

National Unit Specification: General Information

UNIT Computer Applications Software - Graphics (Intermediate 2)

NUMBER D966 11

COURSE

SUMMARY

This unit is designed to develop basic skills in the use of graphics software and enable candidates to appreciate current and future developments in the field of visual communications.

OUTCOMES

- 1 Identify common graphics types and layouts.
- 2 Explore the facilities provided by graphics software.
- 3 Use an application package to display information in a graphical format.
- 4 Identify current uses of graphics software.
- 5 Outline contemporary developments in visual communications software.

RECOMMENDED ENTRY

No previous qualifications or experience are required to access this unit.

CREDIT VALUE

1 Credit at Intermediate 2 level.

Administrative Information

Superclass: CE

Publication date: December 1998

Source: Scottish Qualifications Authority

Version: 02 (*Version 01 is National Certificate Module 8110075*)

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CORE SKILLS

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

The achievement of this unit may contribute to the development of core skills, but the assessment arrangements for the unit do not guarantee that candidates will produce sufficient evidence of core skill achievement. This means that there is no automatic certification of core skills for this unit.

National unit specification: statement of standards

UNIT Computer Applications Software: Graphics (Intermediate 2)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

OUTCOME 1

Identify common graphics types and layouts.

Performance Criteria

- a) Identification of the characteristics of each graphic type is accurate.
- b) Identification of each graphic layout is correct.
- c) Identification of each component within each layout is correct.
- d) Identification of the design characteristics is accurate.

Note on range for the Outcome

Graphic types: bitmap; vector; animation.

Graphic layouts: drawing; chart; slide; advert; newsletter; brochure; magazine.

Evidence Requirements

Written or oral evidence that the candidate can identify the graphic types and layouts as detailed in Performance Criteria (a) to (d) across all classes in the range.

OUTCOME 2

Explore the facilities provided by graphics software.

Performance Criteria

- a) Exploration is carried out with minimum assistance.
- b) Use of documentation and on-line help facilities is efficient and effective.
- c) Description of major graphics and typographical facilities is correct.
- d) Identification of the types of software used to process graphical information is complete and accurate.

Note on range for the outcome

Facilities: help; filing text; drawing; animation; colours; special effects; editing; viewing; printing; customising.

Evidence Requirements

Performance evidence that the candidate can explore graphics software as detailed in Performance Criteria (a) and (b).

Written or oral evidence of the candidate's knowledge and understanding of graphics facilities and the types of software used to process graphical information as detailed in Performance Criteria (c) and (d).

National unit specification: statement of standards (cont)

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OUTCOME 3

Use an application package to display information in a graphical format.

Performance Criteria

- a) Use of program is consistent with manufacturer's documentation.
- b) Use of program is efficient and effective.
- c) Use of resources is efficient.
- d) Presentation of information is consistent with defined layout.
- e) Presentation of information is attractive and effectively imparts information.

Note on range for the outcome

The range for this outcome if fully expressed within the Performance Criteria.

Evidence Requirements

Evidence of actual performance to show that the candidate can use an application package to process graphical information as detailed in Performance Criteria (a) to (c).

Evidence of a product in the form of three print-outs illustrating different graphic layouts as detailed in Performance Criteria (d) and (e).

OUTCOME 4

Identify current uses of graphics software.

Performance Criteria

- a) Identification is complete and includes all major uses of graphics software.
- b) Identification of each use is accurate.
- c) Identification use is related to specific context.
- d) Identification of the limitations of contemporary software is accurate.

Note on range for the outcome

Contexts: personal; educational; professional; commercial.

Evidence Requirements

Written or oral evidence that the candidate can identify the uses and limitations of graphics software as detailed in Performance Criteria (a) to (d) across all classes in the range. At least one application of graphics software must be identified for each class in the range. The limitations may be described in general terms rather than related to specific classes in the range.

National unit specification: statement of standards (cont)

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OUTCOME 5

Outline contemporary developments in visual communication software.

Performance Criteria

- a) The developments are related to visual communications.
- b) The stimulus to change is correctly identified.
- c) The impact of developments on user productivity is accurately described.
- d) The impact of developments on ease of use is accurately described.

Note on range for the outcome

The range for this outcome is full expressed within the Performance Criteria.

Evidence Requirements

Written or oral evidence of a candidate's knowledge and understanding of contemporary developments in visual communication software as detailed in Performance Criteria (a) to (d).
At least one development should be described.

National unit specification: support notes

UNIT Computer Applications Software: Graphics (Intermediate 2)

This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

GUIDANCE ON CONTENT AND CONTEXT

Outcome 1

The aim of this outcome is to expose candidates to a variety of graphic types and layouts. This is a knowledge-based outcome and it is anticipated that candidates will develop a vocabulary of terms relating to computer graphics and graphic design. Candidates should be exposed to paper-based examples of each graphic layout in preparation for Outcome 2 which explores the graphics facilities provided by contemporary software.

Outcome 2

This wide ranging outcome provides the candidate with an opportunity to explore the graphics facilities provided by contemporary software. The type of software is unimportant so long as it has extensive graphics facilities; appropriate software will range from a spreadsheet program (incorporating a charting facility) to dedicated graphics software. The candidate should explore graphics facilities through his/her use of one or more packages and also through individual research using published literature (such as magazines containing reviews of contemporary packages) and other sources of information (which may include on-line sources). The key aspect of this outcome is that the candidate should acquire an appreciation for the breadth of contemporary software. No individual feature need be covered in great depth. For example, candidates are required to gain experience of the facilities available to manipulate text (such as font and formatting facilities) but light coverage of each feature is preferable to extensive coverage of any one feature. It is expected that the candidate will make extensive use of the manufacturer's documentation when exploring a package (particularly the on-line help facilities) and frequent requests for assistance are in appropriate.

Outcome 3

This outcome provides an opportunity for the candidate to apply his/her knowledge of graphic types and layouts. It is required that she/he uses one or more packages to produce information in a prescribed layout such as a drawing or a chart. Candidates are not required to produce complex designs and should be encouraged to use the full facilities of the program even if this simplifies the task. For example, presentation software often includes a variety of pre-prepared templates and candidates should make use of this facility; the use of clipart should also be encouraged when this is appropriate (such as the production of an advert). Candidates should be encouraged to make efficient use of resources. This includes physical resources (such as paper) and computer resources (such as memory). So, for example, wasting paper by taking unnecessary print-outs or inefficient use of system resources (such as main or secondary storage) is unacceptable.

National unit specification: support notes (cont)

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Outcome 4

This outcome requires the candidate to identify the current uses of graphics software. This will involve him/her in identifying a wide range of uses in a variety of contexts. For example, the personal uses of graphics software might include the use of drawing programs for personal pleasure; educational uses include the production of multi-media software to enhance the learning process; professional uses might include the ways in which graphic designers can use graphics software; scientific uses include the ways in which doctors can use graphic imaging to study parts of the human body. Candidates are not expected to be intimate with any one application, the focus of this outcome is the breadth of application. This outcome provides an opportunity to discuss the limitations of contemporary software. For example, current methods of producing multi-media presentations may require a knowledge of computer programming; the resolution of images may be constrained by the amount of on-board memory: animations may be slow due to hardware and software limitations.

Outcome 5

This outcome requires the candidate to investigate current developments in visual communication software. It builds on the previous outcome which related to the limitations of contemporary software. The identified developments should be related to user interface enhancements and/or productivity improvements. While the identified developments should be related to user interface enhancements may be general in nature, they should be clearly related to computer graphics rather than broad statements of technological progress. So, for example, if improvements in processor speed are identified then these must be related to its implications for processing graphical images. The use of video or an outside speaker is recommended.

GUIDANCE ON TEACHING AND LEARNING APPROACHES

A candidate-centred, resource-based learning approach is recommended. During the work of the unit, candidates should have several opportunities to develop their practical skills and should be assessed at appropriate points. Terminology should be presented in context throughout the module. Where the candidate is unsuccessful in achieving an outcome, provision should be made for remediation and re-assessment. It is recommended that performance evidence is recorded using an observation checklist (together with the production of designated artefacts when appropriate). Observation checklist should include the prescribed performance criteria.

A possible time distribution between outcomes could be:

Outcome 1	5 hours
Outcome 2	15 hours
Outcome 3	10 hours
Outcome 4	5 hours
Outcome 5	5 hours

National unit specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT

Where the outcomes require the candidate to ‘Identify’ something (such as Outcome 1) then the candidate need only recognise one example of each type. Outcome 1 can be assessed using written or oral evidence or a mixture of these. For example, the identification of the characteristics of graphic types might be done by written means; the identification of graphic layout must be done orally. If oral evidence is used, centres should consider methods of recording such evidence through the use of audio and/or visual media for at least a cross-section of candidates.

Assessors should consider opportunities to integrate assessments. For example, the assessment activity for Outcomes 2 and 3 could be combined into a single activity by requiring candidates to explore software facilities and then use these facilities to produce graphical information in the prescribed formats. Similarly, Outcomes 4 and 5 could be combined to produce open assessment activity requiring the candidate to describe current applications of graphics software (including its limitations) and then outlining future developments (including means of overcoming the identified limitations).

Centres may use the instruments of assessment which are considered to be most appropriate. Examples of instruments of assessment which could be used are as follows:

Outcome 1

Oral questioning to ensure that candidates can identify common graphic types and layouts.

Outcome 2

Short answer questions on the facilities of graphics software and the types of program used to process graphic information.

Observation of the candidates’ exploration of graphics software and their use of documentation (including on-line help).

Outcome 3

Practical exercise involving the candidate in producing a variety of graphical layouts.

Outcome 4

Short answer questions on the current uses and limitations of graphics software.

Outcome 5

Extended response questions on the future developments in visual communication software.

National unit specification: support notes (cont)

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SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special 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 Special Assessment and Certification Arrangements* (SQA, 1998).