Advanced Higher Coursework Assessment Task

Advanced Higher Graphic Communication

Project

Assessment task

This document provides information for teachers and lecturers about the coursework component of this course in terms of the skills, knowledge and understanding that are assessed. It **must** be read in conjunction with the course specification.

Valid from session 2023–24 and until further notice.

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Contents

Introduction

This document contains instructions for teachers and lecturers, marking instructions, and instructions for candidates for the Advanced Higher Graphic Communication project. You must read it in conjunction with the course specification.

This project is worth 90 marks. This is 50% of the overall marks for the course assessment.

This is one of two course assessment components. The other component is a question paper.

Instructions for teachers and lecturers

For the project, candidates have to produce a graphical response to a brief. The graphic communication brief should provide sufficient challenge to allow candidates to showcase their abilities in both technical graphics (TG) and commercial and visual media graphics (CVMG) contexts. There is no requirement for the TG and CVMG contexts to relate directly to each other. However, it may be beneficial in terms of planning and consistency if there is a central theme.

The project is:

- an open brief: candidates choose a brief for their project in discussion with their teacher or lecturer
- conducted under some supervision and control
- submitted to SQA for marking

Assessment conditions

Time

Candidates choose a brief and produce a graphic response over an extended period of time. This allows them to develop and refine their work before presenting it for assessment.

Candidates should start their project when they have developed the necessary skills, knowledge and understanding.

Supervision, control and authentication

The project is produced under some supervision and control. This means that:

- candidates do not need to be directly supervised at all times
- you can provide reasonable assistance

You must ensure that evidence submitted by a candidate is the candidate's own work. For example, candidates must not trace drawings and they must create their own CAD models in accordance with instructions.

Resources

The project is carried out under open-book conditions, but supervised to ensure that the work presented is the candidate's own.

There are no restrictions on the resources that candidates may access while producing their project.

Reasonable assistance

Candidates must carry out the project independently. However, they can receive reasonable assistance before the formal assessment process takes place. The term

‘reasonable assistance’ is used to balance the need for support with the need to avoid giving too much help. If candidates need more than what is thought to be ‘reasonable assistance’, they may not be ready for assessment or they may have been entered for the wrong level of qualification.

Candidates can seek clarification on the project assessment task if they find it unclear. In this case, you should clarify it for the whole class.

If, while working on their project, a candidate is faced with more than one possible solution to a problem, then you can discuss the pros and cons of different options with them. The candidate can then decide on a solution based on the discussion.

Once candidates have submitted their evidence, it must not be changed by anyone.

You must not provide model answers to help candidates complete any part of the project.

Please show the marking instructions to the candidates if you think that will be helpful.

Evidence

The following candidate evidence is required:

- a graphic communication project not exceeding 20 A3-sized pages (or equivalent for graphics work)

All project evidence including digital work (for example screenshots, slides and storyboards) must be printed and submitted to SQA to be marked. Do not submit electronic files for marking.

Where printed final graphics would require commercial printing equipment used in industry, the graphics should be printed using equipment available in centres. Candidates must then annotate the graphics to show which commercial processes would be used in industry.

Please ensure that candidates are aware that place holder text is not suitable for final graphic solutions.

Volume

Candidates can present their work in a variety of ways. The overall maximum size for the project must not exceed 20 single-sided A3-sized pages or equivalent.

If the project page count exceeds the maximum by 10% (over 22 A3 pages), a 10% penalty is applied.

More information on project submission is available on the Advanced Higher Graphic Communication subject page.

Mark allocation

Area	Marks available	Page limit
Analysing the graphic brief and research	**10**	2
Producing graphic specifications (3 marks for TG; 3 marks for CVMG)	**6**	1
TG preliminary planning (includes project planning and preliminary graphics)	**7**	2
CVMG preliminary planning (includes project planning and preliminary graphics)	**7**	2
TG graphic solution	**25**	5–6
CVMG graphic solution	**25**	5–6
Evaluating the solutions and the process	**10**	1–2
Total	**90**	20

Candidates must complete the preliminary planning for CVMG before they produce the graphic solution for CVMG. However, candidates can complete all the CVMG work before, during or after the similar work for TG and vice versa, depending on their brief.

Marking instructions

In line with SQA's normal practice, the following marking instructions for the Advanced Higher Graphic Communication project are addressed to the marker. They will also be helpful for those preparing candidates for course assessment.

Candidates' evidence is submitted to SQA for external marking.

General marking principles

Always apply these general principles. Use them in conjunction with the detailed marking instructions, which identify the key features required in candidates' responses.

a Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted for errors or omissions.

b If a candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.

Detailed marking instructions

Analysing the graphic brief and research (10 marks available)	
Marking guidance	**Marks**
♦ the analysis identifies almost all the main audience requirements to consider and/or research, and their relevance is explained in detail ♦ the analysis identifies almost all the main TG and CVMG graphics requirements to consider and/or research, and notes are highly detailed ♦ all the conclusions drawn from analysis and research are valid and evidence-based ♦ complete and detailed notes from relevant research and analysis	**8–10**
♦ the analysis identifies most of the main audience requirements to consider and/or research, and their relevance is explained ♦ the analysis identifies most of the main TG and CVMG graphics requirements to consider and/or research, and notes are detailed ♦ most of the conclusions drawn from analysis and research are valid and evidence-based ♦ some notes from relevant research and analysis	**5–7**
♦ the analysis identifies some of the main audience requirements to consider and/or research, and their relevance is explained to some extent ♦ the analysis identifies some of the main TG and CVMG graphics requirements to consider and/or research, and notes detailed to some extent ♦ some of the conclusions drawn from analysis and research are valid and evidence-based ♦ limited notes on relevant research and analysis	**3–4**
♦ the analysis identifies few of the main project issues to consider and/or research, and their relevance is explained to a limited extent ♦ the analysis identifies few of the main TG and CVMG graphics requirements to consider and/or research, and notes include limited detail ♦ few of the conclusions drawn from analysis and research are valid and evidence-based ♦ few or no notes on relevant research and analysis	**1–2**
♦ no appropriate evidence produced	**0**

Producing graphic specifications (6 marks available: 3 marks for TG; 3 marks for CVMG)	
Marking guidance	**Max marks**
The marking instructions below apply to both the TG and CVMG specifications. Do not award more than 3 marks to either TG or CVMG individually.	
♦ clearly derived from the candidate's research and analysis ♦ a detailed graphic specification that clearly defines: — the range of graphics to be produced — the format of graphics to be produced — target audiences	**3**
♦ links to the candidate's research and analysis ♦ a good graphic specification that gives some idea of: — the range of graphics to be produced — the format of graphics to be produced — target audiences	**2**
♦ some links to the candidate's research and analysis ♦ the graphic specification gives limited indication of: — the range of graphics to be produced — the format of graphics to be produced — target audiences	**1**
♦ insufficient evidence produced	**0**

TG preliminary planning (7 marks available) (includes project planning and preliminary graphics)	
Marking guidance	**Max marks**
Project plan	
♦ clear and coherent planning that details key timeframes, tasks to be undertaken, and an obvious and sensible sequence ♦ evidence for this may take the form of Gantt charts or any other relevant formats ♦ **must be specific to TG**	**2**
♦ some evidence of planning that covers some of the key tasks and gives some indication of broad timescales ♦ **must be specific to TG**	**1**
♦ very little or no evidence of project planning that is useful for the chosen project focus	**0**

TG preliminary planning (7 marks available)	
Marking guidance	**Max marks**
Preliminary graphics: ♦ sketches demonstrate a high level of skill and may include complex visualisation ♦ sketches provide enough information to support the progression to production graphics ♦ sketches include all the following features, to a high quality: — indication of dimensions — appropriate technical detail, for example enlarged views, sectional views, continued views — **annotations or labels** that identify the use of at least five modelling techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending — combination of 2D and 3D views	**5**
Preliminary graphics: ♦ sketches demonstrate a good level of skill and may include complex visualisation ♦ sketches provide enough information to support the progression to production graphics ♦ sketches include most of the following features, to a high quality: — indication of dimensions — appropriate technical detail, for example enlarged views, sectional views, continued views — **annotations or labels** that identify the use of at least four modelling process techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending — combination of 2D and 3D views	**4**

TG preliminary planning (7 marks available)	
Marking guidance	**Max marks**
Preliminary graphics: ♦ sketches demonstrate a basic level of skill and may include complex visualisation ♦ sketches provide enough information to support the progression to production graphics ♦ sketches include most of the following features, to a good quality: — indication of dimensions — appropriate technical detail, for example enlarged views, sectional views, continued views — **annotations or labels** that identify the use of at least three modelling process techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending — combination of 2D and 3D views	**3**
Preliminary graphics: ♦ sketches demonstrate a basic level of skill ♦ sketches provide just enough information to support the progression to production graphics ♦ sketches include some of the following features, to an acceptable quality: — indication of dimensions — appropriate technical detail, for example enlarged views, sectional views, continued views — **annotations or labels** that identify the use of at least three modelling techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending — combination of 2D and 3D views	**2**

TG preliminary planning (7 marks available)	
Marking guidance	**Max marks**
Preliminary graphics: ♦ sketches demonstrate a very basic level of skill ♦ sketches provide limited information to support the progression to production graphics ♦ sketches include a limited range of the following features with limited quality**:** — indication of dimensions — appropriate technical detail, for example enlarged views, sectional views, continued views — **annotations or labels** that identify the use of at least three modelling techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending — combination of 2D and 3D views	**1**
Preliminary graphics: ♦ insufficient evidence produced	**0**

CVMG preliminary planning (7 marks available)	
Marking guidance	**Max marks**
Project plan	
♦ clear and coherent planning that details key timeframes, tasks, and an obvious and sensible sequence ♦ evidence may take the form of Gantt charts or any other relevant formats ♦ **must be specific to CVMG**	**2**
♦ some evidence of planning that covers some of the key tasks and gives some indication of broad timescale ♦ **must be specific to CVMG**	**1**
♦ very little to no evidence of project planning that is useful for the chosen project focus	**0**
Preliminary graphics: ♦ preliminary work shows a high level of creativity ♦ preliminary work is fully relevant to the chosen digital- and print-based graphics: — CVMG digital animations that include a start and end frame, six intermediate frames, timings, and demonstrate visually the key transitions within the animation — CVMG digital websites, apps, interactive displays, or any other suitable digital graphics item containing a minimum of four screens — CVMG print-based suite of graphics containing three graphic items from business cards, posters, flyers, logos, lanyards, pull-up display, billboards, vinyl, or any other suitable print-based graphics item — CVMG print-based multiple-page graphics containing a minimum of four pages and including one double-page spread — CVMG print-based packaging, point-of-sale display, surface development, or display stand containing a minimum of four complete surfaces	**5**

CVMG preliminary planning (7 marks available)	
Marking guidance	**Max marks**
Preliminary graphics: ♦ preliminary work shows a good level of creativity ♦ preliminary work is mostly relevant to the chosen digital- and print-based graphics: — CVMG digital animations that include a start and end frame, six intermediate frames, timings, and demonstrate visually the key transitions within the animation — CVMG digital websites, apps, interactive displays, or any other suitable digital graphics item containing a minimum of four screens — CVMG print-based suite of graphics containing three graphic items from business cards, posters, flyers, logos, lanyards, pull-up display, billboards, vinyl, or any other suitable print-based graphics item — CVMG print-based multiple-page graphics containing a minimum of four pages and including one double-page spread — CVMG print-based packaging, point-of-sale display, surface development, or display stand containing a minimum of four complete surfaces	**4**
Preliminary graphics: ♦ preliminary work shows a satisfactory level of creativity ♦ preliminary work is mostly relevant to the chosen digital- and print-based graphics: — CVMG digital animations that include a start and end frame, six intermediate frames, timings, and demonstrate visually the key transitions within the animation — CVMG digital websites, apps, interactive displays, or any other suitable digital graphics item containing a minimum of four screens — CVMG print-based suite of graphics containing three graphic items from business cards, posters, flyers, logos, lanyards, pull-up display, billboards, vinyl, or any other suitable print-based graphics item — CVMG print-based multiple-page graphics containing a minimum of four pages and including one double-page spread — CVMG print-based packaging, point-of-sale display, surface development, or display stand containing a minimum of four complete surfaces	**3**

CVMG preliminary planning (7 marks available)	
Marking guidance	**Max marks**
Preliminary graphics: ♦ preliminary work shows a limited level of creativity ♦ preliminary work has little relevance to the chosen digital- and print-based graphics, and may not include **both** types of graphic: — CVMG digital animations that include a start and end frame, six intermediate frames, timings, and demonstrate visually the key transitions within the animation — CVMG digital websites, apps, interactive displays, or any other suitable digital graphics item containing a minimum of four screens — CVMG print-based suite of graphics containing three graphic items from business cards, posters, flyers, logos, lanyards, pull-up display, billboards, vinyl, or any other suitable print-based graphics item — CVMG print-based multiple-page graphics containing a minimum of four pages and including one double-page spread — CVMG print-based packaging, point-of-sale display, surface development, or display stand containing a minimum of four complete surfaces	**2**
Preliminary graphics: ♦ preliminary work shows a very limited level of creativity ♦ preliminary work has little relevance to the chosen digital- and print-based graphics, and may not include **both** types of graphic: — CVMG digital animations that include a start and end frame, six intermediate frames, timings, and demonstrate visually the key transitions within the animation — CVMG digital websites, apps, interactive displays, or any other suitable digital graphics item containing a minimum of four screens — CVMG print-based suite of graphics containing three graphic items from business cards, posters, flyers, logos, lanyards, pull-up display, billboards, vinyl, or any other suitable print-based graphics item — CVMG print-based multiple-page graphics containing a minimum of four pages and including one double-page spread — CVMG print-based packaging, point-of-sale display, surface development, or display stand containing a minimum of four complete surfaces	**1**
Preliminary graphics: ♦ insufficient evidence produced	**0**

TG graphic solution (25 marks available)		
Marking guidance		**Max marks**
a	**Modelling techniques:** ♦ clear link to preliminary explorative sketches (**1 mark**) ♦ no clear link to preliminary explorative sketches (**0 marks**)	**1**
b	**Modelling techniques:** ♦ five modelling techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending	**2**
	Modelling techniques: ♦ three or four modelling techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending	**1**
	Modelling techniques: ♦ Fewer than three modelling techniques represented from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending	**0**
c	**Component drawings:** ♦ key component drawings produced, with very good clarity and accuracy ♦ appropriate and full dimensions that would enable manufacture ♦ all sectional views are relevant and appropriate for chosen components	**5**
	Component drawings: ♦ key component drawings produced, with good clarity and accuracy ♦ appropriate dimensions that would enable manufacture with only some estimation and/or interpretation required ♦ almost all sectional views are relevant and appropriate for chosen components	**4**

TG graphic solution (25 marks available)		
Marking guidance		**Max marks**
	Component drawings: ♦ key component drawings produced, with satisfactory clarity and accuracy ♦ most dimensions are included but estimation would be required to enable manufacture ♦ some sectional views are relevant and appropriate for chosen components	**3**
	Component drawings: ♦ key component drawings are produced, but some lack clarity and accuracy ♦ some dimensions are included but lots of estimation would be required to enable manufacture ♦ few sectional views are relevant and appropriate for chosen components	**2**
	Component drawings: ♦ key component drawings are produced, but lack clarity and accuracy ♦ limited dimensioning with many key sizes missing ♦ sectional views are not fully relevant and/or appropriate for chosen components	**1**
	Component drawings: ♦ some component drawings are produced, but lack clarity and accuracy ♦ limited dimensioning with many key sizes missing ♦ no sections or limited range of sectional views are not fully relevant and/or appropriate for chosen components	**0**
d	**Assembly drawings that include:** ♦ an appropriate sectional view that accurately demonstrates the assembly of components showing no overlaps (**1 mark**) ♦ appropriate enlarged views taken from the sectional view, that demonstrates the accurate assembly of key components or features (**1 mark**) ♦ a pictorial exploded view with appropriate alignment and positioning of components (**1 mark**)	**3**

TG graphic solution (25 marks available)		
Marking guidance		**Max marks**
e	**Technical detail (evidence taken from across all production drawings):** ♦ 1 mark for each relevant, correct application and demonstration of the following, up to a maximum of five: — removed or revolved sections — stepped sections — partial or half sections — enlarged views — surface finishes — manufacturing detail and information — range of motion — continued views — tolerancing ♦ no evidence (**0 marks**)	**5**
f	**Standards and conventions** Evidence will come from: ♦ dimensioning ♦ third-angle projection symbol ♦ suitable scale(s) ♦ titles and annotations ♦ line types ♦ labels ♦ title blocks	
	Standards and conventions: ♦ correct across all drawings	**3**
	Standards and conventions: ♦ some inconsistencies	**2**
	Standards and conventions: ♦ limited adherence	**1**
	Standards and conventions: ♦ no evidence	**0**

TG graphic solution (25 marks available)		
Marking guidance		**Max marks**
g	**Simulation:** ♦ simulation is appropriate to the product being tested and graphics provided are clear	**3**
	Simulation: ♦ simulation is appropriate, but the graphics provided require some interpretation	**2**
	Simulation: ♦ simulation has been carried out but unclear if it is appropriate	**1**
	Simulation: ♦ no simulation carried out	**0**
h	**Technical renders:** Evidence will come from use of: ♦ texture mapping ♦ bump mapping ♦ materials ♦ image-based lighting ♦ specularity	
	Technical renders: ♦ high quality with appropriate use of all relevant techniques	**3**
	Technical renders: ♦ good quality with appropriate use of all relevant techniques	**2**
	Technical renders: ♦ fair quality with appropriate use of all relevant techniques	**1**
	Technical renders: ♦ poor quality or insufficient evidence	**0**

CVMG graphic solution (25 marks available)		
Marking guidance		**Max marks**
a	**Digital-based graphics:** ♦ the digital graphics serve their purpose on all occasions: — animations include a start and end frame, six intermediate frames, key timings, and show visually the key transitions used within the animation — websites, apps, interactive displays, or any other suitable digital graphics item contain a minimum of four screens or pages ♦ layouts, illustrations, renders and/or animations are clear, and in a format ready for digital publication ♦ CVMG techniques are applied with a very high level of skill ♦ CVMG techniques demonstrate very high visual impact	**8–9**
	Digital-based graphics: ♦ the digital graphics serve their purpose on almost all occasions: — animations include a start and end frame, six intermediate frames, key timings, and show visually the key transitions used within the animation — websites, apps, interactive displays, or any other suitable digital graphics item contain a minimum of four screens or pages ♦ layouts, illustrations, renders and/or animations are clear, and in a format ready for digital publication ♦ CVMG techniques are applied with a high level of skill ♦ CVMG techniques demonstrate high visual impact	**6–7**
	Digital-based graphics: ♦ the digital graphics serve their purpose on most occasions: — animations include a start and end frame, five or fewer intermediate frames, key timings, and show visually the key transitions used within the animation — websites, apps, interactive displays, or any other suitable digital graphics item contain fewer than four screens or pages ♦ layouts, illustrations, renders and/or animations are clear, and in a format ready for digital publication ♦ CVMG techniques are applied with a good level of skill ♦ CVMG techniques demonstrate good visual impact	**4–5**

CVMG graphic solution (25 marks available)		
Marking guidance		**Max marks**
	Digital-based graphics: ♦ the digital graphics serve their purpose on some occasions: — animations include a start and end frame, five or fewer intermediate frames, key timings, and show visually the key transitions used within the animation — websites, apps, interactive displays, or any other suitable digital graphics item contain fewer than four screens or pages ♦ layouts, illustrations, renders and/or animations are clear, and in a format ready for digital publication ♦ CVMG techniques are applied with a satisfactory level of skill ♦ CVMG techniques demonstrate satisfactory visual impact	**2–3**
	Digital-based graphics: ♦ the digital graphics serve their purpose on few occasions: — animations include a start and end frame, five or fewer intermediate frames, key timings, and show visually the key transitions used within the animation — websites, apps, interactive displays, or any other suitable digital graphics item contain fewer than four screens or pages ♦ layouts, illustrations, renders and/or animations are clear, and in a format ready for digital publication ♦ CVMG techniques are applied with a limited level of skill ♦ CVMG techniques demonstrate limited visual impact	**1**
	Digital-based graphics: ♦ insufficient evidence produced	**0**

CVMG graphic solution (25 marks available)		
Marking guidance		**Max marks**
b	**Print-based graphics:** ♦ the print-based graphics serve their purpose on all occasions: — the suite of graphics contains three graphic items from business cards, posters, flyers, logos, lanyards, pull-up displays, billboards, vinyl, or any other suitable print-based graphics item — multiple-page documents contain a minimum of four pages and include one double-page spread — packaging has a minimum of four complete surfaces ♦ layouts and illustrations are clear, and in a format ready for printing ♦ CVMG techniques are applied with a very high level of skill ♦ CVMG techniques demonstrate very high visual impact	**8–9**
	Print-based graphics: ♦ the print-based graphics serve their purpose on almost all occasions: — the suite of graphics contains three graphic items from business cards, posters, flyers, logos, lanyards, pull-up displays, billboards, vinyl, or any other suitable print-based graphics item — multiple-page documents contain a minimum of four pages and include one double-page spread — packaging has a minimum of four complete surfaces ♦ layouts and illustrations are clear, and in a format ready for printing ♦ CVMG techniques are applied with a high level of skill ♦ CVMG techniques demonstrate high visual impact	**6–7**
	Print-based graphics: ♦ the print-based graphics serve their purpose on most occasions: — the suite of graphics contains three or fewer graphic items from business cards, posters, flyers, logos, lanyards, pull-up displays, billboards, vinyl, or any other suitable print-based graphics item — multiple-page documents contain four or fewer pages and include one double-page spread — packaging has four or fewer complete surfaces ♦ layouts and illustrations are clear ♦ CVMG techniques are applied with a good level of skill ♦ CVMG techniques demonstrate good visual impact	**4–5**

CVMG graphic solution (25 marks available)		
Marking guidance		**Max marks**
	Print-based graphics: ♦ the print-based graphics serve their purpose on some occasions: — the suite of graphics contains three or fewer graphic items from business cards, posters, flyers, logos, lanyards, pull-up displays, billboards, vinyl, or any other suitable print-based graphics item — multiple-page documents contain four or fewer pages and include one double-page spread — packaging has four or fewer complete surfaces ♦ layouts and illustrations are clear ♦ CVMG techniques are applied with a satisfactory level of skill ♦ CVMG techniques demonstrate satisfactory visual impact	**2–3**
	Print-based graphics: ♦ the print-based graphics serve their purpose on few occasions: — the suite of graphics contains three or fewer graphic items from business cards, posters, flyers, logos, lanyards, pull-up displays, billboards, vinyl, or any other suitable print-based graphics item — multiple-page documents contain four or fewer pages and include one double-page spread — packaging has four or fewer complete surfaces ♦ layouts and illustrations are clear ♦ CVMG techniques are applied with a limited level of skill ♦ CVMG techniques demonstrate limited visual impact	**1**
	Print-based graphics: ♦ insufficient evidence produced	**0**
c	**Continuity:** ♦ evidence of clear continuity between the digital- and print-based graphics, for example shared colour schemes, style and/or brand, shared graphics, common logo use	**2**
	Continuity: ♦ evidence of an attempt to connect the digital- and print-based graphics; mostly successful in sharing colour schemes, logos and other aspects; likely that one or more elements does not connect well	**1**
	Continuity: ♦ no clear continuity or connection between the digital- and print-based graphics	**0**

CVMG graphic solution (25 marks available)		
Marking guidance		**Max marks**
d	**Analysis and understanding:** ♦ annotations that demonstrate a very good understanding of the use of CVMG techniques across all CVMG work ♦ justification for using most of the following in both print- and digital-based graphics: — choice of printing methods and requirements — digital media choices, navigation, and functionality, as appropriate — elements, principles, and features — colour space and colour conversion information — file types and compatibility issues — images to source and/or use — choice of digital graphic or animation method — transitions, overlays, timestamps, frame rates (digital graphics only) — resolution requirements	**5**
	Analysis and understanding: ♦ annotations that demonstrate a good understanding of the use of CVMG techniques across all CVMG work ♦ justification for using some of the following in both print- and digital-based graphics: — choice of printing methods and requirements — digital media choices, navigation, and functionality, as appropriate — elements, principles, and features — colour space and colour conversion information — file types and compatibility issues — images to source and/or use — choice of digital graphic or animation method — transitions, overlays, timestamps, frame rates (digital graphics only) — resolution requirements	**3–4**

CVMG graphic solution (25 marks available)		
Marking guidance		**Max marks**
	Analysis and understanding: ♦ annotations that demonstrate a limited understanding of the use of CVMG techniques across all CVMG work ♦ justification for using few of the following in both print- and digital-based graphics: — choice of printing methods and requirements — digital media choices, navigation, and functionality, as appropriate — elements, principles, and features — colour space and colour conversion information — file types and compatibility issues — images to source and/or use — choice of digital graphic or animation method — transitions, overlays, timestamps, frame rates (digital graphics only) — resolution requirements	**1-2**
	Analysis and understanding: ♦ limited or no sufficient evidence produced	**0**

Evaluating the solutions and the process (10 marks available)	
Marking guidance	**Max marks**
Technical graphics (5 marks available)	
♦ detailed evaluation that justifies the performance of all the technical graphics items produced, including: — evaluating how British Standards have been used to ensure technical graphics are accurate — evaluating how technical detail has been used to enhance understanding of technical graphics — evaluating the simulation to highlight strengths and weaknesses of the design — evaluating the use of illustration techniques to create technical renders that demonstrate realism ♦ evaluation that identifies almost all the strengths and weaknesses in the graphics and/or processes	**5**
♦ evaluation that justifies the performance of most of the technical graphics items produced, including: — evaluating how British Standards have been used to ensure technical graphics are accurate — evaluating how technical detail has been used to enhance understanding of technical graphics — evaluating the simulation to highlight strengths and weaknesses of the design — evaluating the use of illustration techniques to create technical renders that demonstrate realism ♦ evaluation that identifies most of the strengths and weaknesses in the graphics and/or processes	**3-4**
♦ evaluation that justifies the performance of some of the technical graphics items produced, including: — evaluating how British Standards have been used to ensure technical graphics are accurate — evaluating how technical detail has been used to enhance understanding of technical graphics — evaluating the simulation to highlight strengths and weaknesses of the design — evaluating the use of illustration techniques to create technical renders that demonstrate realism ♦ evaluation that identifies some of the strengths and weaknesses in the graphics and/or processes	**1-2**
♦ limited or no sufficient evaluation produced	**0**

Evaluating the solutions and the process (10 marks available)	
Marking guidance	**Max marks**
CVMG graphics (5 marks available)	
♦ detailed evaluation that justifies the performance of all the CVMG graphics items produced, including: — evaluating how design elements and principles create visual impact across graphics items — evaluating how design edits or features enhance visual impact across graphics items — evaluating how the choice of printed graphics meets the requirements of the intended target audience — evaluating how the choice of digital graphics meets the requirements of the intended target audience ♦ evaluation that identifies almost all the strengths and weaknesses in the graphics and/or processes	**5**
♦ detailed evaluation that justifies the performance of most of the CVMG graphics items produced, including: — evaluating how design elements and principles create visual impact across graphics items — evaluating how design edits or features enhance visual impact across graphics items — evaluating how the choice of printed graphics meets the requirements of the intended target audience — evaluating how the choice of digital graphics meets the requirements of the intended target audience ♦ evaluation that identifies most of the strengths and weaknesses in the graphics and/or processes	**3-4**
♦ detailed evaluation that justifies the performance of some of the CVMG graphics items produced, including: — evaluating how design elements and principles create visual impact across graphics items — evaluating how design edits or features enhance visual impact across graphics items — evaluating how the choice of printed graphics meets the requirements of the intended target audience — evaluating how the choice of digital graphics meets the requirements of the intended target audience ♦ evaluation that identifies some of the strengths and weaknesses in the graphics and/or processes	**1-2**
♦ limited or no sufficient evaluation produced	**0**

Instructions for candidates

This assessment applies to the project for Advanced Higher Graphic Communication.

This project is worth 90 marks. This is 50% of the overall marks for the course assessment.

It assesses the following skills, knowledge and understanding:

- analysis and research
- graphic specification
- planning and preliminary graphics
- solution graphics for both technical graphics (TG) and commercial and visual media graphics (CVMG)
- evaluation

Your teacher or lecturer will let you know if there are any specific conditions for doing this assessment.

In this assessment, you have to:

- identify and analyse a graphic communication brief
- produce a graphical response in the contexts of **both** TG and CVMG

The brief you select should provide sufficient challenge to allow you to showcase your abilities in both TG and CVMG contexts. The contexts do not need to be directly related, but you may find it easier to plan and be consistent if there is a central theme.

Evidence

You must produce a project with a maximum of 20 A3-sized pages (or equivalent for graphics work) covering the following areas:

Area	Marks available	Page limit
Analysing the graphic brief and research	**10**	2
Producing graphic specifications (3 marks for TG; 3 marks for CVMG)	**6**	1
TG preliminary planning (includes project planning and preliminary graphics)	**7**	2
CVMG preliminary planning (includes project planning and preliminary graphics)	**7**	2
Graphic solution: TG	**25**	5–6
Graphic solution: CVMG	**25**	5–6
Evaluating the solutions and the process	**10**	1–2
Total	**90**	20

If the project page count exceeds the maximum by 10% (over 22 A3 pages), a 10% penalty is applied.

You must complete the preliminary planning for CVMG before you produce the graphic solution for CVMG. However, you can complete all the CVMG work before, during or after the similar work for TG and vice versa, depending on your brief.

Guidance on identifying a brief

The project allows you to develop your knowledge of graphic communication and to apply this knowledge in a context you find interesting.

You will develop and apply skills you will need for your future study or career, including planning, research, problem solving, presentation and evaluation.

You must choose a context for your project and ask your teacher or lecturer to approve it. A list of possible contexts is given at the end of this document. (Please note this list is not exhaustive or prescriptive.)

Your brief for TG and CVMG does not need to be connected. However, it is likely that the brief you choose for TG will connect directly to the CVMG aspect focused on promoting the same product.

Your brief for TG should contain enough complexity to allow you to achieve all the available marks. Your teacher or lecturer will help you choose an appropriate brief. Any product you choose should enable at least five complex modelling techniques from the following list to be applied:

- morphing (freeform modelling)
- extruding along a path
- lofting
- helix
- irregular fillets
- irregular chamfers
- blending
- surface modelling

Your focus may be an existing product and/or product line, or it may be a product and/or product line that you have designed or created.

It may be possible to complete your project within your centre, but you could also consider a project that might require collaboration with a university, college or local industry. Your teacher or lecturer can advise you on this.

Project brief checklist

When choosing a topic for your project, you should consider the following questions:

		yes	no
1	Will your project topic allow you to apply graphic communication knowledge and skills in both TG and CVMG?	☐	☐
2	Will your project topic require you to apply some knowledge and skills from your own research?	☐	☐
3	Will your project topic allow you to develop skills in planning, research, analysis, problem solving and evaluation?	☐	☐
4	Will you be able to complete your project in the time available?	☐	☐
5	Can all potential barriers to you carrying out your project be overcome (for example health and safety issues, permissions, and logistics)?	☐	☐
6	Do you have access to any necessary expertise, resources and equipment?	☐	☐

If you answer 'No' to any of these questions, you will need to reconsider your idea for your project.

Producing a project proposal and outline plan

Once you have decided on a context for your project, you should produce a **short** project proposal, showing how you will allocate the time available, and any resources you may need to access. This helps your teacher or lecturer to decide whether your proposed project is appropriate. They can also check that you can access any specific resources.

Your proposal should include:

- a basic description of your project brief
- how your project fulfils the following requirements:
  - applies relevant knowledge and skills
  - develops skills in planning research, problem solving, presentation and evaluation
  - is feasible within the timescale
  - all barriers to completion can be overcome
  - all required expertise, resources and equipment are available
- an outline of the key activities, the time you think you will need to spend on it and possible target dates for completion
- an indication of any special resources you think you will need to access

When you have written your proposal and outline, you must discuss it with your teacher or lecturer and get their approval to continue.

Keep your approved project proposal and outline plan. Although this is not assessed, it helps to ensure that your project is well targeted and planned.

The next page is a useful template for presenting your project proposal and outline plan to your teacher or lecturer. There is space for them to make comments and indicate their approval of your proposal and outline.

Remember to consult the list of possible contexts at the end of this document. These are only ideas, and you may have more ideas of your own. Be sure to discuss any idea or context with your teacher or lecturer.

Project proposal and outline plan

Your outline plan could be a simple table as shown below.

Advanced Higher Graphic Communication project proposal (include this with your final submission)			
Candidate name: _____ Brief description of project proposal: _____ _____ _____			
Task		**Time allocated**	**Target date**
1	Analysing the graphic brief and research		
2	Producing graphic specifications		
3	TG preliminary planning (includes project planning and preliminary graphics)		
4	CVMG preliminary planning (includes project planning and preliminary graphics)		
5	Graphic solution: TG		
6	Graphic solution: CVMG		
7	Evaluating the solutions and the process		
Special resources that might be required:			
Approved by:			

Check the final submission date with your teacher or lecturer. Insert an appropriate target date for each activity to allow you to complete your project in good time.

When you have obtained approval, you are ready to begin.

Analysing the graphic brief and research (10 marks)

You must apply some knowledge and/or skills **from your own research**. You might carry out some of this research at the start of your project, when analysing the problem and thinking of solutions. The results of your research and analysis will enable you to produce a specification for a solution to the problem.

Assessment requirements

For this stage of the project assessment, you must produce:

- an analysis that identifies all the main audience requirements to consider and/or research, and a detailed explanation of their relevance for both TG and CVMG
- valid and evidence-based conclusions, drawn from initial analysis and research
- complete and detailed notes from relevant research and analysis, including formally referenced sources

Guidance on research

You must use primary and/or secondary research.

Primary research is information you gather yourself by using one or more of the following methods: user surveys, interviews, site visits, company visits, work experience, work shadowing. You can also explore other methods.

Secondary research is information you gather from existing research. It includes information from online sources, publications, trade magazines, specialist organisations, sector specialists, STEM (science, technology, engineering and maths) ambassadors, learned bodies and different types of media. You should evaluate all the information you access by checking its currency, authority, accuracy and balance.

You must record and reference any information you gather from sources like those described above. Your teacher or lecturer can help you with this, but here are a few guidelines:

- Use quotation marks (“ ”) around any text that has come from other sources, and identify clearly what those sources are.
- Re-phrase the text into your own words where possible. When you do this, you must still reference the original source.
- Acknowledge the sources of diagrams.
- Write a bibliography (a list of references including all sources).
- Use a recognised referencing system, for example Harvard referencing.

Plagiarism (passing off other people’s work and ideas as your own) is cheating. This includes:

- all or some of your project being produced by someone else
- your project being example work prepared by your teacher or lecturer
- copying from a book, internet site or an essay bank without referencing it

Note: you must present your analysis and research on a maximum of two **single-sided** A3 pages.

Producing graphic specifications (6 marks)

(3 marks for TG specification; 3 marks for CVMG specification)

Once you have analysed the brief and carried out any initial research, you should put together a graphic specification for an effective solution.

Assessment requirements

You must produce separate specifications for TG and CVMG. You must base both specifications entirely on valid conclusions drawn from your analysis and research of the graphic brief. You must:

- produce two complete graphic specifications with details of all relevant requirements for the solution(s) for TG and CVMG
- identify all graphic communications, types, and formats required to meet the needs of the target audience for both TG and CVMG

Guidance on producing a specification

A specification is a document that defines all the important parameters of the solution. It is likely to include information about:

- the target audience(s) who will use or view the graphic solution
- the types, ranges and formats of graphics required to meet the needs of the target audience(s)
- enough detail to allow the solutions to be produced

The specification is based on your initial analysis and research of the graphic problem. It should provide enough detail to allow the design and development to go ahead. It should also provide the basis for evaluating your graphic solution.

If, while working on your project, you need to adapt some aspects of the specification, make notes of the changes and the reasons why you made them. You could also include detailed reflective comments in your work. You may need to refer to these when you come to evaluate your graphic solutions and the processes you used to achieve it.

Note: you should present your graphic specification on a maximum of one **single-sided** A3 page (the page should include both TG and CVMG specifications).

TG preliminary planning (7 marks)

Project plan: 2 marks

Your project proposal and outline plan for allocating time should give target dates for the main stages.

You now need to develop a project plan specific to your technical graphics covering resource and time management. It should include all sub-tasks and intermediate targets for your project. You should revisit this project plan frequently throughout your project to show where you have had to make important amendments. It is likely that this planning will take the form of a Gantt chart (or similar), accompanied by detailed descriptions. Remember you have an overall page limit of 20 pages.

Preliminary graphics: 5 marks

Using your chosen product as a focus, you should produce a range of explorative sketches that demonstrate how you will produce a 3D CAD model of your product. The sketches should demonstrate:

- five different modelling techniques from:
  - morphing (freeform modelling)
  - extruding along a path
  - lofting
  - helix
  - irregular fillets
  - irregular chamfers
  - blending
  - surface modelling
- indication of dimensions
- appropriate technical detail
- annotations to support the modelling process
- a combination of 2D and 3D views

Your 3D CAD modelling should include complex extrusions and/or revolves as required.

Note: you should present your TG preliminary planning on a maximum of two **single-sided** A3 pages.

CVMG preliminary planning (7 marks)

Project plan: 2 marks

Your project proposal and outline plan for allocating time should give target dates for the main stages.

You now need to develop a project plan specific to your CVMG graphics, covering resource and time management. It should include all sub-tasks and intermediate targets for your project. You should revisit this project plan frequently throughout your project to show where you have had to make important amendments. It is likely that this planning will take the form of a Gantt chart (or similar), accompanied by detailed descriptions. Remember you have an overall page limit of 20 pages.

Preliminary graphics: 5 marks

Your preliminary graphics should clearly demonstrate a range of creative approaches to your chosen brief. Your planning should address both the digital- and print-based graphics to be produced.

Digital-based graphic
For the digital-based graphic you may wish to produce one of the following types of media:

- website
- interactive displays
- promotional animation

The graphic item must be multiple screens and/or pages. Animations must include:

- a start frame
- an end frame
- six intermediate frames
- timings
- key transitions

Print-based graphic
For the print-based graphic you may wish to produce one of the following types of media:

- magazine spreads (minimum one double-page spread)
- promotional brochure (minimum four pages)
- suite of graphic items that contains three of the following items:
  - business card
  - poster
  - flyer
  - logo
  - lanyard
  - pull-up display
  - billboard
  - vinyl
  - any other suitable print-based graphics item

It is likely that your preliminary graphics will take the form of:

- thumbnails
- visuals
- preliminary animations
- explorative sketches

Within your graphics you should address the following details:

- colour space
- colour details
- file type and/or compatibility issues
- images to source and/or use
- transitions (animations)
- graphic format (for example canvas size)
- print requirements

You should also apply design elements and principles to create visual impact. Annotate your work, giving justification for your choices.

Note: you should present your CVMG preliminary planning on a maximum of two **single-sided** A3 pages.

TG graphic solution (25 marks)

a Modelling techniques must have a clear link to explorative sketches. **(1 mark)**

b Demonstrate five modelling techniques from: loft, helix, extrude along a path, irregular fillets, irregular chamfers, surface modelling, morphing (freeform modelling), blending. **(2 marks)**

c Produce key component drawings with appropriate and full dimensions to enable manufacture. All sectional views must be relevant and appropriate. **(5 marks)**

d Produce assembly drawings with accurately assembled components, sectioned with appropriate cutting plan positions. Exploded views must have appropriate alignment and positioning. **(3 marks)**

e Technical detail includes the correct application and demonstration of the following, up to a maximum of five: **(5 marks)**

- removed or revolved sections
- stepped sections
- partial or half sections
- enlarged views

- surface finishes
- manufacturing detail and information
- range of motion
- continued views
- tolerancing

f Application of standards and conventions across all TG. **(3 marks)**

g Simulation is appropriate to the product being tested and graphics provided are clear. **(3 marks)**

h Technical renders should include appropriate use of: **(3 marks)**

- texture mapping
- bump mapping
- materials
- image-based lighting
- specularity

If you produce an animated render, you must supply evidence in hard copy format (for example slides, screenshots, storyboards), complete with timings if required.

All project evidence including digital work (for example screenshots, slides and storyboards) must be printed and submitted to SQA to be marked. Do not submit electronic files for marking.

Note: you should present your TG graphic solution on a maximum of six **single-sided** A3 pages.

CVMG graphic solution (25 marks)

Although there is no requirement for your TG and CVMG graphics to be related, you must ensure that the digital- and print-based graphics for CVMG work relate to each other.

a Produce one digital-based graphic item: **(9 marks)**

- Animations must include a start and end frame, six intermediate frames, key timings, and show visually the key transitions used within the animation.
- Websites, apps, interactive displays, or any other suitable digital graphics item must contain a minimum of four screens.
- Layouts, illustrations, renders and/or animations must be clear, and in a format ready for digital publication.
- You must supply digital evidence in hard copy format (for example slides, screenshots, storyboards) complete with timing information, where required.

b Produce a suite of graphics containing three graphic items from business cards, posters, flyers, logos, lanyards, pull-up displays, billboards, vinyl, or any other suitable print-based graphics item. **(9 marks)**

The graphics should serve their purpose on all occasions:

- Multiple-page documents must contain a minimum of four pages and include one double-page spread.
- Packaging must have a minimum of four complete surfaces.
- Layouts and illustrations must be clear, and in a format ready for printing.

c Ensure continuity between digital- and print-based graphics: **(2 marks)**

- Digital and print-based graphics should interconnect effectively so that they clearly communicate the same style and/or brand.
- Evidence of this may come in the form of colour schemes, shared graphics, shared graphic styles, and common logos.

d Demonstrate analysis and understanding of CVMG: **(5 marks)**

- Your annotations must demonstrate a very good understanding of the use of CVMG techniques across all CVMG work.
- Justify the use of the following in both print- and digital-based graphics:
  - your choice of printing methods and requirements
  - digital media choices, navigation, and functionality, as appropriate
  - elements, principles, and features
  - colour space and colour conversion information
  - file types and compatibility issues
  - images to source and/or use
  - choice of digital graphic or animation method
  - transitions, overlays, timestamps, frame rates (digital graphics only)
  - resolution requirements

Note: you should present your CVMG graphic solution on a maximum of six **single-sided** A3 pages.

Evaluating the solutions and the process (10 marks)

You must give yourself enough time to evaluate the project as a whole. Consider it from a personal and learning perspective. Think about the decisions you made and how well your solution meets the assessment requirements.

Assessment requirements

You should produce the following evidence of evaluating your solutions and your development process:

- comprehensive and technically correct descriptions and explanations of the processes or steps undertaken to achieve the final graphic solution
- all the key developmental stages or critical points in the evolution of your graphical design proposal
- explanation of the impact of all important decisions taken
- effective references to notes, comments or annotations from your project design work
- reference to your graphic specifications and comment on how effectively your solutions met the requirements

Guidance on evaluating

The evaluation of your graphic solutions and the process by which you arrived at them is worth **up to 10 marks**.

You can use a variety of approaches to your evaluation. You may include written commentaries and extracts from your work to help illustrate your evaluation. Descriptions and explanations could be in the form of a written response supported by screen captures, images, annotations and modelling plans.

Any explanations should provide clear reasons for the choices and decisions that you made. You should present the key developmental stages of the graphic solutions, indicating where you took key decisions, why the decisions were needed, and the resulting impact of the changes on the evolving solutions.

You should present the key alternatives in approach that you considered, and outline the reasons for pursuing your preferred one.

Note: you should present your evaluation of the solutions and the process on a maximum of two **single-sided** A3 pages.

Possible project contexts

Here are some examples of possible contexts you may like to consider. Talk to your teacher or lecturer about the design opportunities within these contexts, or other contexts of your choice, to ensure the context you choose is suitable for your project.

- retailing and promotional
- engineering themes
- commercial products
- community issues and events
- health and wellbeing
- environmental
- sports
- transport
- video gaming graphics
- school, college and learning environments
- entertainment
- national events
- international charities
- built environment
- travel
- leisure
- campaigning
- architecture
- news media and communications
- theatre

Administrative information

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History of changes

Version	Description of change	Date
1.1	Detailed marking instructions — reference to specification removed from TG preliminary planning and CVMG preliminary planning.	November 2020
1.2	No changes: however, dates amended to apply to session 2021–22.	August 2021
2.0	The 'Detailed marking instructions' and 'Instructions for candidates' sections amended to ensure marks in the upper bandings are more accessible.	August 2022
2.1	Added helix to the five modelling techniques accepted.	September 2022
3.0	Updated throughout to reflect the removal of course assessment modifications.	August 2023

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

Security and confidentiality

This document can be used by SQA approved centres for the assessment of National Courses and not for any other purpose.