GRAPHIC COMMUNICATION
Intermediate 2

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National Course Specification

Graphic Communication (Intermediate 2)

COURSE CODE   C033 11

COURSE STRUCTURE

This Course has three mandatory Units. The mandatory Units are:

F397 11	*Technical Graphics 1 (Intermediate 2)*	1 credit (40 hours)
F398 11	*Technical Graphics 2 (Intermediate 2)*	1 credit (40 hours)
D173 11	*Computer Graphics (Intermediate 2)*	1 credit (40 hours)

All Courses include 40 hours over and above the 120 hours for the Units. This may be used for induction, extending the range of learning and teaching approaches, support, consolidation, integration of learning and preparation for Course assessment.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

♦ Intermediate 1 Graphic Communication
♦ Standard Grade Graphic Communication at General level

PROGRESSION

This Course or its Units may provide progression to:

♦ Higher Graphic Communication Course or Units.

National Course Specification (cont)

COURSE Graphic Communication (Intermediate 2)

CREDIT VALUE

The Intermediate 2 Course in Graphic Communication is allocated 24 SCQF credit points at SCQF level 5*.

SCQF points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification 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

Achievement of this Course gives automatic certification of the following:

Complete Core Skill   Using Information Technology at SCQF level 4
Core Skill component(s)   Using Graphical Information at SCQF level 4

National Course Specification: Course details (cont)

COURSE Graphic Communication (Intermediate 2)

RATIONALE

Communication is frequently facilitated by the use of graphics and, in particular, by the use of technical graphics in construction, engineering and consumer contexts. The creation and interpretation of drawings are generic skills useful in employment and as life skills in a world where communication increasingly relies upon graphics.

The Intermediate 2 Graphic Communication Course is designed to build on prior learning at Intermediate 1 and Standard Grade General level (or their equivalents) and to provide progression to Higher Graphic Communication and to possible further study of Graphic Communication and related subjects.

The Intermediate 2 Graphic Communication Course develops knowledge and practical application of sketching and drawing of everyday items in orthographic and pictorial projections and creating colour illustrations, using both manual and computer-aided methods. Candidates will develop an understanding of how to use graphics to communicate more clearly and effectively. Candidates will also be made aware of the need for clear and accurate drawings and will gain knowledge of relevant British Standards.

Computers will be used in learning and teaching and candidates will work with Computer-Aided Draughting (CAD) and other types of Computer-Aided Graphics (CAG) software, thus widening their appreciation of the role of information technology within Graphic Communication and the world today.

In addition, candidates will have the opportunity to develop analytical thinking and creativity. The Course makes a significant contribution to developing technological capability.

The Intermediate 2 Course in Graphic Communication is designed to fulfil the following aims:

♦ develop aspects of technological capability
♦ develop technological creativity in relation to the use of computer software
♦ develop the ability to communicate graphical information using both manual and computer graphic skills and techniques
♦ foster an awareness of the importance of graphics as a form of communication
♦ develop the ability to read and interpret a range of drawings
♦ develop knowledge of, and the ability to use, software for graphic communication

National Course Specification: Course details (cont)

COURSE Graphic Communication (Intermediate 2)

COURSE CONTENT

This Course consists of three mandatory Units.

- Technical Graphics 1 (Intermediate 2)
- Technical Graphics 2 (Intermediate 2)
- Computer Graphics (Intermediate 2)

All of the Course content will be subject to sampling in the Course Assessment.

The Course content is summarised below.

Technical Graphics 1 (Intermediate 2)

Content	Outcome	Notes
Pictorial Drawings	1	Isometric and oblique views of everyday items which contain curved surfaces. Isometric and oblique views of an assembly of two or three main components, working from orthographic details of the components. Exploded isometric views consisting of three component parts, of everyday items working from orthographic details of the assembly. Planometric views of room interiors containing two or more objects.
Orthographic Drawings	2	Drawings of geometric forms in third angle projection: - views: elevations, end elevations, plans, true shapes and surface developments - geometric forms: square, rectangular, triangular, hexagonal and octagonal right prisms and pyramids, cylinders and cones
Pictorial Sketches	3	1-point and 2-point perspective sketches of everyday items.
Manual Illustration	3	Manual illustration to include the use of colour, light, shade and tone in rendering.
Colour Theory	4	Understand the colour wheel. Recognise the use of colour in relation to effect, ie harmonising/contrasting, advancing/receding and warm/cold. Recognise the use of colour in relation to mood and function Procedures for creating a tint and a shade.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

Technical Graphics 2 (Intermediate 2)

Content	Outcome	Notes
Orthographic sketches	1	Sketch two related views of everyday items in third angle projection. Sketches of sectional views of everyday items.
Orthographic drawings	1	Drawings of everyday items in third angle projection. Drawings of sectional views of everyday items.
	2	Drawings of three-part assemblies, in third angle projection, working from orthographic or pictorial details of the components. Sectional drawings of three part assemblies, in third angle projection, working from orthographic or pictorial details of the components. Limited to three main components involving straight-edged and curved surfaces. Draw objects to a given scale (1:1, 1:2, 2:1).

Knowledge of current British Standards	3	Correct use and identification of common drawing conventions to include:
		    — line type applications (fold line, hidden line, section line, centre line, outline, projection/ construction line, hatching)
		    — dimensioning (horizontal, vertical, square, radius and diameter, angular, AC, AF, CL)
		    — architectural symbols (sink, sinktop, wash basin, wc, bath, shower tray, window, door, radiator, lamp, switch, socket, North symbol, sawn timber, insulation, brickwork, concrete)
		    — third angle projection symbol

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

Computer Graphics (Intermediate 2)

Content	Outcome	Notes
Computer-Aided Draughting (CAD)-orthographic and pictorial	1	Produce orthographic and pictorial drawings of everyday objects which contain fillets and arcs. Apply dimensions to orthographic drawings in accordance with British Standards. Use a range of line type and dimensioning conventions in the production of orthographic drawings in accordance with British Standards.
Rendered Item	2	Produce a computer- rendered item containing text and graphics using illustration and presentation software. Illustration and presentation techniques: light, shade and tonal scale; highlights, reflections and shadows; gradients
Multi-Page Layout	3	Produce a multi-page layout document containing a body of text (contained within two or more columns) and graphic items using desktop publishing software. The layout should contain at least two imported graphic items. Text may be typed or imported. Appropriate meaningful text should be used and not lorem ipsum or other irrelevant text.
Computer Knowledge	4	Demonstrate knowledge of software commands/features. CAD: zoom; copy; scale; rotate; mirror; move; array (polar/ ring, box/ rectangular) hatch; dimension; fillet; group; linestyles; layering; pan; chamfer; trim; extend; break. Illustration and Presentation: cut; copy; paste; rotate; mirror, colour and gradients (tonal or colour). DTP: headers; footers; columns; gutters; margins; page orientation; text wrap; caption; importing text and importing graphics; crop. Demonstrate knowledge of input/output and storage devices relating to: Input: keyboard, mouse, digital camera, scanner, graphics tablet Output: monitor, plotter, printer(laser, inkjet) Storage: hard drive, floppy disk, CD, DVD, solid state storage device (memory card/ USB device). Advantages of using a Computer–Aided Graphics (CAG) system.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

ASSESSMENT

To achieve the Course award the candidate must achieve the Units as well as pass the Course assessment. The candidate's grade is based on the Course assessment.

Assessment objectives

The key objective of Course assessment is to ensure that candidates have achieved the aims of the Course:

♦ develop aspects of technological capability
♦ develop technological creativity in relation to the use of computer software
♦ develop the ability to communicate graphical information using both manual and computer graphic skills and techniques
♦ foster an awareness of the importance of graphics as a form of communication
♦ develop the ability to read and interpret a range of drawings
♦ develop knowledge of, and the ability to use, software for graphic communication

In particular, the assessment seeks to ensure that candidates have understood and can apply the Course content and that they can communicate their understanding.

Unit assessment

Unit assessment is conducted in accordance with the standards set out in the National Unit Specification: statement of standards for each Unit. Full details of the Outcomes, Performance Criteria and Evidence Requirements may be found in the Unit Specifications for:

♦ Technical Graphics 1 (Intermediate 2)
♦ Technical Graphics 2 (Intermediate 2)
♦ Computer Graphics (Intermediate 2)

F397 11 Technical Graphics 1 (Intermediate 2*)* is assessed by means of a folio of work containing evidence for Outcomes 1, 2, and 3 and a short closed-book assessment for Outcome 4.

F398 11 Technical Graphics 2 (Intermediate 2) is assessed by means of a folio of work containing evidence for Outcomes 1, 2, and 3 and a short closed-book assessment for Outcome 3.

D173 11 Computer Graphics (Intermediate 2) is assessed by means of a folio of work containing evidence for Outcomes 1, 2, and 3 and a short closed-book assessment for Outcome 4.

Further details about Unit assessment for this Course can be found in the Unit Specifications and the National Assessment Bank (NAB) materials.

Course assessment

The Intermediate 2 Graphic Communication Course is externally assessed against the Grade Descriptions as detailed in the Course Arrangements. The Course assessment will provide the basis for grading attainment in the Course awards. Course awards will be graded A to D, and will be based on the total score achieved in the Course assessment.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

The Course assessment of the Intermediate 2 Graphic Communication Course will consist of two components:

♦   Question Paper
♦   Graphic Presentation Folio

All of the Course content will be subject to sampling in the Course assessment.

Further details of the Course assessment are given in the Course Assessment Specification and in the Specimen Question Paper.

Question Paper

The Question Paper will comprise a single paper of 2 hours 30 minutes duration, set and externally marked by the SQA. The total marks available will be 70. The Question Paper will test knowledge and drawing skills across all three Units. The questions will focus mainly on manual drawing, knowledge and understanding of colour theory, British Standards, computer graphics and computer terminology. Candidates should attempt all questions:

♦   knowledge: short response questions on current British Standards, computer terminology, colour theory and the advantages of Computer-Aided Graphic (CAG) systems
♦   drawing: questions on manual drawing, testing application of pictorial and orthographic projections

(The ratio of marks allocated to knowledge and drawing questions will be approximately 20:50.)

Graphic Presentation Folio

There are 30 marks available for the Graphic Presentation Folio. Each candidate will produce a range of manual and computer graphics, which will provide evidence for the internal assessment of the Unit, Computer Graphics (Intermediate 2) and, additionally, the Illustration and Presentation elements of the Unit, Technical Graphics 1 (Intermediate 2). From this evidence, the best work should be selected by the candidate and enhanced, under supervised conditions, in terms of complexity, accuracy, detail and visual impact for inclusion in the Graphic Presentation Folio. Items can be enhanced or additional work created, under supervised conditions, within the extra 40 hours allocated to the Course. The Graphic Presentation Folio will be internally assessed but subject to external verification by SQA.

A *Guidance on Assessment* document will be produced by SQA to provide further guidance on the assessment of the Graphic Presentation Folio.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

Content of the Graphic Presentation Folio

Manual	Rendering & Presentation	One presentation example of rendering (mono or colour).
Computer	CAD	One orthographic drawing of an everyday object. One pictorial drawing of an everyday object.
	Rendered Item	One single rendered item.
	DTP	One multi-page layout containing text and graphics.

It should be noted that graphics selected for inclusion in the Graphic Presentation Folio must be the candidate's own work. **Work produced by following a directed approach, such as a step-by-step guide or wizard, is not valid for assessment purposes.**

Further details of the Course assessment are given in the Course Assessment Specification, in the Specimen Question Paper and in the Guidance on Assessment of the Graphic Presentation Folio.

Link between Unit and Course assessment/added value

Unit assessment is focused on either manual or computer-aided aspects of graphic communication, and the practical skills associated with these domains as assessed in folios of work to demonstrate the achievement of all Outcomes and Performance Criteria. There are also knowledge and understanding inputs in the Technical Graphics 1 (Intermediate 2) and Computer Graphics (Intermediate 2) Units.

The Course Assessment builds on the knowledge, understanding, skills and abilities gained in the Units and it provides further opportunities for candidates to demonstrate:

♦ integration of knowledge and drawing skills from across the Units
♦ application of drawing skills in more complex contexts
♦ retention of knowledge, understanding and skills demonstrating the ability to respond to a Question Paper on a single occasion

In the Graphic Presentation Folio, candidates will be required to demonstrate their ability to integrate and draw on skills gained in the Units to select and develop items, or create additional items, which go beyond Unit performance in terms of complexity, accuracy, detail and visual impact. For example, candidates will draw on knowledge of colour theory and manual rendering skills gained in Technical Graphics 1 (Intermediate 2) to produce computer-aided illustration and presentation graphics which are creative and effective in providing visual impact.

For the Question Paper, candidates will require to demonstrate the retention and integration of knowledge and drawing skills and the application of drawing skills to more complex contexts.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

GRADE DESCRIPTIONS AT A AND C

The candidate's grade will be based on the total score obtained from the Course assessment. The descriptions below indicate the nature of achievement required for an award at Grade C and A in the Course.

For an award at Grade C candidates should be able to:

♦   apply manual graphic techniques to produce:
     — pictorial drawings of common regular shapes and everyday items to a straightforward scale
     — orthographic drawings of geometric forms
     — orthographic drawings with overall dimensions of everyday items, assemblies and sections
♦   apply manual graphic techniques to produce:
     — rendered graphic items using shading and toning techniques
     — a display using layout techniques
♦   use relevant British Standards, the terms associated with computer graphics and the common input, output and storage devices
♦   demonstrate knowledge and understanding of colour theory
♦   use computer hardware and Computer-Aided Draughting software to produce:
     — orthographic drawings with overall dimensions of objects
     — pictorial drawings of objects
♦   use Desktop Publishing/paint-rendering software to produce a multi-page layout.

For an award at Grade A candidates should be able to:

♦   apply manual graphic techniques to produce:
     — pictorial drawings of common regular shapes and more complex everyday items to a given scale
     — related orthographic drawings of a combination of geometric forms
     — related orthographic drawings with dimensions of everyday items, assemblies and sections
♦   apply manual graphics techniques to produce:
     — realistic rendered graphic items using a range of shading and toning techniques
     — a display using suitable layout techniques to create visual impact
♦   demonstrate knowledge and understanding of relevant British Standards, the terms associated with computer graphics, the common input, output and storage devices and advantages of CAG systems
♦   demonstrate knowledge and understanding of colour theory with reasons for choice of colours
♦   use computer hardware and Computer-Aided Draughting software to produce:
     — related (dimensioned) orthographic drawings of more complex objects
     — (non-dimensioned) pictorial drawings of more complex objects
♦   use Desktop Publishing/ paint-rendering software to produce a creative multi-page layout.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

ESTIMATES AND APPEALS

Estimates

In preparing estimates, evidence must take account of performance across the Course and must be judged against the Grade Descriptions.

Evidence used to compile the **overall estimate** should reflect all components of the Course assessment and should take into account any difference in weightings of these components.

Valid evidence of attainment for the Question Paper could be generated through the use of an assessment instrument, such as a prelim, based on the work from at least two Units of the Course, which replicates, as far as possible, the standard, format, duration and security of SQA Question Papers.

Evidence for the Graphic Presentation Folio should be based on the candidate's progress up to the date of the overall estimate.

Where estimates are based on an assessment covering only part of the Course, centres should be aware that the level of challenge is less than in the Course assessment.

Further advice on the preparation of estimates is given in the Course Assessment Specification.

Appeals

Evidence for the Question Paper is mandatory; it must show the same breadth of coverage of Course content as SQA's Question Paper and relate to the Course Grade Descriptions. While a prelim paper is not mandatory, it is an indicator of likely candidate performance in the external examination when pressure of time and retention of learning are significant factors. Evidence for the Question Paper should replicate as far as possible the standard, format, duration and security of SQA's Question Paper.

For the Graphic Presentation Folio component, no evidence is required for Appeals.

Evidence for the Question Paper component could include:

An integrated test or prelim which covers all Units and replicates the standard, format, duration and security of SQA's Question Paper.

OR

an integrated test or prelim which covers a minimum of two Units of the Course and an additional test which covers the content of the third Unit. In this case the additional test must integrate some content from the other two Units. However, where two assessments have been separated by a period of time rather than being taken on one occasion, centres should be aware that the level of demand is less than in the Course assessment.

NABs are unlikely to generate valid evidence for appeal.

National Course Specification: Course details (cont)

COURSE   Graphic Communication (Intermediate 2)

QUALITY ASSURANCE

All National Courses are subject to external marking and/or verification. External markers, visiting examiners and verifiers are trained by SQA to apply national standards.

The Units of all Courses are subject to internal verification and may also be chosen for external verification. This is to ensure that national standards are being applied across all subjects.

Courses may be assessed by a variety of methods. Where marking is undertaken by a trained marker in their own time, markers meetings are held to ensure that a consistent standard is applied. The work of all markers is subject to scrutiny by the Principal Assessor.

To assist centres, Principal Assessor and Senior Verifier reports are published on SQA's website **www.sqa.org.uk**.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS COURSE

The Units can be taught sequentially, as stand-alone Units or concurrently. The Course could be structured around a series of tasks, some of which may integrate content across Units where appropriate. Integration could be achieved by using the same objects across the three Units or by taking a thematic approach. It would also be appropriate to stress the importance of the correct use of current British Standards on line types, dimensioning and symbols during the learning and teaching of all three Units

To encourage motivation, it is recommended that the objects drawn are everyday items that are relevant to the candidates. Suitable objects may be wooden toys, personal CD players, mp3 players, cameras, mobile phones etc. The same objects can be used for both orthographic and pictorial drawings; thus allowing candidates to appreciate the use of different formats for different purposes.

Throughout the Course it would be helpful, especially for candidates who intend progressing to the Higher Graphic Communication Course, to introduce the terms preliminary, production and promotional graphics.

Work on computer graphics should be based around the use of Computer-Aided Draughting (CAD), Illustration and Desktop Publishing (DTP) that reflect some of the features which would be expected in industrial software.

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 this Course. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).

National Unit Specification: general information

UNIT   Technical Graphics 1 (Intermediate 2)

CODE   F397 11

SUMMARY

This Unit is a mandatory Unit of the Intermediate 2 Graphic Communication Course, but can also be taken as a free-standing Unit. The focus of the Unit is practical, developing graphic skills which will be beneficial to them as they progress through any course or vocation where knowledge of graphic communication terminology and practical skills is required.

This Unit offers opportunities to gain experience in pictorial projection methods, manual illustration, orthographic drawings and geometric constructions. The Unit is suitable for those candidates wishing to build on previous experience of graphic communication or those candidates who have no previous qualifications or experience and wish to gain a qualification as part of a general education or as a first step to more specialised study.

OUTCOMES

1   Draw isometric and oblique views of everyday items and assemblies, and planometric views of room interiors.
2   Construct and draw views of solid, hollow, uncut and cut right prisms, pyramids, cylinders and cones in orthographic projection.
3   Sketch perspective views of everyday objects and apply freehand illustration techniques.
4   Demonstrate knowledge and understanding of the use of colour theory in graphics.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

♦   Intermediate 1 Graphic Communication
♦   Standard Grade Graphic Communication at General level

National Unit Specification: general information (cont)

UNIT   Technical Graphics 1 (Intermediate 2)

CREDIT VALUE

1 credit at Intermediate 2 (6 SCQF credit points at SCQF level 5*).

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

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill   None
Core Skill component(s)   Using Graphical Information at SCQF level 4

National Unit Specification: statement of standards

UNIT   Technical Graphics 1 (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

Draw isometric and oblique views of everyday items and assemblies, and planometric views of room interiors.

Performance Criteria

(a) Isometric drawings are neat and accurate.
(b) Planometric drawings are neat and represent the subject matter.
(c) Oblique drawings are neat and accurate.
(d) Exploded pictorial views are sufficiently detailed to define clearly the component parts and their relative positions.

OUTCOME 2

Construct and draw views of solid, hollow, uncut and cut right prisms, pyramids, cylinders and cones in orthographic projection.

Performance Criteria

(a) Related views produced represent clearly the geometric form and are accurate in terms of scale, overall size and position.
(b) Geometric constructions are accurate and appropriate.
(c) True shapes and surface developments are accurate in terms of scale and overall size.

National Unit Specification: statement of standards (cont)

UNIT   Technical Graphics 1 (Intermediate 2)

OUTCOME 3

Sketch perspective views of everyday objects and apply freehand illustration techniques.

Performance Criteria

(a) Perspective sketches are in good proportion and sufficiently detailed to represent the object clearly.
(b) The freehand illustration techniques applied are appropriate.
(c) Rendering and use of colour is effective in enhancing sketches to represent various materials.

OUTCOME 4

Demonstrate knowledge and understanding of the use of colour theory in graphics.

Performance Criteria

(a)   Primary, secondary and tertiary colours are correctly identified.
(b)   The use of colours in relation to effect is correctly identified.
(c)   The use of colours in relation to mood and function is correctly identified.
(d)   The procedure for creating a tint or shade is correctly identified.

EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

For Outcomes 1, 2, and 3, graphical evidence is required in the form of a folio of work containing evidence that the candidate can produce:

♦   an isometric drawing of an everyday object containing a curved surface
♦   a planometric drawing of a room interior incorporating two or more objects
♦   an oblique drawing of a everyday object containing a curved surface
♦   an isometric drawing showing three exploded parts
♦   an isometric or an oblique drawing showing three assembled components
♦   an orthographic drawing showing the surface development of a rectangular or triangular right prism
♦   an orthographic drawing showing the surface development of a rectangular or triangular right pyramid
♦   an orthographic drawing showing the surface development of a right cylinder
♦   an orthographic drawing showing the surface development of a hexagonal or octagonal right prism
♦   an orthographic drawing showing the surface development of a hexagonal or octagonal right pyramid
♦   an orthographic drawing showing the surface development of a right cone
♦   pictorial sketches of everyday objects that have been enhanced to represent light, shade, tone and the use of colour

National Unit Specification: statement of standards (cont)

UNIT Technical Graphics 1 (Intermediate 2)

The orthographic drawings detailed above should include one example of each of the following:

♦ an uncut geometric form
♦ a hollow geometric form with more than one cut
♦ a solid geometric form with more than one cut
♦ a true shape of a cut surface

The evidence for the folio must be produced under supervised conditions to ensure that it is the candidate's own work. Work produced by following a directed approach, such as a step-by-step guide, is not valid for assessment purposes.

For Outcome 4, written and/or recorded oral evidence is required which demonstrates that the candidate has achieved the Outcome to the standard specified in the Outcome and Performance Criteria and covering the mandatory content specified in the Appendix. The assessment for this Outcome should be carried out under controlled, closed-book, supervised conditions and should last no more than 15 minutes.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

National Unit Specification: support notes

UNIT   Technical Graphics 1 (Intermediate 2)

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

This Unit may be taken as a free-standing Unit or as part of the Intermediate 2 Graphic Communication Course.

It is particularly suitable for candidates seeking to expand their sketching, illustration and drawing techniques.

The mandatory content for this Unit can be found in the Appendix.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

This Unit could be taught as a free-standing Unit or concurrently with any of the other Units that make up the Intermediate 2 Graphic Communication Course.

To encourage motivation, it is recommended that the objects drawn are everyday items that are relevant to the candidates. Suitable objects may be wooden toys, personal CD players, mp3 players, cameras, mobile phones etc. The Unit could be structured around a series of tasks, some of which may integrate content across Units, for example isometric views of an everyday item produced in F397 11 Technical Graphics 1 (Intermediate 2) and orthographic views of an everyday object produced in F398 11 Technical Graphics 2 (Intermediate 2). This would allow candidates to appreciate the use of different formats for different purposes. Another area for integration could be the correct use of current British Standards on line types, dimensioning and symbols across all three Units of the Intermediate 2 Graphic Communication Course.

The tasks should take candidates from an introductory level up to the Unit standard of performance and cover the content listed in the Appendix to this Unit.

Practice in sketching and detailed drawing will introduce the candidates to a practical need for good graphic skills. Opportunities should be provided to relate the work to the interests of candidates, through the choice of drawing examples. Throughout the Unit, illustration techniques and colour theory should be integrated to allow candidates to appreciate the use of such techniques to enhance and clarify their work.

National Unit Specification: support notes (cont)

UNIT Technical Graphics 1 (Intermediate 2)

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Appropriate instruments of assessment that could be used to generate and gather evidence of achievement are as follows:

Outcomes 1–3: Practical exercises, to be included in a folio of work, which each candidate has compiled working independently under supervised conditions which satisfy the Evidence Requirements for the Unit.

Outcome 4: A short, closed-book, restricted response test, lasting no more than 15 minutes to assess the candidate's knowledge of colour theory. The test should cover all four Performance Criteria and the content listed for Outcome 4 in the Appendix.

The work must be the candidate's own. Work produced by following a directed approach, such as a step-by-step guide, is not valid for assessment purposes.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).

National Unit Specification: statement of standards (cont) — Appendix

UNIT Technical Graphics 1 (Intermediate 2)

APPENDIX

This appendix provides a list of the mandatory content for the Unit. All of the mandatory content will be subject to sampling in the Unit assessment.

OUTCOME 1

The following is the mandatory content for Outcome 1:

♦ isometric and oblique views of everyday items which contain curved surfaces
♦ isometric and oblique views of an assembly of two or three main components, working from orthographic details of the components
♦ exploded isometric views, consisting of three component parts, of everyday items working from orthographic details of the assembly
♦ planometric views of room interiors containing two or more objects

OUTCOME 2

The following is the mandatory content for Outcome 2:

♦ drawings of geometric forms in third angle projection:
  — views: elevations, end elevations, plans, true shapes and surface developments
  — geometric forms: square, rectangular, triangular, hexagonal and octagonal right prisms and pyramids, cylinders and cones

OUTCOME 3

The following is the mandatory content for Outcome 3:

♦ 1-point and 2-point perspective sketches of everyday items
♦ manual illustration to include the use of colour, light, shade and tone in rendering

OUTCOME 4

The following is the mandatory content for Outcome 4:

♦ understand the colour wheel
♦ recognise the use of colour in relation to effect, ie harmonising/contrasting, advancing/receding and warm/cold
♦ recognise the use of colour in relation to mood and function
♦ procedures for creating a tint and a shade

National Unit Specification: general information

UNIT   Technical Graphics 2 (Intermediate 2)

CODE   F398 11

SUMMARY

This Unit is a mandatory Unit of the Intermediate 2 Graphic Communication Course, but can also be taken as a free-standing Unit. The focus of the Unit is practical, developing graphic skills which will be beneficial for any course or vocation where knowledge of Graphic Communication terminology and practical skills is required.

This Unit offers opportunities to gain knowledge and experience of the production of detailed orthographic sketches and drawings in third angle projection. The candidate will also develop knowledge of current British Standards Institute (BSI) conventions.

The Unit is suitable for those candidates wishing to build on previous experience of graphic communication or those candidates who have no previous qualifications or experience and wish to gain a qualification as part of a general education or as a first step to more specialised study.

OUTCOMES

1   Produce orthographic sketches, drawings and sectional views of everyday items in third angle projection.
2   Produce orthographic drawings and sectional views of three part assemblies in third angle projection, working from orthographic and pictorial details of the components.
3   Use knowledge of current British Standards in the production of drawings.

Additional copies of this Unit Specification can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre, telephone 0845 279 1000.   22

National Unit Specification: general information (cont)

UNIT   Technical Graphics 2 (Intermediate 2)

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

♦   Intermediate 1 Graphic Communication
♦   Standard Grade Graphic Communication at General level

CREDIT VALUE

1 credit at Intermediate 2 (6 SCQF credit points at SCQF level 5*).

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

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill   None
Core Skill component(s)   Using Graphical Information at SCQF level 4

National Unit Specification: statement of standards

UNIT   Technical Graphics 2 (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

Produce orthographic sketches, drawings and sectional views of everyday items in third angle projection.

Performance Criteria

(a) Drawings and preliminary sketches are sufficiently detailed to define items clearly.
(b) Sketches are in correct proportion and to an appropriate scale.
(c) Drawings produced are accurate in terms of projection, scale and overall size.
(d) Sectional views reveal internal detail correctly.

OUTCOME 2

Produce orthographic drawings and sectional views of three part assemblies in third angle projection, working from orthographic and pictorial details of the components.

Performance Criteria

(a) Drawings produced of assemblies are accurate in terms of the relative position of component parts.
(b) Drawings produced of sectional views illustrate relevant detail correctly.
(c) Drawings produced are in accordance with relevant British Standards conventions.

OUTCOME 3

Use knowledge of current British Standards in the production of drawings.

Performance Criteria

(a) Use of a range of line types is correct.
(b) Dimensions are shown in accordance with current British Standards.
(c) British Standards symbols are identified correctly.

National Unit Specification: statement of standards (cont)

UNIT   Technical Graphics 2 (Intermediate 2)

EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

For Outcomes 1, 2 and Outcome 3 (a) and (b), graphical evidence is required in the form of a folio of work which will contain evidence that the candidate can produce:

♦ a single sheet with four related sketched views of an everyday item in third angle orthographic projection, one of the sketched views being a section in one plane
♦ a single sheet with three related drawn views, one of which must be a plan of an everyday item, accurately dimensioned and to a given scale; taken from given orthographic views
♦ a single sheet with three related drawn views, one of which must be a plan of an everyday item, accurately dimensioned and to a given scale; taken from given pictorial views
♦ a single sheet with three related drawn views, one of which must be a plan, of an assembly comprising three parts, accurately dimensioned and to a given scale
♦ a single sheet with three related drawn views, one of which must be shown as a section, of an assembly comprising three parts, accurately dimensioned and to a given scale

The correct use of the required range of line type applications and dimensioning in accordance with current British Standards, as detailed in the Appendix to this Unit, must be evident across the orthographic drawings produced for this folio.

The evidence for the folio must be produced under supervised conditions to ensure that it is the candidate's own work. Work produced by following a directed approach, such as a step-by-step guide, is not valid for assessment purposes.

For Outcome 3 (c), written and/or recorded oral evidence is required which demonstrates that the candidate can:

♦ identify the required range of architectural symbols from current British Standards as detailed in the Appendix attached to this Unit
♦ identify the third angle projection symbol

The assessment for Outcome 3 (c) should be carried out under controlled, closed-book, supervised conditions and should last no more than 15 minutes.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

National Unit Specification: support notes

UNIT   Technical Graphics 2 (Intermediate 2)

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

This Unit may be taken as a free-standing Unit or as part of the Intermediate 2 Course in Graphic Communication.

The Unit should allow candidates to gain experience in detailed sketching and drawing techniques to develop a greater understanding of the need for orthographic views, to develop an awareness of the importance of British Standards and to gain experience of the various methods of conveying information graphically.

Opportunities should be provided to relate the work to the interests of candidates, industry and commerce through the choice of drawing examples

The mandatory content for this Unit can be found in the Appendix.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

This Unit could be taught as a free-standing Unit or concurrently with any of the other Units that make up the Intermediate 2 Graphic Communication Course.

To encourage motivation, it is recommended that the objects drawn are everyday items that are relevant to the candidates. Suitable objects may be wooden toys, personal CD players, mp3 players, cameras, mobile phones etc. The Unit could be structured around a series of tasks, some of which may integrate content across Units within the Intermediate 2 Graphic Communication Course eg isometric views of an everyday item produced in F397 11 Technical Graphics 1 (Intermediate 2) and orthographic views of an everyday object produced in F398 11 Technical Graphics 2 (Intermediate 2). This would allow candidates to appreciate the use of different formats for different purposes. Another area for integration could be the correct use of current British Standards on line types, dimensioning and symbols across all three Units of the Intermediate 2 Graphic Communication Course.

The tasks should take candidates from an introductory level up to the Unit standard of performance and cover the content which is detailed in the Appendix to this Unit.

A common product could be used to demonstrate sketching (preliminary) and orthographic drawing (production) to help candidates to understand the use of preliminary and production graphics. The same product could be used in other Units of the Intermediate 2 Graphic Communication Course.

National Unit Specification: support notes (cont)

UNIT   Technical Graphics 2 (Intermediate 2)

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Appropriate instruments of assessment that could be used to generate and gather evidence of achievement are as follows:

Outcomes 1–3: Practical exercises, to be included in a folio of work, which each candidate has compiled working independently under supervised conditions. The required range of line type applications and dimensioning conventions must be evident across the orthographic drawings in the folio.

The work must be the candidate's own. Work produced by following a directed approach, such as a step-by-step guide, is not valid for assessment purposes.

Outcome 3: A short, closed-book, restricted response test lasting no more than 15 minutes covering the mandatory content listed in the Appendix to this Unit.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).

National Unit Specification: statement of standards (cont) — Appendix

UNIT   Technical Graphics 2 (Intermediate 2)

APPENDIX

This appendix provides a list of the mandatory content for the Unit. All of the mandatory content is subject to sampling in the Unit assessment.

OUTCOME 1

The following is the mandatory content for Outcome 1:

♦   sketch two related views of everyday items in third angle projection
♦   drawings of everyday items in third angle projection
♦   sketches of sectional views of everyday items
♦   drawings of sectional views of everyday items

OUTCOME 2

The following is the mandatory content for Outcome 2:

♦   drawings of three-part assemblies, in third angle projection, working from orthographic or pictorial details of the components.
♦   sectional drawings of three part assemblies, in third angle projection, working from orthographic or pictorial details of the components. Limited to three main components involving straight-edged and curved surfaces.
♦   draw objects to a given scale (1:1, 1:2, 2:1).

OUTCOME 3

The following is the mandatory content for Outcome 3:

♦   correct use and identification of common drawing conventions to include:
  —   line type applications (fold line, hidden line, section line, centre line, outline, projection/ construction line, hatching)
  —   dimensioning (horizontal, vertical, square, radius and diameter, angular, AC, AF, CL)
  —   architectural symbols (sink, sinktop, wash basin, wc, bath, shower tray, window, door, radiator, lamp, switch, socket, North symbol, sawn timber, insulation, brickwork, concrete)
  —   third angle projection symbol

National Unit Specification: general information

UNIT   Computer Graphics (Intermediate 2)

CODE   D173 11

SUMMARY

This Unit is a mandatory Unit of the Intermediate 2 Graphic Communication Course, but can also be taken as a free-standing Unit.

The focus of the Unit is practical, developing computer graphic skills associated with Computer-Aided Graphics (CAG) systems which will be beneficial for any course or vocation where a knowledge of Graphic Communication terminology and practical computer skills is required.

This Unit offers opportunities to gain knowledge and experience in the production of detailed orthographic and pictorial drawings using Computer-Aided Draughting (CAD) software. The Candidate will also gain experience in the use of illustration, presentation and Desktop Publishing (DTP) software, producing posters, leaflets, etc.

The Unit is suitable for those candidates wishing to build on previous experience of Graphic Communication or those candidates who have no previous qualifications or experience and wish to gain a qualification as part of a general education or as a first step to more specialised study.

OUTCOMES

1   Produce dimensioned orthographic drawings and pictorial drawings of everyday objects using Computer-Aided Draughting software in accordance with British Standards.
2   Produce a computer-rendered item for promotional purposes using illustration and presentation software.
3   Produce a multi-page layout using Desktop Publishing software.
4   Demonstrate knowledge associated with computer graphics.

National Unit Specification: general information (cont)

UNIT   Computer Graphics (Intermediate 2)

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

♦   Intermediate 1 Graphic Communication
♦   Standard Grade Graphic Communication at General level

CREDIT VALUE

1 credit at Intermediate 2 (6 SCQF credit points at SCQF level 5*).

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

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill   Information Technology at SCQF level 4
Core Skill component(s)   None

National Unit Specification: statement of standards

UNIT   Computer 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

Produce dimensioned orthographic drawings and pictorial drawings of everyday objects using Computer-Aided Draughting software in accordance with British Standards.

Performance Criteria

(a) Orthographic drawings produced include fillets, arcs and a range of line type and dimensioning conventions, and are accurate in terms of projection, scale and overall size.
(b) Pictorial drawings produced include curved edges and effectively represent the object in terms of detail and proportion.
(c) Dimensions on orthographic drawings are clear and unambiguous in terms of their positioning and statement of size; and in accordance with the relevant British Standard.

OUTCOME 2

Produce a computer-rendered item for promotional purposes using illustration and presentation software.

Performance Criteria

(a) Rendering is effective in enhancing the item using appropriate illustration and presentation techniques.
(b) Rendering and use of colour is effective in enhancing the item to show various materials.

OUTCOME 3

Produce a multi-page layout using Desktop Publishing software.

Performance Criteria

(a) The layout contains a body of text contained within columns.
(b) The layout contains edited and unedited graphic items.
(c) The layout produced is clear and effective in terms of its use of backgrounds, text style and integration of text and graphics.

National Unit Specification: statement of standards (cont)

UNIT   Computer Graphics (Intermediate 2)

OUTCOME 4

Demonstrate knowledge associated with computer graphics.

Performance Criteria

(a)   Common input/output and storage devices are identified correctly.
(b)   The uses of common input/output and storage devices are described correctly.
(c)   Software command/features are identified correctly.
(d)   The uses of software command/features are described correctly.
(e)   The advantages of CAD/CAG over manual methods are described correctly.

EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

For Outcomes 1, 2, and 3, product evidence is required in the form of a folio of work, which will contain evidence that the candidate can produce:

♦   a dimensioned orthographic CAD drawing showing related views of an everyday object which includes fillets, arcs, four different line types and three different dimensioning conventions.
♦   a line pictorial CAD drawing of an everyday object which includes curved edges.
♦   a hard copy of a realistically computer rendered item, which incorporates appropriate illustration and presentation techniques from the list in the Appendix.
♦   a multi-page DTP layout document containing a body of text within at least two columns and at least two imported graphic items, one of which should be edited. The text should be appropriate and should not be lorem ipsum or other irrelevant text.

The evidence for the folio must be produced under supervised conditions to ensure that it is the candidate's own work. Work produced by following a directed approach, such as a step by step guide, is not valid for assessment purposes.

For Outcome 4, written and/or recorded oral evidence is required. The instrument of assessment will provide opportunities for all Performance Criteria to be fulfilled, by means of sampling across the range of the content of Outcome 4 in the Appendix. If a re-assessment is required, it should contain a different sample from the range of mandatory content contained within the Appendix and achievement can be decided by the use of a cut-off score. Each sample must include the following:

♦   identify one of each of the following: input, output and storage devices taken from the mandatory content detailed in the Appendix
♦   describe the use of one of each of the following: input/output or storage devices taken from the mandatory content detailed in the Appendix
♦   identify three software commands/features taken from the mandatory content detailed in the Appendix
♦   describe the use of three software commands/features taken from the mandatory content detailed in the Appendix
♦   describe three advantages of Computer Aided Graphics over manual

National Unit Specification: statement of standards (cont)

UNIT   Computer Graphics (Intermediate 2)

The assessment for Outcome 4 should be carried out under controlled, supervised, closed-book conditions and should last no more than 15 minutes.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

National Unit Specification: support notes

UNIT   Computer Graphics (Intermediate 2)

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

This Unit may be taken as a free-standing Unit or as part of the Intermediate 2 Graphic Communication Course.

The Unit will deal with the use of three commercially available software types, ie Computer-Aided Draughting (CAD), illustration and presentation and Desktop Publishing (DTP) — these software types may be included within an integrated package. These could be used to solve problems and present ideas that candidates might realistically expect to find in a vocational or leisure environment.

Candidates could gain experience in producing orthographic and pictorial views using CAD software; in using illustration software to enhance presentation graphic items in terms of colour, impact and presentation; and in using DTP software to produce effective layouts involving graphics and text. Candidates could become familiar with common terms associated with computer graphics and gain knowledge of the advantages of Computer Aided Graphics (CAG) in professional, commercial and industrial settings.

Throughout this Unit, safety should be stressed, along with good computer housekeeping, shutdown procedures, safe storage of files and continual saving of work. Care and correct use of equipment should be an integral part of all activities.

The mandatory content for this Unit can be found in the Appendix.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

This Unit could be taught as a free-standing Unit or concurrently with any of the other Units that make up the Intermediate 2 Graphic Communication Course.

For candidates following the Intermediate 2 Graphic Communication Course, the work of this Unit should help to consolidate and integrate content taught in the other two Units. For example, the use of the same objects as was used in the other Units can help to show how different views are used for different purposes; colour theory, manual rendering techniques and the use of British Standard on line types, dimensioning and symbols learned in other Units, can be reinforced in Computer Graphics work.

Opportunities could be provided to relate the work to the interests of candidates through the choice of drawing examples. Suitable examples could be wooden toys, personal CD players, mp3 players, cameras, mobile phones etc.

Using the same product to demonstrate orthographic drawing (production) and computer illustration and presentation (promotional) would help candidates to understand and see the use of production and promotional graphics.

National Unit Specification: support notes (cont)

UNIT   Computer Graphics (Intermediate 2)

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Appropriate instruments of assessment that could be used to generate and gather evidence of achievement are as follows:

Outcomes 1–3: Practical exercises, to be included in a folio of work, which each candidate has compiled working independently under supervised conditions. Practical exercises, included in a folio of work, to assess the candidate's ability in orthographic and pictorial CAD drawing, DTP and illustration and presentation.

The work should be the candidate's own work. Work produced by following a directed approach, such as a step by step guide or wizard, is not valid for assessment purposes.

Outcome 4: a short closed-book restricted response test to assess the candidate's awareness of terminology and the advantages of computer graphics in industry. The test should be aimed at a sample of the range of terminology associated with computer graphics. If a re-assessment is required it should contain a different sample from the range of mandatory content contained within the Appendix.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).

National Unit Specification: statement of standards (cont) — Appendix

UNIT Computer Graphics (Intermediate 2)

APPENDIX

This appendix provides a list of the mandatory content for the Unit. All of the mandatory content is subject to sampling in the Unit assessment.

OUTCOME 1

The following is the mandatory content for Outcome 1:

♦ produce orthographic and pictorial drawings of everyday objects which contain fillets and arcs
♦ use a range of line type and dimensioning conventions in the production of orthographic drawings in accordance with British Standards
♦ apply dimensions to orthographic drawings in accordance with British Standards

OUTCOME 2

The following is the mandatory content for Outcome 2:

♦ produce a computer-rendered item containing text and graphics using illustration and presentation software
♦ illustration and presentation techniques: light, shade and tonal scale; highlights, reflections and shadows; gradients

OUTCOME 3

The following is the mandatory content for Outcome 3:

♦ produce a multi-page layout document containing a body of text (contained within two or more columns) and graphic items using Desktop Publishing software
♦ the layout should contain at least two imported graphic items, text may be typed or imported
♦ appropriate meaningful text should be used and not lorem ipsum or other irrelevant text

OUTCOME 4

The following is the mandatory content for Outcome 4:

♦ demonstrate knowledge of software commands/features:
  — CAD: zoom; copy; scale; rotate; mirror; move; array (polar/ ring, box/ rectangular) hatch; dimension; fillet; group; linestyles; layering; pan; chamfer; trim; extend; break
  — illustration and presentation: cut; copy; paste; rotate; mirror, colour and gradients (tonal or colour)
  — DTP: headers; footers; columns; gutters; margins; page orientation; text wrap; caption; importing text and importing graphics; crop
♦ demonstrate knowledge of input/output and storage devices relating to:
  — input: keyboard, mouse, digital camera, scanner, graphics tablet
  — output: monitor, plotter, printer (laser, inkjet)
  — storage: hard drive, floppy disk, CD, DVD, solid state storage device (memory card/ USB device)
♦ advantages of using a Computer–Aided Graphics (CAG) system