



Higher Graphic Communication

Course code:	C835 76
Course assessment code:	X835 76
SCQF:	level 6 (24 SCQF credit points)
Valid from:	session 2018–19

This document provides detailed information about the course and course assessment to ensure consistent and transparent assessment year on year. It describes the structure of the course and the course assessment in terms of the skills, knowledge and understanding that are assessed.

This document is for teachers and lecturers and contains all the mandatory information you need to deliver the course.

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Contents

Course overview	1
Course rationale	2
Purpose and aims	2
Who is this course for?	2
Course content	3
Skills, knowledge and understanding	3
Skills for learning, skills for life and skills for work	15
Course assessment	16
Course assessment structure: question paper	16
Course assessment structure: assignment	17
Grading	19
Equality and inclusion	20
Further information	21

Course overview

The course consists of 24 SCQF credit points which includes time for preparation for course assessment. The notional length of time for candidates to complete the course is 160 hours.

The course assessment has two components.

Component	Marks	Duration
Component 1: question paper	90	2 hours and 30 minutes
Component 2: assignment	50	see 'Course assessment' section

Recommended entry	Progression
<p>Entry to this course is at the discretion of the centre.</p> <p>Candidates should have achieved the National 5 Graphic Communication course or equivalent qualifications and/or experience prior to starting this course.</p>	<ul style="list-style-type: none">◆ other SQA qualifications in graphic communication or related areas◆ further study, employment and/or training

Conditions of award

The grade awarded is based on the total marks achieved across all course assessment components.

Course rationale

National Courses reflect Curriculum for Excellence values, purposes and principles. They offer flexibility, provide time for learning, focus on skills and applying learning, and provide scope for personalisation and choice.

Every course provides opportunities for candidates to develop breadth, challenge and application. The focus and balance of assessment is tailored to each subject area.

This course develops skills that are complementary to other curricular areas, including expressive arts, sciences, and mathematics. It allows candidates to engage with technologies and consider the impact that graphic communication technologies have on our environment and society.

Candidates are encouraged to exercise imagination, creativity and logical thinking. They develop an awareness of graphic communication as an international language.

Purpose and aims

The course provides opportunities for candidates to initiate and develop their own ideas graphically. It allows them to develop skills in reading and interpreting graphics produced by others. Candidates continue to develop graphic awareness, often in complex graphic situations, expanding their visual literacy.

The course is practical, exploratory and experiential in nature. It combines elements of creativity and communicating for visual impact with elements of protocol and an appreciation of the importance of graphic communication standards.

Candidates develop:

- ◆ skills in graphic communication techniques, including the use of equipment, graphic materials and software
- ◆ creativity in the production of graphic communications to produce visual impact in meeting a specified purpose
- ◆ skills in evaluating the effectiveness of graphics in communicating and meeting their purpose
- ◆ an understanding of graphic communication standards, protocols and conventions, where these apply
- ◆ an understanding of the impact of graphic communication technologies on our environment and society

Who is this course for?

The course is suitable for candidates with an interest in both digital and paper-based graphic communication. It is largely candidate-centred and includes practical and experiential learning opportunities, so there is broad scope for personalisation and choice.

Course content

The course develops skills in two main areas — 2D, and 3D and pictorial graphic communication. Candidates apply these skills to produce graphics with visual impact that communicate information effectively.

2D graphic communication

Candidates develop creativity and presentation skills within a 2D graphic communication context. They initiate, plan, develop and communicate ideas graphically, using 2D graphic techniques. Candidates develop skills and attributes including spatial awareness, visual literacy, and the ability to interpret given drawings, diagrams and other graphics. They evaluate the effectiveness of their own and given graphic communications to meet their purpose.

3D and pictorial graphic communication

Candidates develop creativity and presentation skills within a 3D and pictorial graphic communication context. They initiate, plan, develop and communicate ideas graphically, using 3D and pictorial graphic techniques. Candidates develop a number of skills and attributes including spatial awareness, visual literacy, and the ability to interpret given drawings, diagrams and other graphics. They evaluate the effectiveness of their own and given graphic communications to meet their purpose.

Skills, knowledge and understanding

Skills, knowledge and understanding for the course

The following provides a broad overview of the subject skills, knowledge and understanding developed in the course:

- ◆ replicating familiar and some new graphic forms with some complex features in 2D, 3D and pictorial views
- ◆ applying recognised graphic communication standards, protocols and conventions in straightforward but unfamiliar contexts
- ◆ initiating, planning and producing preliminary, production, promotional, and informational graphics in both familiar and new contexts, with some complex features
- ◆ applying graphic design skills, including creativity, when developing solutions to graphic tasks with some complex features
- ◆ understanding the application of colour, illustration and presentation techniques in a broad range of graphic contexts
- ◆ critically reviewing graphics work as it progresses, and evaluating completed tasks suggesting strategies for improvement
- ◆ extending visual literacy by interpreting unfamiliar graphic communications — some with complex features or combinations of views
- ◆ extending graphic spatial awareness in unfamiliar 2D, 3D and pictorial graphic situations including those with complex features

- ◆ selecting, managing and using graphic communication equipment, software and materials effectively across tasks
- ◆ understanding a broad range of computer-aided graphic techniques including commercial/industrial practice
- ◆ an informed understanding of the impact of graphic communication technologies on the environment and society

Skills, knowledge and understanding for the course assessment

The following provides details of skills, knowledge and understanding sampled in the course assessment:

Question paper (knowledge and understanding)		Assignment (skills)	
Graphic types	The role of preliminary, production and promotional graphics in the design, manufacturing and marketing of a product or publication.	Graphic types	Producing effective preliminary, production and promotional graphics.
Manual techniques	Manual graphic communication techniques and processes, and their relative merits compared to electronic methods. A range of common manual graphics media.	Manual techniques and/or computer-aided techniques	Selecting and applying manual and/or computer-aided and desktop-publishing (DTP) graphic techniques and processes. Using graphic communication applications and a range of common graphic media, equipment and/or devices to produce effective and informative graphic communications.
Computer-aided techniques	Computer-aided techniques, computer-aided design (CAD), desktop publishing (DTP), digital capture/input and output techniques and devices.		

Question paper (knowledge and understanding)		Assignment (skills)	
Drawing standards, protocols and conventions	<p>Recognised drawing standards, protocols and conventions, demonstrated through application, identification and recognition in given contexts, views and items.</p> <ul style="list-style-type: none"> ◆ line types: <ul style="list-style-type: none"> — dimension lines, centre line, hidden detail, cutting planes, fold lines ◆ dimensioning: <ul style="list-style-type: none"> — linear, radial, angular, diameter, tolerance ◆ symbols for sections ◆ hatching ◆ building construction ◆ third-angle projection system 	Drawing standards, protocols and conventions	<p>Applying recognised drawing standards, protocols and conventions in engineering and construction, including symbols and standards.</p> <ul style="list-style-type: none"> ◆ line types: <ul style="list-style-type: none"> — dimension lines, centre line, hidden detail, cutting planes, fold lines ◆ dimensioning: <ul style="list-style-type: none"> — linear, radial, angular, diameter, tolerance ◆ symbols for sections ◆ hatching ◆ building construction ◆ third-angle projection system

Question paper (knowledge and understanding)		Assignment (skills)	
Geometric shapes and forms	<p>Spatial awareness when interpreting geometric shapes and forms, and/or those used in the communication of products, components, assemblies and other items.</p> <ul style="list-style-type: none"> ◆ interpenetration ◆ intersections of right prisms and cylinders ◆ true shapes ◆ ellipses ◆ common geometric forms and partial cuts of those forms ◆ components built from various simple combinations of forms 	Geometric shapes and forms	<p>Producing graphics representing products, components, assembly and other items.</p> <ul style="list-style-type: none"> ◆ interpenetration ◆ intersections of right prisms and cylinders ◆ true shapes ◆ ellipses ◆ common geometric forms and partial cuts of those forms ◆ components built from various simple combinations of forms

Question paper (knowledge and understanding)		Assignment (skills)	
Views and techniques	<p>The role, benefits and use of a variety of views and techniques in 2D and 3D formats:</p> <ul style="list-style-type: none"> ◆ communicating geometric shapes, objects and forms ◆ components ◆ assemblies ◆ third-angle orthographic projection ◆ tangency (internal and external radii location) ◆ true lengths and true shapes ◆ surface developments ◆ a range of sectional views (full, part, revolved, and stepped) and cut-aways ◆ assembly drawings (minimum three parts) ◆ auxiliary views ◆ exploded views (full and sectioned) ◆ oblique, isometric and planometric views ◆ use of appropriate scales 	Views and techniques	<p>Appropriate selection and use of 2D, and 3D and pictorial views and techniques, when producing graphic communications:</p> <ul style="list-style-type: none"> ◆ third-angle orthographic projection ◆ tangency (internal and external radii location) ◆ true lengths and true shapes ◆ surface developments ◆ a range of sectional views (full, part, revolved, and stepped) and cut-aways ◆ assembly drawings (minimum three parts) ◆ auxiliary views ◆ exploded views (full and sectioned) ◆ oblique, isometric and planometric views ◆ use of appropriate scales

Question paper (knowledge and understanding)		Assignment (skills)	
		Techniques in sketching (paper-based and/or using electronic tablets or similar devices)	Applying electronic and/or manual sketching techniques: <ul style="list-style-type: none"> ◆ proportion ◆ line quality ◆ vanishing points ◆ line sketching using related orthographic views ◆ single- and two-point perspective ◆ oblique and isometric forms
Illustration techniques	The use of illustration techniques used to support effective graphic communications. The use and role of, and common techniques for representing: <ul style="list-style-type: none"> ◆ light ◆ shadow ◆ reflection ◆ tone ◆ layout ◆ material ◆ texture 	Illustration techniques using manual and/or computer-aided formats	Using illustration techniques to create effective and informative graphic communications for representing: <ul style="list-style-type: none"> ◆ light ◆ shadow ◆ reflection ◆ tone ◆ layout ◆ material ◆ texture Visual enhancement techniques

Question paper (knowledge and understanding)		Assignment (skills)	
	3D-rendering techniques: <ul style="list-style-type: none"> ◆ light source ◆ materials ◆ reflections ◆ shade ◆ sited environment 		Creating scenes that place 3D models in relevant contexts.
Techniques used for producing effective promotional documents and publications	Techniques used in producing promotional documents and publications: <ul style="list-style-type: none"> ◆ colour theory: <ul style="list-style-type: none"> — warm, cool, contrast, harmony, accent, advancing and receding ◆ design elements and principles: <ul style="list-style-type: none"> — line, shape, texture, value, mass/weight, alignment, balance, contrast, depth, dominance, emphasis, proportion, rhythm, unity/proximity, white space, grid structure 	Producing effective promotional documents	Applying and using: <ul style="list-style-type: none"> ◆ colour theory: <ul style="list-style-type: none"> — warm, cool, contrast, harmony, accent, advancing and receding ◆ design elements and principles: <ul style="list-style-type: none"> — line, shape, texture, value, mass/weight, alignment, balance, contrast, depth, dominance, emphasis, proportion, rhythm, unity/proximity, white space, grid structure <p>Techniques used to create promotional documents and graphic displays.</p> <p>Presenting research/investigation and generating ideas for work to support/justify a graphic communication proposal.</p>

Question paper (knowledge and understanding)		Assignment (skills)	
Using technology in graphic communication	Ranges, features and use of graphic hardware and software computer systems and networks: <ul style="list-style-type: none"> ◆ file management ◆ cloud computing ◆ cloud storage ◆ digital rights management ◆ digital input and output devices ◆ advantages and limitations of CAD 		
Computer-aided design (CAD)	Generic techniques, customs and practices used across a range of packages: <ul style="list-style-type: none"> ◆ 2D-drawing tools: <ul style="list-style-type: none"> — line, circle, rectangle, ellipse, trim, array (linear, box and radial), offset, mirror, project edge, extend, fillet, chamfer ◆ modelling features: <ul style="list-style-type: none"> — extrude, revolve, loft, helix, extrude/sweep along a path ◆ modelling edits: <ul style="list-style-type: none"> — shell, fillet (regular/irregular), chamfer (regular/irregular), mirror, 	Computer-aided design (CAD)	Applying generic techniques, customs and practices used across a range of 2D and 3D CAD packages: <ul style="list-style-type: none"> ◆ 2D-drawing tools: <ul style="list-style-type: none"> — line, circle, rectangle, ellipse, trim, array (linear, box and radial), offset, mirror, project edge, extend, fillet, chamfer ◆ modelling features: <ul style="list-style-type: none"> — extrude, revolve, loft, helix, extrude/sweep along a path ◆ modelling edits: <ul style="list-style-type: none"> — shell, fillet (regular/irregular), chamfer (regular/irregular), mirror,

Question paper (knowledge and understanding)		Assignment (skills)	
	<p>array (linear, box and radial), add, subtract, intersect</p> <ul style="list-style-type: none"> ◆ 2D constraints: <ul style="list-style-type: none"> — linear, radius, diameter, perpendicular, parallel, fixed, tangent, concentric ◆ terminology: <ul style="list-style-type: none"> — component, assembly, sub-assembly, work-plane/plane, axis, feature, profile, sketch, face, edge, datum, suppress ◆ assembly: <ul style="list-style-type: none"> — 3D constraints (mate, align, centre axis, orientate, offset, tangent), stock/library components ◆ modelling concepts: <ul style="list-style-type: none"> — top-down modelling, bottom-up modelling, vertices, edges and faces, modelling tree/hierarchy, modelling plan ◆ file types: <ul style="list-style-type: none"> — dxf, 3ds, step/iges ◆ CAD libraries: <ul style="list-style-type: none"> — use and function of CAD libraries and stock models 		<p>array (linear, box and radial), add, subtract, intersect</p> <ul style="list-style-type: none"> ◆ 2D constraints: <ul style="list-style-type: none"> — linear, radius, diameter, perpendicular, parallel, fixed, tangent, concentric ◆ terminology: <ul style="list-style-type: none"> — component, assembly, sub-assembly, work-plane/plane, axis, feature, profile, sketch, face, edge, datum, suppress ◆ assembly: <ul style="list-style-type: none"> — 3D constraints (mate, align, centre axis, orientate, offset, tangent), stock/library components ◆ modelling concepts: <ul style="list-style-type: none"> — top-down modelling, bottom-up modelling, vertices, edges and faces, modelling tree/hierarchy, modelling plan ◆ file types: <ul style="list-style-type: none"> — dxf, 3ds, step/iges ◆ CAD libraries: <ul style="list-style-type: none"> — use and function of CAD libraries and stock models

Question paper (knowledge and understanding)		Assignment (skills)	
Desktop publishing (DTP)	<p>Generic DTP terms and techniques including:</p> <ul style="list-style-type: none"> ◆ planning strategies: <ul style="list-style-type: none"> — thumbnails, visuals and annotation ◆ generic DTP terms and techniques: <ul style="list-style-type: none"> — copy/paste, import/export — single- and multi-page format — page size, orientation, grid, guides, snap, master page layers, document sizing — cropping (square and full cropping), rotate, text box, handles, text wrap, flow text along a path, extended text — colour fill, colour picking, textured fills, gradient fill, transparency, drop shadow — serif, sans serif and script fonts, font styles, placeholder text (lorem ipsum), reverse, drop caps — column, margin, gutter, caption, header, running headline, heading, title, footer, folio, column rule/rule, indent, hanging indent, line spacing, pull quote, justification — proofs (pre-press), registration marks, crop marks, bleed ◆ file types: <ul style="list-style-type: none"> — raster (tiff, jpg, png, bmp), vector (svg, dxf) and their features 	Desktop publishing (DTP)	<p>Applying and using generic DTP terms and techniques including:</p> <ul style="list-style-type: none"> ◆ planning strategies: <ul style="list-style-type: none"> — thumbnails, visuals and annotation ◆ generic DTP terms and techniques: <ul style="list-style-type: none"> — copy/paste, import/export — single- and multi-page format — page size, orientation, grid, guides, snap, master page layers, document sizing — cropping (square and full cropping), rotate, text box, handles, text wrap, flow text along a path, extended text — colour fill, colour picking, textured fills, gradient fill, transparency, drop shadow — serif, sans serif and script fonts, font styles, placeholder text (lorem ipsum), reverse, drop caps — column, margin, gutter, caption, header, running headline, heading, title, footer, folio, column rule/rule, indent, hanging indent, line spacing, pull quote, justification — proofs (pre-press), registration marks, crop marks, bleed ◆ file types: <ul style="list-style-type: none"> — raster (tiff, jpg, png, bmp), vector (svg, dxf) and their features

Question paper (knowledge and understanding)		Assignment (skills)	
Graphic communication technology and society	<p>The impact and influence of CAD systems and graphic communication technologies on industry and society:</p> <ul style="list-style-type: none"> ◆ the paperless office ◆ use of recycled materials ◆ CAD, as it supports manufacturing and other industries ◆ DTP in marketing and promotional activities ◆ remote working ◆ communication crossing international boundaries 		
		Safe working	The safe working practices and systems that support graphic communication activities in studios and other working environments.

Skills, knowledge and understanding included in the course are appropriate to the SCQF level of the course. The SCQF level descriptors give further information on characteristics and expected performance at each SCQF level, and can be found on the SCQF website.

Skills for learning, skills for life and skills for work

This course helps candidates to develop broad, generic skills. These skills are based on SQA's Skills Framework: Skills for Learning, Skills for Life and Skills for Work and draw from the following main skills areas:

2 Numeracy

2.2 Money, time and measurement

4 Employability, enterprise and citizenship

4.2 Information and communication technology (ICT)

5 Thinking skills

5.3 Applying

5.4 Analysing and evaluating

5.5 Creating

You must build these skills into the course at an appropriate level, where there are suitable opportunities.

Course assessment

Course assessment is based on the information provided in this document.

The course assessment meets the key purposes and aims of the course by addressing:

- ◆ breadth — drawing on knowledge and skills from across the course
- ◆ challenge — requiring greater depth or extension of knowledge and/or skills
- ◆ application — requiring application of knowledge and/or skills in practical or theoretical contexts as appropriate

This enables candidates to:

- ◆ demonstrate aspects of breadth and application in a graphic context, based on recognised graphic principles and those used in industry and commerce
- ◆ produce practical responses to a graphics situation, which allows them to confirm their capabilities through challenge and application
- ◆ apply knowledge and understanding from across the course, to describe and explain graphic communication techniques, methods and standards
- ◆ apply knowledge and understanding from across the course, to interpret unfamiliar, potentially complex graphic communications
- ◆ apply skills, knowledge and understanding from across the course, to produce a response to a graphic communication brief

Course assessment structure: question paper

Question paper

90 marks

The question paper has a total mark allocation of 90 marks. This is 64% of the overall marks for the course assessment.

It has one section, allowing for a variety of response types across the paper.

The question paper gives candidates the opportunity to demonstrate skills, knowledge and understanding relating to the following:

Area	Range of marks
Computer-aided design techniques	20–30
Interpretation of graphic items	12–30
Digital technology in graphic communication	4–12
Drawing standards, protocols and conventions	7–14
Desktop-publishing features, design elements and principles	20–30

A proportion of marks are available for more challenging questions, which generally require interpretation and/or integration of more complex graphic communication techniques. This could be in complexity of the expected response, the descriptions and/or justifications of more detailed and/or complex processes, or problem solving, for example in computer-aided design techniques and processes.

Candidates may include sketches to further illustrate and support their response, however, sketching is not a requirement. Candidates are not required to draw with instruments.

Questions are a mixture of limited and extended responses and/or scenario-based questions, allowing for either written and/or sketched responses, and illustrations for descriptive purposes.

Setting, conducting and marking the question paper

The question paper is set and marked by SQA, and conducted in centres under conditions specified for external examinations by SQA.

Candidates have 2 hours and 30 minutes to complete the question paper.

Specimen question papers for Higher courses are published on SQA's website. These illustrate the standard, structure and requirements of the question papers candidates sit. The specimen papers also include marking instructions.

Course assessment structure: assignment

Assignment

50 marks

The assignment assesses candidates' ability to apply graphic communication skills and knowledge acquired and developed during the course, in the context of defined tasks which require a response to a problem or situation.

It has three areas covering preliminary, production and promotional graphics. These may, or may not, be thematically related and include various tasks that candidates complete.

The assignment has a total mark allocation of 50 marks. This is 36% of the overall marks for the course assessment.

Marks are awarded for:

Area	Range of marks
Preliminary graphics	5–15
Production graphics	10–25
Promotional graphics	10–25

The assignment provides an opportunity for candidates to:

- ◆ demonstrate creativity when responding to realistic and contextualised graphic tasks and situations
- ◆ demonstrate skills when using graphic communication technologies to meet a purpose
- ◆ produce relevant preliminary, production and promotional graphic responses to a brief
- ◆ apply illustration and presentation techniques to create graphic responses with relevant visual impact and clear purpose
- ◆ produce 2D and 3D production drawings, applying appropriate standards, protocols and conventions (drawing includes manual or electronic production methodologies); including third-angle projection, dimensioning, line type and using scale
- ◆ produce promotional graphic publications with relevant visual impact, that are planned and designed to meet a market and purpose, with an agreed content and style
- ◆ review, evaluate and justify their decisions on the choice of graphic items and communication techniques employed

Setting, conducting and marking the assignment

The assignment is:

- ◆ set by SQA, on an annual basis
- ◆ conducted under a high degree of supervision and control
- ◆ submitted to SQA for external marking

All marking is quality assured by SQA.

Assessment conditions

Time

The assignment is carried out over 8 hours, starting at an appropriate point in the course, once all content has been delivered.

Supervision, control and authentication

Candidates must carry out the assignment:

- ◆ without interruption by periods of learning and teaching
- ◆ in a classroom environment
- ◆ on an individual basis, ie no group work is permitted
- ◆ in a supervised environment, to ensure that work presented is their own

Resources

This is a closed-book assessment. Candidates must not have access to learning and teaching materials, the internet, notes, exemplar materials, resources on classroom walls or anything similar.

Each assessment task includes instructions and details of any equipment or materials required.

Reasonable assistance

Candidates must progress through each stage of the assignment without any teacher or lecturer intervention or guidance.

Once assignments are completed, they must not be returned to candidates for further work.

Evidence to be gathered

Full details of evidence requirements are contained within each assessment task.

All candidate evidence (whether created manually or electronically) must be submitted to SQA in paper-based format.

Volume

There is no word count.

Candidates should present their work on a maximum of 10 single-sided A3-sized pages, however, there is no penalty for exceeding this.

Grading

Candidates' overall grades are determined by their performance across the course assessment. The course assessment is graded A–D on the basis of the total mark for all course assessment components.

Grade description for C

For the award of grade C, candidates will typically have demonstrated successful performance in relation to the skills, knowledge and understanding for the course.

Grade description for A

For the award of grade A, candidates will typically have demonstrated a consistently high level of performance in relation to the skills, knowledge and understanding for the course.

Equality and inclusion

This course is designed to be as fair and as accessible as possible with no unnecessary barriers to learning or assessment.

For guidance on assessment arrangements for disabled candidates and/or those with additional support needs, please follow the link to the assessment arrangements web page: www.sqa.org.uk/assessmentarrangements.

Further information

The following reference documents provide useful information and background.

- ◆ [Higher Graphic Communication subject page](#)
- ◆ [Assessment arrangements web page](#)
- ◆ [Building the Curriculum 3–5](#)
- ◆ [Guide to Assessment](#)
- ◆ [Guidance on conditions of assessment for coursework](#)
- ◆ [SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work](#)
- ◆ [Coursework Authenticity: A Guide for Teachers and Lecturers](#)
- ◆ [Educational Research Reports](#)
- ◆ [SQA Guidelines on e-assessment for Schools](#)
- ◆ [SQA e-assessment web page](#)

The SCQF framework, level descriptors and handbook are available on the SCQF website.

Administrative information

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History of changes

Version	Description of change	Date

Note: you are advised to check SQA's website to ensure you are using the most up-to-date version of this document.

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