Arts and Design: Theory and Practice

Outcome 3

Apply the key theories used in the production of Computer Arts and Design to a given brief.

Knowledge and/or Skills

- Interactivity
- Engagement
- Information structures
- Navigation
- Dynamics
- Compositing and Layering
- Computer networks

Evidence Requirements

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

- apply theoretical knowledge within a chosen Computer Arts and Design discipline
- produce a finished art and design artefact or product to a given brief
- produce sketchbook research and development of ideas.

Assessment Guidelines

The candidate should demonstrate that they have developed the ability to understand theoretical ideas within their chosen area of Computer Arts and Design. This can be evidenced through informal observation, formative assessment and summative project work

This Outcome could be assessed individually. However there is an opportunity for integration of this Outcome with a number of existing design projects throughout a variety of Art and Design, Craft and Design, Multimedia, Web, Television and Broadcast Media and Creative Industries frameworks. If used in this manner, an assessment matrix should be devised.

Higher National Unit specification: support notes

Unit title: Computer Arts and Design: Theory and Practice

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 provide candidates with some background knowledge and conceptual theories for the practice of computer arts and design. This could include multimedia, web design, digital video, illustration, time-based art, computer art 2D/3D animation and 3D modelling.

The approach to delivery is one that requires the candidate to integrate an appropriate Design Project on the course with that of Outcome 3. It is therefore suggested that this Unit be delivered in the context of practical Units.

The Unit is intended primarily as a research Unit. The candidate should collect information and produce a work/sketchbook and evaluate this information by analysing a number of case studies within their own chosen subject area. Finally they have to apply this knowledge, by evaluating a range of work produced by lead practitioners, again within their chosen area.

Within the context of the Outcomes and knowledge/skills there has been no recommendation or identification of specific subject content. This is because Computer Arts and Design are rapidly evolving disciplines and any prescriptive content could be out of date very quickly. Instead this section will highlight the range of theoretical issues associated with Computer Arts and Design at the time of writing. There will be an ongoing review of subject content to ensure fitness for purpose.

Theory in the practice of Computer Arts and Design

♦ Interactivity: consider the types of interactivity involved with using computer environments for example closed interactivity; open interactivity; menu based interactivity and simulation/games based interactivity.
♦ Engagement: consider how we engage with computer environments. Old media theories could be applied here such as film, theatre or storytelling.
♦ Information structures: consider how we structure information in computer environments through grids, databases and modular systems.
♦ Navigation: consider how we navigate computer space.
♦ Screen space: consider how we view the screen. For example look at open and closed form.
♦ Dynamics: consider how movement and dynamics effect how we use and view computer information. Old media theories such as film may assist here.
♦ Compositing and layering: consider how it is now possible to build multilayer images from a range of diverse sources. This could include theories on both collage and montage.

Unit title: Computer Arts and Design: Theory and Practice

♦ Computer networks: consider the implications on art and design practice of video and file sharing; blogging, social media and the worldwide web in general.

Guidance on the delivery and assessment of this Unit

This Unit has been developed as part of the Computer Arts and Design Group Award and has been identified as one of three key skill Units in the award.

It is expect that the candidate will have gained some experience of computer art and design before undertaking this Unit. It is therefore suggested that this Unit is introduced at a later stage of the delivery of the Group Award to allow the candidate to contextualise the given information.

This Unit may be taught alone as an independent research Unit. However it is suggested that this Unit is used to support practical Units with in the framework. These could include Compositing and Motion Graphics, Basic Web Design, Animation 1, 3D Computer Visualisation and Screen Based Design. This could allow for extended research by the candidate, for a given project brief.

Evidence Requirements for assessment have been expressed in the guidelines for each Outcome. Assessment should be continuous, and assessed summatively on completion of all three Outcomes.

Opportunities for developing Core Skills

Candidates will develop skills in the use of *Information and Communication Technology* as they apply theoretical knowledge within a selected CAD discipline. Formative activities should allow candidates to analyse in detail relevant issues affecting the production of a product or artefact. They should be made aware of the range of tools and media available in the creation and implementation of design solutions. Candidates should be advised on effective and responsible use of equipment and software applications, and learn methods for keeping all research data secure and well organised. They should be aware of the importance of saving and performing back ups and of the need to develop efficient systems of recording, coding and storing notes and drafts of design work.

Appling theoretical knowledge and producing a finished Art and Design product to a given brief will develop creative problem solving skills to an advanced level. There are opportunities to consider integration with work across the award. Evaluation which examines all stages of the design in context would be on-going and candidates could benefit from group and individual discussion to reinforce critical judgement.

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Open learning

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

Online materials could be used to deliver the Unit in conjunction with a well defined brief taking account of any factors specific to open learning. Feedback from the lecturer and peers could come from the formation of an online group where discussions relevant to the Unit could take place.

Consideration should be given to learning methodology and planning and resources required for ongoing candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes.

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**

History of changes to Unit

Version	Description of change	Date

General information for candidates

Unit title: Computer Arts and Design: Theory and Practice

The purpose of this Unit is to provide you with the background knowledge of different theories in the practice of computer arts and design. This could include multimedia, web design, digital video, illustration, time-based art, computer art 2D/3D animation and 3D modelling. It will help to place your elected vocational area in context and allow you to explore a range of theoretical issues which will then help you understand some of the conceptual ideas behind using the computer to produce art and design. You will be expected to undertake a number of research activities and some analysis into the following subject areas.

Theory in the practice of Computer Arts and Design

♦   Interactivity
♦   Engagement
♦   Information structures
♦   Navigation
♦   Screen space
♦   Dynamics
♦   Compositing and layering
♦   Computer networks

In Outcome 1 you will be expected to compile an illustrative sketch/workbook of examples from the above list and apply it to your chosen subject area. Carrying out this research will help you establish a basis for further study and introduce you to the disciplines of organisation, management and selection of material.

In Outcome 2 you will be expected to look at a range of work produced by lead practitioners within your chosen subject area and compile an illustrative and written report that demonstrates that you have evaluated your chosen examples to comply with the list given in Knowledge and Skills.

In Outcome 3 you should learn how to apply your knowledge to a practical art or design brief or assignment. Having made the investigation and analysis, you should have a clear idea of the theory and practice in Computer Arts and Design. These considerations will then be applied to the development of practical work. The content of this will very much depend on your course of study, including Fine Art, Visual Communication, 3D Design, Film, Television and Broadcast Media, and Games Design.

You will be expected to produce a finished artefact or design that illustrates what you have learnt in Outcomes 1 and 2.