



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate Examination 2024

Design and Communication Graphics

Student Assignment

Ordinary level and Higher level

To be completed by Friday 19 January 2024

160 marks

Instructions to Candidates

1. Select **one** student assignment from the assignments provided.
2. If **either** assessment component (written examination or coursework) is submitted at Ordinary Level, the subject is graded at Ordinary Level.
3. Your coursework submitted for assessment must consist of **two** components:
 1. A bound A3 design portfolio:
 - The portfolio should contain a maximum of **8 pages** at Ordinary Level and a maximum of **10 pages** at Higher Level
 2. An individual **USB flash drive** containing:
 - All of the SolidWorks files relating to the completed assignment
 - An electronic copy of the completed portfolio in PDF format.
4. All coursework submitted for assessment must be clearly identified with your examination number which will be issued to your school early in 2024.
5. It is your responsibility to ensure that all electronic materials submitted are free from viruses, so that examiners can open all required files for assessment.
Note: the portfolio and USB flash drive will not be returned at the end of the assessment process.
6. You must submit your original sketches for Outputs 2 and 6 – scanned images will not suffice.
7. You must reference and acknowledge all research sources used such as: publications including books, professional journals and government reports; online sources and other types of media; any material generated using artificial intelligence (AI) software or applications; and material from specialist organisations and relevant individuals. To include such material without properly referencing the source will be considered plagiarism. In addition, the copying from, or reproduction of, material from such sources may also be considered plagiarism.
8. Material copied directly from the Internet or from other sources and presented as your own work will not receive any marks.
9. The coursework presented for assessment must be displayed in an attractive manner and marks will be awarded for presentation.
10. Your **Examination Number** should be written clearly on the completed assignment.
11. The coursework must be completed by **Friday 19 January 2024**.

Submission of electronic files:

1. The USB flash drive must contain one main folder. The name of this folder should contain your candidate examination number in the following format “**DCG SA 2024(Exam number)**”.
2. The main folder, referred to above, must contain two sub-folders. One of these sub-folders will contain all the pages of the completed assignment in **PDF format**. The other sub-folder must contain two sub-folders. One of these sub-folders must contain all of the SolidWorks electronic files associated with **Part A** of the assignment and the second subfolder must contain all of the SolidWorks electronic files associated with **Part B** of the assignment.
3. No other files should be included on the USB flash drive.
4. All CAD files must be in SolidWorks format. The version of SolidWorks used to complete your assignment should be indicated on the front cover of your design portfolio.
5. It is your responsibility to ensure that all of the required files are contained on the USB flash drive prior to submission of the work. You will **lose marks** under the relevant headings in the marking scheme if required files are omitted.
Marks will be awarded for conforming to the filing structure outlined above.
6. For protection during transit, the USB flash drive must be placed in a protective sleeve or envelope. This should be fixed close to the bound edge on the inside cover of the design portfolio.
7. A **backup copy of the submitted files** should be retained in your school until the assessment (including appeals) process is complete.

Authentication of coursework:

1. The coursework you submit for assessment must be **your own individual work** and must be completed in school under the supervision of your teacher.
2. Your coursework must not be removed from the school under any circumstances as doing so may result in the coursework being considered invalid and no marks will be awarded.
3. It is your responsibility, as the candidate, to comply with these instructions. If you fail to comply with these instructions, your teacher will not be able to validate and sign off on your coursework and you will not receive any marks for it.

Note:

- *The circumstances in which the Minister for Education may withhold marks from candidates are set out in the “Rules and Programme for Secondary Schools”.*
- *Anyone who helps a candidate to break examination rules can be prosecuted under the Education Act 1998.*

Ordinary Level Student Assignment 2024

Portable mirrors can be easily moved around the home due to their size and shape. They can be used for personal grooming including hair styling, shaving, applying makeup, etc. Portable mirrors can be freestanding, handheld or have suction cups. Some mirrors can be folded to make them more compact or can include integrated lights.

(a) Carry out a design investigation of existing portable mirrors in graphic format. Your investigation should include an analysis of physical forms and shapes, features, materials, etc.

and

(b) Show graphically how you would physically modify a chosen portable mirror to improve its overall design.

or

Develop and graphically communicate a new concept design for a portable mirror based on a selected theme or target market.

Allocation of marks:

The completed coursework will be assessed using the following mark allocations:

- Part **A** – Existing Artefact 110 marks
- Part **B** – Design Modification or Concept Design 50 marks

Outline marking scheme - Ordinary Level 2024

The table below gives an outline of the marking headings that will be used to assess your completed coursework. While the general mark allocations will largely remain the same, assumptions about future mark breakdowns should be avoided.

Output	Heading	Description	Max no. of A3 pages	Marks	
Part A – Existing Artefact					
Presentation, thought process, reflection and factor of difficulty will be considered throughout.	1	Design research & Design feature comparison	Exploration of brief and presentation of existing artefacts in graphic format. Select 2 images and illustrate/explain the main design features. Insert the main dimensions. Compare and contrast the main design features of both using suitable freehand sketches and other presentation techniques.	1 - 2	50
	2	Freehand graphical representation	Choose one of the artefacts and make a detailed graphical presentation of this artefact. This should include a rendered freehand presentation quality drawing in 3D format.	1	
	3	SolidWorks Parts, Assembly, Drawing and eDrawing files	Detailed computer model, comprising at least 3 parts but no more than 6 parts, an Assembly, a Drawing and an eDrawing of the selected artefact. The required filing structure will be considered in the marking process.	Electronic SolidWorks files	60
	4	Hardcopy output from Solidworks	Detailed orthographic views. Pictorial Views.	1 - 2	
	Part B – Design Modification or Concept Design				
	5	Graphical exploration of design solutions	Analysis of brief and graphic illustration of possible solution(s). Justification for your chosen solution.	1 - 2	50
	6	Presentation of Modification/ Concept Design	Detailed graphical presentation of the design Modification / Concept Design. This should include a rendered freehand presentation quality drawing in 3D format.	1	
7	Hardcopy output from Solidworks	CAD model (Part/Assembly & Drawing) and associated hardcopies to include appropriately detailed orthographic and rendered pictorial views to communicate your chosen design.	1 - 2 (plus electronic SolidWorks files)		
Overall Total			8 pages	160	

Higher Level Student Assignment 2024

Desk lights can be used to create different atmospheres and ambiance by controlling the level and type of light in a room, workplace, or social setting. They can be used during a variety of activities; including reading, studying, social media content creation, or other recreational interests. The underlying geometry of a desk light has an influence on its functionality, target market, and aesthetic. Desk lights come with a variety of power sources, controls, light fittings and some include additional features.

(a) Carry out a design investigation of existing desk lights in graphic format. Your investigation should include an analysis of physical forms and shapes, geometry, materials, innovation, etc.

and

(b) Show graphically how you would physically modify a chosen desk light to improve its overall design.

or

Develop and graphically communicate a new concept design for a desk light based on a selected theme or target market.

Allocation of marks:

The completed coursework will be assessed using the following mark allocations:

- Part A – Existing Artefact 100 marks
- Part B – Design Modification or Concept Design 60 marks

Outline marking scheme - Higher Level 2024

The table below gives an outline of the marking headings that will be used to assess your completed coursework. While the general mark allocations will largely remain the same, assumptions about future mark breakdowns should be avoided.

Output	Heading	Description	Max no. of A3 pages	Marks	
Part A – Existing Artefact					
Presentation, thought process, reflection and factor of difficulty will be considered throughout.	1	Design research & Design feature comparison	Exploration of brief and presentation of existing artefacts in graphic format, using primary and secondary research. Select 2 images and illustrate/explain the main design features. Insert the main dimensions. Compare and contrast the main design features of both using suitable freehand sketches and other presentation techniques.	2 - 3	50
	2	Freehand graphical representation	Choose one of the artefacts and make a detailed graphical presentation of this artefact, to include an exploration of the underlying geometry. This should include a rendered freehand presentation quality drawing in 3D format.	1	
	3	SolidWorks Parts, Assembly, Drawing and eDrawing files	Detailed computer model comprising at least 5 parts but no more than 10 parts, an Assembly, a Drawing and an eDrawing of the selected artefact. Economy of design, design intent and the required filing structure will be considered in the marking process.	Electronic SolidWorks files	50
	4	Hardcopy output from Solidworks	Detailed orthographic views. Pictorial View. Exploded View.	1 - 2	
	Part B – Design Modification or Concept Design				
	5	Graphical exploration of design solutions	Analysis of brief and graphic illustration of possible solutions. Justification for your chosen solution including aesthetics, functionality and sustainability.	1 - 3	60
	6	Presentation of Modification/ Concept Design	Detailed graphical presentation of the design Modification / Concept Design. This should include a rendered freehand presentation quality drawing in 3D format.	1	
7	Hardcopy output from Solidworks	CAD model (Part/Assembly & Drawing) and associated hardcopies to include appropriately detailed orthographic, rendered pictorial and photorealistic view(s) to communicate your chosen design.	1 - 3 (plus electronic SolidWorks files)		
Overall Total			10 pages	160	