Graphic Communication
Course Assessment Information

The overall marks (120 marks) for the course are shown below:

Component	Marks	Duration
Component 1: question paper	80	2 hours
Component 2: assignment	40	See course assessment section

Question Paper

80 marks
67%

This gives you the opportunity to demonstrate skills, knowledge and understanding relating to:

Area	Range of marks
Computer-aided design techniques	15–20
Graphic items in specific situations	8–10
Manual and electronic methods of graphic communication	6–14
Spatial awareness	12–17
Drawing standards, protocols and conventions	10–17
Use of colours, layout and presentation techniques	15–20

Exam

28th of May 2020 at 9:00- 11:00

Assignment

40 marks
33%

This gives you the opportunity to apply GC skills and knowledge in response to a problem of brief:

Area	Range of marks
Preliminary graphics	10–20
Production graphics	10–20
Promotional graphics	10–20

The assignment provides an opportunity for candidates to:

- demonstrate graphic design skills and creativity
- use graphic communication technologies
- produce preliminary, production and promotional graphic items in response to a situation or problem
- use illustration techniques to create graphics with relevant visual impact
- produce 2D and 3D production drawings, applying appropriate standards, protocols and conventions (drawing includes manual or electronic production methodologies)
- review and evaluate their progress, giving justification for the choice of graphic items and the graphic communication techniques employed

https://www.bbc.com/bitesize/subjects/znpy4wx

http://www.technologystudent.com/

https://www.sqa.org.uk/sqa/47459.html

http://3dmadeeasy.com/

N5 Skills, knowledge and understanding
Graphic Communication

Question paper		Assignment	
Graphic types	Knowledge and understanding of the role of preliminary, production and promotional graphics in graphic communication activities.	Graphic types	Skills in producing effective preliminary, production and promotional graphic communications.
Manual techniques	Knowledge and understanding of the role of manual and computer-aided techniques and processes and their comparative merits when producing effective and informative graphic communications and solutions.	Manual and/or computer-aided techniques	Skills in selecting and applying manual and/or computer-aided 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	Knowledge and understanding of the role of computer-aided techniques: ♦ describing processes, stages and generic commands applied (or to be applied) in producing graphic solutions ♦ ranges, features and uses of graphic hardware and software and computer systems file management ♦ digital input and output devices and the advantages and limitations of computer-aided design (CAD) ♦ application of light source, surface texture and materials in both 2D CAD and 3D CAD illustrations		
Drawing standards, protocols and conventions	Knowledge, understanding and identification of recognised drawing standards, protocols and conventions commonly used in engineering and construction: ♦ line types: outline, projection, dimension, centre, hidden detail, cutting plane and fold ♦ dimensioning: linear, chain, parallel, radial, diameter, angular, square, across flats and across corners ♦ symbols and conventions ♦ conventions for sectioning and hatching ♦ symbols for building construction ♦ third-angle projection system and symbols ♦ building construction drawing: location plans, site plans, floor plans, sectional views, elevations and scales	Applying drawing standards, protocols and conventions	Skills in applying recognised drawing standards, protocols and conventions, while producing responses and/or solutions to a graphic communication problem or situation: ♦ line types: outline, projection, dimension, centre, hidden detail, cutting plane and fold ♦ dimensioning: linear, chain, parallel, radial, diameter, angular, square, across flats and across corners ♦ symbols and conventions ♦ conventions for sectioning and hatching ♦ symbols for building construction ♦ third-angle projection system and symbols ♦ building construction drawing: location plans, site plans, floor plans, sectional views, elevations and scales

Question paper		Assignment	
Geometric shapes and forms and everyday objects	Knowledge, understanding and skills in spatial awareness when interpreting geometric shapes and forms and/or those used in the communication of everyday objects: ♦ common geometric forms and everyday objects consisting of squares, rectangles, circles, hexagons, octagons, right prisms, pyramids, cones and cylinders ♦ partial or single cuts to these forms ♦ components based on geometric forms ♦ combinations of two components	Geometric shapes and forms and everyday objects	Skills in producing graphics representing everyday objects, based upon geometric shapes and forms in supporting the production of graphic communications: ♦ common geometric forms and everyday objects consisting of squares, rectangles, circles, hexagons, octagons, right prisms, pyramids, cones and cylinders ♦ partial or single cuts to these forms ♦ components based on geometric forms ♦ combinations of two components
Views and techniques	Knowledge and understanding of the role, benefits and use of a variety of views and techniques in 2D, 3D and pictorial formats, in communicating geometric shapes and forms and everyday objects: ♦ orthographic projection of geometric forms and everyday objects in third-angle projection ♦ true lengths and true shapes ♦ surface developments, sectional views, assembly drawings and exploded isometric views ♦ pictorial views: one- and two-point perspective, isometric, oblique and planometric	Views and techniques	Skills in the appropriate selection and use of 2D, 3D and pictorial views and techniques, to produce graphic communications: ♦ orthographic projection of geometric forms and everyday objects in third-angle projection ♦ true lengths and true shapes ♦ surface developments, sectional views, assembly drawings and exploded isometric views (minimum of three parts) ♦ pictorial views: one- and two-point perspective, isometric (including curves), oblique (including curves) and planometric
Layout elements and principles, colour theory and informational graphics	Knowledge and understanding of the types of promotional graphics, informational graphics (including graphs and charts) and their associated roles. Interpretation and identification of creative techniques used for effective promotional graphics: ♦ alignment, dominance, unity, depth, contrast, line, the use of colour (warm, cool, contrast, harmony, advancing, receding, mood, tints, shades, primary, secondary and tertiary), reflection and shade ♦ using a range of manual and electronic techniques in promotional graphics	Creativity in producing effective promotional documents	Skills in applying creative and effective techniques to generate ideas and to produce effective promotional graphic responses to a graphic communication problem or situation: ♦ using design elements and principles: alignment, dominance, unity, depth, contrast, line, the use of colour (warm, cool, contrast, harmony, advancing, receding, mood, tints, shades, primary, secondary and tertiary), reflection and shade ♦ using a range of manual and electronic techniques in promotional documents

Question paper		Assignment	
		Techniques in sketching	Skills in applying electronic and/or manual sketching techniques: ♦ proportion, line quality, vanishing points, line sketching using related orthographic views and single- and two-point perspective ♦ representations of geometric forms and everyday objects in supporting the production of graphic communications
		Illustration techniques using manual and/or computer-aided formats	Skills in using illustration techniques to create effective and informative graphic communications: ♦ representations of light, shade, shadow, reflection, tone, gradient, material, texture and layout ♦ visual enhancement techniques in supporting the production of graphic communications
Computer-aided design	Knowledge, understanding and interpretation of techniques and generic drawing and editing commands and terms: ♦ 2D drawing tools: line, circle, ellipse, arc, rectangle, copy, zoom, mirror, trim, rotate, chamfer, fillet, pattern fill and scale ♦ import and export ♦ 3D modelling features: extrusion and revolve/revolved solids ♦ 3D modelling edits: shell, subtraction, fillet and chamfer ♦ assemblies (mate, align and centre axis) ♦ techniques in producing orthographic and pictorial views using CAD ♦ the use and function of CAD libraries		
Desktop publishing	Knowledge, understanding and interpretation in explaining and justifying using desktop publishing (DTP) techniques and generic terms: ♦ copy/cut/paste, text box, handles, colour fill, margin, single-page format, title, extended text, cropping, text wrap, flow text along a path, serif and sans serif font styles, bleed, transparency, drop shadow, rotate, justification, paper sizing, reverse, column, gutter, caption, header and footer, line, grid, snap to grid, guidelines and snap to guidelines ♦ the use and role of thumbnails and annotation	Desktop publishing	Skills in applying desktop publishing (DTP) techniques when planning and producing graphic layouts: ♦ copy/cut/paste, text box, handles, colour fill, margin, single-page format, title, extended text, cropping, text wrap, flow text along a path, serif and sans serif font styles, bleed, transparency, drop shadow, rotate, justification, paper sizing, reverse, column, gutter, caption, header and footer, line, grid, snap to grid, guidelines and snap to guidelines ♦ thumbnails and annotation

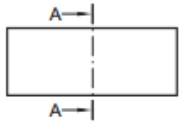
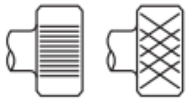
Question paper		Assignment	
Graphic communication technology: impact on society and the environment	Knowledge and understanding of the impact and influence of graphic communication technologies on society and the environment: ♦ soy ink and wax ink ♦ 3D printing ♦ touchscreen devices ♦ the paperless office ♦ 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	Using safe working practices and systems which support graphic communication activities in studios and other such working environments.

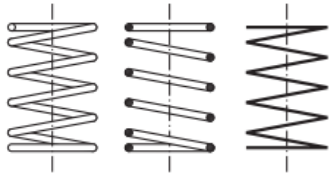
N5 Standards and Conventions Graphic Communication

Technical graphic line types

These are the technical graphic line types that you should use in your work.

Outline solid	Projection line	Hidden detail line	Centre line
Continuous thick line for visible edges and outlines.	Continuous thin line for projecting between views.	Dashed thin line for hidden detail.	Long dash, dot, chain line for centres of symmetry. Please note that BS (7)308 (long dash, short dash chain) is also acceptable.

Fold line	Cutting plane	Knurling
Thin long dash, double dot, chain line to indicate folds on surface developments. BS (7)308 (long dash, short double dash chain) is also acceptable)	 Long dashed dotted thin line, thick at ends. Please note that BS (7)308 (long dash, short dash (chain) line thick at ends is also acceptable.	

Springs


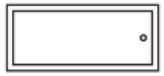
Building drawing symbols

These symbols are drawn from BSI.

You may be required to use these symbols in your assignment or project, or be asked questions about them in your exam.

You **must** use the symbols and terms specified below.

Lamp	Switch	Socket	Radiator
			

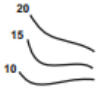
Shower tray	Bath	Wash basin	Sink	WC
				

Sinktop	Heated towel rail	Concrete	Brickwork
			

Door	Sawn timber	Insulation board	Blockwork
			

Fixed window	Window–hinged at side	Window–hinged at top	Window–hinged at bottom
			

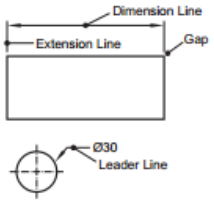
Window–pivoted, horizontal axis	Window–sliding horizontally	Drainage	North sign
			

Existing tree	Existing tree–to be removed	Proposed tree	Contours
			

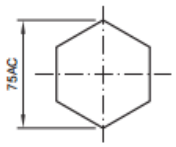
Dimensioning terms

These are the conventions for technical graphic dimensioning that you should use in your work.

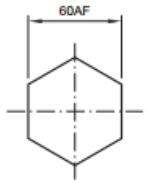
Leader line



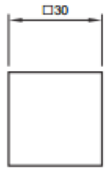
Across corners



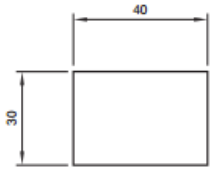
Across flats



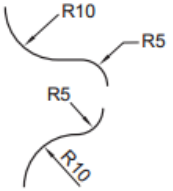
Square



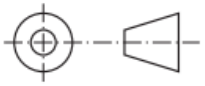
Linear



Radial

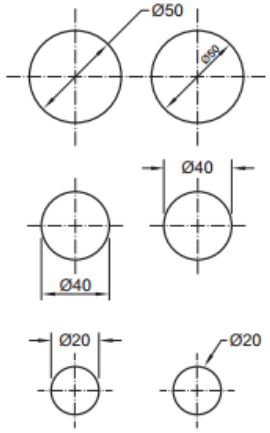


Projection symbol



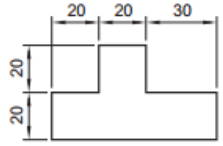
3rd angle projection

Diameter

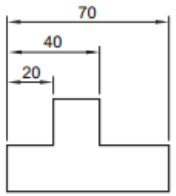


Running

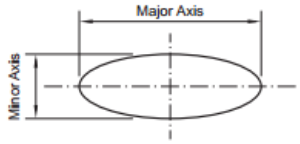
Chain



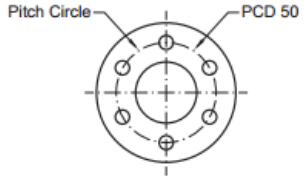
Parallel



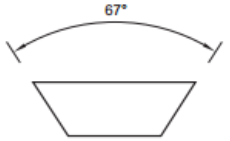
Major and minor axis



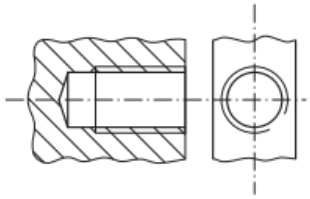
Pitch circle diameter



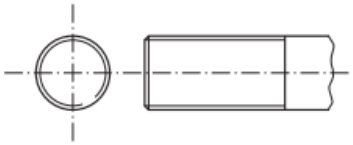
Angular dimension



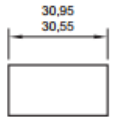
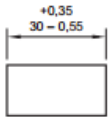
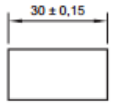
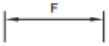
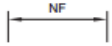
Internal screw threads



External screw threads



Tolerances

Common tolerance	Asymmetrical tolerance	Symmetrical tolerance	Functional tolerance	Non-functional tolerance
				
The **Common** method shows the upper limit of the size placed above the lower limit.	The **Asymmetrical** method shows the nominal size plus the upper and lower limits of the tolerance.	The **Symmetrical** method shows the nominal size and the symmetrical tolerance expressed as a plus and minus.	A dimension that is **essential** to the function of a component or space.	A dimension that is **not essential** to the function of a component or space.

3D CAD terms

3D CAD is an important aspect of Graphic Communication and you will be expected to demonstrate skill in using it throughout the Courses.

You will be required to answer questions about 3D CAD in your exam. You may be using terms pertaining to a specific software platform, however, you should know these generic terms for 3D CAD.

These terms can be found in the Course Assessment Specifications for the Graphic Communication Courses. Candidates and centres should note that these are **not the only** terms to be covered at these levels.

At National 4 and 5

Extrude	Revolve	Subtract	Assembly
The term used when a 2D profile is pulled into a 3D shape. The term add or subtract must be used to describe the function of the extrude.	A profile that is rotated around an axis.	Used in conjunction with features to describe material being removed from a 3D model.	Multiple components combined to create a model.

Fillet	Chamfer	Shell	Materials
A rounded edge applied to a corner. Can be applied in either the sketch or as a stand-alone feature.	A straight edge applied to a corner. Can be applied in either the sketch or as a stand-alone feature.	Used to remove material from the inside of a 3D model to a specifed wall thickness. It can also be used to remove a face.	Apply a material to a CAD model. This can be used for illustration or to conduct a CAD simulation or test.

Align	Centre axis	Component	Mate
To align the face of a 3D model with another face.	To align cylindrical objects, circular edges or circular faces.	A single component part, used to create an assembly later on.	To join the face of a 3D model to another face.

CAD library	Sketch
A directory of commonly used parts.	The name given to the CAD drawing feature used to create a profile.