

Higher National Unit Specification

General information for centres

Unit title: Scientific Illustration Project

Unit code: DX62 35

Unit purpose: This Unit has been designed to introduce candidates to a variety of illustration styles, media and techniques employed within a scientific illustration area such as botanical, forensic, medical, natural history, ornithological, technical and zoological. This unit is appropriate for candidates undertaking a course with a strong illustration emphasis.

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

- 1 Critically analyse scientific illustrations.
- 2 Research and develop potential solutions for a scientific illustration brief.
- 3 Produce finished illustrations for a scientific illustration brief.

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 center. It is recommended that candidates have undertaken the HN Units DV96 34 Developmental drawing and DV64 34 Illustration or equivalent.

Core Skills: There are opportunities to develop the Core Skill of 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: Outcome 1 should be assessed by a minimum of six scientific illustration case studies.

Outcome 2 should be assessed by research and development for a given brief. Evidence should be presented in an annotated sketchbooks/sourcebooks.

Outcome 3 should be assessed by the production of a final solution for a scientific illustration brief.

Higher National Unit specification: statement of standards

Unit title: Scientific Illustration Project

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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

Critically analyse scientific illustrations

Knowledge and/or skills

- ◆ Function
- ◆ Media
- ◆ Techniques
- ◆ Styles
- ◆ Suitability

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can in relation to the six examples:

- ◆ explain the function of scientific illustration (purpose, historical context)
- ◆ identify the range of media and techniques used
- ◆ explain why the range of media and techniques identified are suitable to the scientific illustration area
- ◆ identify the range of styles used
- ◆ explain why the range of styles identified is suitable

Candidates should submit evidence of critical analysis of 6 case studies. This should be presented as an annotated portfolio of examples.

Assessment guidelines

The tutor should provide six scientific illustration examples for candidate analysis.

Higher National Unit specification: statement of standards (cont)

Unit title: Scientific Illustration Project

Outcome 2

Research and develop potential solutions for a scientific illustration brief

Knowledge and/or skills

- ◆ Research skills
- ◆ Compositional sketches
- ◆ Developmental drawings
- ◆ Mediums and techniques
- ◆ Illustrative styles
- ◆ Analytical skills

Evidence Requirements

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

- ◆ interpret visual requirements
- ◆ research and gather source material
- ◆ develop research material into potential illustrative solutions
- ◆ select appropriate solutions for development
- ◆ produce a series of developmental drawings, media, technique and stylistic experiments
- ◆ analyse potential illustration solutions

Evidence for this outcome should be in the form of annotated sketchbooks or worksheets which include visual research and the development of a variety of illustrative solutions to the given brief. A minimum of two solutions should then be developed to an advanced stage in preparation for the completion of final illustrations in Outcome 3.

Analysis and reflection should be assessed by oral/written responses to questions or annotation of development work.

Assessment guidelines

This Outcome could be assessed independently or be combined with Outcome 3 as part of a practical assignment working from a scientific illustration brief.

For this Outcome candidates should plan and undertake relevant research, collect relevant reference material and produce compositional sketches and developmental drawings for a given brief. Candidates should demonstrate practical experimentation with media, technique and stylistic interpretation.

Higher National Unit specification: statement of standards (cont)

Unit title: Scientific Illustration Project

Outcome 3

Produce finished illustrations for a scientific illustration brief

Knowledge and/or skills

- ◆ Production of finished illustrations
- ◆ Presentation skills

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can, in relation to the finished illustrations:

- ◆ select and effectively apply suitable composition, media, techniques and style
- ◆ fulfil the requirements of the scientific illustration brief
- ◆ complete and present in accordance with the requirements of the brief
- ◆ present a minimum of two finished scientific illustrations to a given brief

Assessment guidelines

Candidates must provide evidence of their ability to make appropriate judgements in the selection of composition, media, techniques, style and presentation of the finished illustration.

It is recommended that a minimum of two finished illustrations are submitted. However, the number of illustrations produced by the candidate should reflect the time allocated to undertake the unit in relation to their scale and complexity.

Administrative Information

Unit code: DX62 35

Unit title: Scientific Illustration Project

Superclass category: JB

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History of Changes:

Version	Description of change	Date

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Higher National Unit specification: support notes

Unit title: Scientific Illustration 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 Unit is intended to provide the candidate with an introduction to an area of scientific illustration such as botanical, forensic, medical, natural history, ornithological, technical, zoological.

Outcome 1 should introduce the candidate to an area of scientific illustration working from professional examples supplied by the tutor. The selected examples should be produced by scientific illustrators and enable the candidate to analyse a diverse range of illustration functions, media, styles and techniques typical to the scientific area.

The area of scientific illustration studied in this Outcome should continue in the practical brief specified for Outcomes 2 and 3.

Outcomes 2 and 3 will allow the candidate to apply knowledge acquired in Outcome 1 in a practical situation through the research, development, experimentation and production of finished scientific illustrations.

Potential sources of research/references might include:

- ◆ library
- ◆ internet
- ◆ photo libraries
- ◆ photography
- ◆ observation sketches

Guidance on the delivery and assessment of this Unit

The Unit can be delivered as a stand alone Unit. Where it is delivered as part of a group award it is envisaged that it would be delivered in the latter stages and draw upon knowledge and skills acquired in the core and cluster Units.

It is recommended that the Unit is delivered in sequence starting with Outcome 1 which provides an introduction to an area of scientific illustration. Outcomes 2 and 3 require practical application and experimentation in response to the demands of a scientific illustration brief.

In Outcome 1, the tutor should provide a varied range of scientific illustration examples for candidate analysis. A variety of styles and approaches to scientific illustration should be utilised. Assessment should be evidenced through individual analysis of examples.

Re-assessment would require the use different examples.

Delivery of the Unit could be enhanced by guest speakers/practitioners and scientific illustrators.

Higher National Unit specification: support notes (cont)

Unit title: Scientific Illustration Project

For Outcomes 2 and 3, candidates should be provided with a brief given by the tutor. The assessment for these Outcomes should consist of a substantial amount of development work and experimentation leading towards the production and presentation of finished scientific illustrations.

Opportunities for developing Core Skills

Candidates will analyse requirements and seek solutions involving a range of practical issues as they apply theoretical knowledge and understanding to a complex design task involving commercial formats and applications. Analysis of the thematic concept which is to be communicated will require examination and consideration of a range of issues and a definition of specific objectives. Identifying and considering all aspects of a concept and analysing the relative significance of each before selecting and justifying an appropriate medium and creative approach will provide opportunities to develop elements of planning, critical thinking and general problem solving skills to an advanced level.

Formative opportunities to develop skills in the interpretation and presentation of scientific illustrations will encourage skills development. Analysing and evaluating the potential impact of work produced will be a significant aspect of underpinning knowledge and understanding, and candidates could be made aware of appropriate evaluative methods by which to measure achievement and justify their illustrative approaches. Candidates may also benefit from individual discussions with the assessor to reinforce the analytical evaluation of all aspects of the practical process.

Open learning

This Unit could be undertaken through open learning. To ensure the reliability and authenticity of evidence, candidates may be required to produce examples of assessment evidence whilst working under tutor supervision. 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: Scientific Illustration Project

This Unit will introduce you to a variety of illustration styles, media and techniques employed within a scientific illustration area such as botanical, forensic, medical, natural history, ornithological, technical and zoological.

Outcome 1 will allow you to critically analyse a scientific illustration area in terms of the function of the illustrations and the range of media, techniques and styles adopted to convey information. This will be assessed by your investigation of professional scientific illustration examples. You will be asked to identify media, styles and techniques and present this analysis in the form of annotated workbook/worksheets.

Outcome 2 will allow you to research and source appropriate reference material for a scientific illustration brief. Working from your source material you will explore a broad range of potential illustration styles and techniques. Through critical analysis and personal reflection of this development work you will select appropriate potential solutions for a scientific illustration brief.

You will produce research and development sketchbooks/worksheets that includes research and source material, compositional sketches, development drawings and media, technique and style experimentation.

In **Outcome 3** you will produce a minimum of two finished scientific illustration in accordance with an illustration brief.