



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate Examination 2012

Design and Communication Graphics

Student Assignment

Ordinary Level and Higher Level
160 marks

Details of the Student Assignment for the Leaving Certificate Examination 2012 are given overleaf.

The Student Assignment must be completed by Friday 20th January 2012.

The work should be submitted following the issue of candidate examination numbers to schools.

Design and Communication Graphics (DCG) Student Assignment Leaving Certificate 2012

Instructions to candidates:

1. Your coursework submitted for assessment must consist of two components:
 - A bound A3 design portfolio
 - The portfolio should contain a maximum of 12 pages at Ordinary Level and a maximum of 14 pages at Higher Level.
 - An individual CD containing:
 - All of the SolidWorks files relating to the completed assignment
 - An electronic copy of the completed portfolio in **PDF format**.

All coursework submitted for assessment must be clearly identified with your examination number which will be issued to your school early in 2012.

2. The CD must contain one main folder. The name of this folder should contain your candidate examination number in the following format “DCG SA 2012 (Candidate Identifier)”.
3. The main folder, referred to above, must contain 2 sub-folders. One of these sub-folders will contain all the pages from the completed assignment in **PDF format**. The other sub-folder must contain 2 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. No other files should be included on the CD.
(All required CAD files must be in SolidWorks 2009 format)
4. It is your responsibility to ensure that all of the required files are contained on the CD 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.
A backup copy of the files on the CD should be retained in your school until the assessment process is complete.
5. For protection during transit, the CD should be placed in a protective sleeve. This sleeve should be fixed close to the bound edge on the inside cover of the design portfolio.
6. You must submit your **original sketches** for Outputs 3 and 8 – scanned images will not suffice.
7. The coursework submitted for assessment must be **your own individual work** and must be **completed in school** under the supervision of the class teacher.
8. When using research sources, including the Internet, the sources must be acknowledged. Research material copied directly from the Internet or from other sources and presented as your own work will not receive marks.
9. The coursework presented for assessment must be displayed in an attractive manner and marks will be awarded for presentation.
10. The coursework must be completed by *Friday 20th January 2012*.

Ordinary Level Student Assignment - Leaving Certificate 2012

A desk tidy is a container for holding pens, pencils, rulers and paperclips that is kept on a desk top.

Some artefacts incorporate additional features such as notepaper storage, integrated calculator, clock, etc. Many of the designs are novel in their shape and form and are manufactured from a wide variety of materials.

(A) Carry out a design investigation of existing desk tides in graphic format. Your investigation should include an analysis of physical form and shape, features, colour, materials etc.

and

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

or

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

	No.	Section Heading	Description	Suggested no. of A3	Marks	
Presentation, thought process, reflection and factor of difficulty will be considered throughout.	Part (A) - Existing Artefacts	1	Design Research	Exploration of brief and presentation of existing artefacts in graphic format.	1-2	50
		2	Design Feature Comparison	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	
		3	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	
		4	SolidWorks Parts, Assembly, Drawing, and eDrawing files	Detailed computer model, comprising at least 3 Parts, an Assembly, Drawing and an eDrawing of the selected artefact. The required filing structure will be considered in the marking process.	Electronic SolidWorks files on CD	60
		5	Hardcopy output from Solidworks	Detailed orthographic views Rendered pictorial view Exploded View	1-3	
		6	Photorealistic Representation	Computer generated photorealistic image(s) of the artefact	1	
	Part (B) Design Modification or Concept Design	7	Graphical exploration of design solutions	Analysis of brief and graphical illustration of possible solution(s). Justification for chosen solution(s)	1-2	50
		8	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	
		9	Hardcopy output from Solidworks	CAD Model (Part/Assembly, Drawing & eDrawing) and associated hardcopies to include appropriately detailed orthographic and rendered pictorial views to communicate your chosen design.	1-3 (Plus electronic SolidWorks files on CD)	
Page 3 of 4				Total	160	

Higher Level Student Assignment - Leaving Certificate 2012

Research has shown that the design of contemporary perfume or aftershave bottles can frequently influence a consumer's decision to purchase a particular product. Many fragrance bottle designs are inspired by themes from nature, culture, fashion, sport, arts, etc. An array of artefacts, which differ in shape, form, texture and colour, are manufactured from a wide range of materials.

(A) Carry out a design investigation of fragrance bottles in graphic format.

Your investigation should include an analysis of shape and form, features, themes, target market, presentation, etc. that inspire modern fragrance bottle design.

and

(B) Show graphically how you would physically modify an existing fragrance bottle to improve its overall design.

or

Develop and graphically communicate a new concept design for a fragrance bottle based on a selected theme. Your design should consider the message that is to be conveyed to the consumer.

		No.	Section Heading	Description	Suggested no. of A3 Pages	Marks
Presentation, thought process, reflection and factor of difficulty will be considered throughout.	Part (A) - Existing Artefacts	1	Design Research	Exploration of brief and presentation of existing artefacts in graphic format.	1-2	50
		2	Design Feature Comparison	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	
		3	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	
		4	SolidWorks Parts, Assembly, Drawing and eDrawing files	Detailed computer model, comprising at least 5 Parts, an Assembly, 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 on CD	50
		5	Hardcopy output from Solidworks	Detailed orthographic views. Rendered pictorial view. Exploded View.	2-4	
		6	Photorealistic Representation	Computer generated photorealistic image(s) of the artefact.	1	
	Part (B) Design Modification or Concept Design	7	Graphical exploration of design solutions	Analysis of brief and graphical illustration of possible solutions. Justification for chosen solution(s) including aesthetics, functionality and environmental sustainability.	2-4	60
		8	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	
		9	Hardcopy output from Solidworks	CAD Model (Part/Assembly, Drawing & eDrawing) and associated hardcopies to include appropriately detailed orthographic, rendered pictorial and photorealistic views to communicate your chosen design.	2-4 (Plus Electronic SolidWorks files on CD)	
Page 4 of 4					Total	160

Tasc an Dalta Ardleibhéal – Ardeistiméireacht 2012

Léiríonn taighde gur minic gur féidir leis an dearadh atá ag buidéal cumhráin nó ag buidéal iarrbhearttha comhaimseartha tionchar a imirt ar chineadh tomhaltóra táirge áirithe a cheannach. Is iomaí dearat a bhíonn ag buidéal chumhráin a spreagtar ag téamaí a bhaineann le cursaí dúlra, cultúir, faisins, spóirt, ealaíon, agus rí. Déantar déantáin éagsúla, atá difriúil ó thaobh crutha, foirme, uigeachta agus dath de as raon leathan ábhar.

(A) Déan imscrúdu dearaídh i bhformáid ghrafach ar bhuidéil chumhráin. Ba chóir go gcuimseodh d'imscrúdu analís ar an gcruth agus ar an bhfoirm, ar na gnéithe, na téamaí, ar an spríocmhargadh, ar an gcur i láthair agus rí a spreagann dearadh comhaimseartha an bhuidéil chumhráin.

agus

(B) Léirigh go grafach conas a dhéanfa buidéal cumhráin atá ann cheana féin a mhionathrú chun an dearadh foriomlán a fheabhsú.

nó

Agus é bunaithe ar théama roghnaithe déan dearadh nua coincheapa do bhuidéal cumhráin a fhorbairt agus a chur in úil go grafach. Ba chóir do do dhearadh an teachtaireacht atá le tabhairt don tomhaltóir a chur san áireamh.

U.	Ceannteideal	Tuairisc	Líon lch. A3	ata molta	Marc
60	Cuid (A) - Déantúsáin atá ann cheana féin	1	Taighde Dearaidh	Comre a fhisrú agus déantúsáin atá ann cheana féin a chur i láthair i bhformáid ghrafach.	1-2
		2	Comparáid leis an nGné Dhearaídh	Roghnaigh 2 fomhá agus léirigh/minigh na príomhghnéithe dearaídh. Cur isteach na príomhghnéithe dearaídh an dá cheann i gcomparáid agus i gcodarsnacht agus úsáid á baint as scéil saorláimhe oiriúnacha agus as teicníc cur i láthair eile.	2-3
		3	Léiriúchán Grafach	Roghnaigh ceann amháin de na déantúsáin agus déan léiriúchán grafach den déantúsáin sin. Ba chóir go mbeadh saorláimhe san áireamh ann líníocht léiriúcháin saorláimhe déanta i bhformáid 3D.	1
		4	Páirteanna SolidWorks, Líníocht, Cóimeáil agus eDrawing	Gin mionsamhail mhion ríomhaire ina mbeidh 5 pháirt ar a laghad, Líníocht, Cóimeáil agus eDrawing den déantúsáin atá roghnaithe. Cuirfead tús maidir le dearadh agus leis an rún dearaídh san áireamh sa mharcáil ar an tasc.	Comhaid Leictreonaicha SolidWorks ar CD
		5	Aschur cruachóipe as SolidWorks	Mionchlónna ortagrafacha. Cló pictiúrtha déanta. Cló scartha.	2-4
		6	Léiriú Fóiréalaíoch	Lomhána fóiréalaíocha den déantán, ar na cheapadh ar ríomhaire, a chur ar fáil.	1
		7	Fiosrú grafatace ar réitigh dhearaídh	Anailís ar an gcoimre agus léiriú grafach ar réitigh fhéideartha An réiteach/na réitigh a roghnaíodh a mhíniú agus bíodh aeistéic, Feidhmíúlacht agus inbhuanaitheacht imshaoil san áireamh agat.	2-4
		8	Mionathrú/Dearadh Coincheapa a chur i láthair	Mionchur i láthair grafach ar an Mionathrú/Dearadh Coincheapa. Ba chóir a bheith san áireamh ann líníocht d'ardchaighdeán cur i láthair déanta go saorláimhe i bhformáid 3D.	1
		9	Aschur cruachóipe ó SolidWorks	Samhail CAD (Páirt/Cóimeáil, Líníocht agus eDrawing) agus na haschur cruachóipe a bhaineann léi a mbeidh ann mionchlónna ortagrafacha, pictiúrtha déanta agus lomhána fóiréalaíochachun an dearadh mionathraithe/coincheapa a chur in úil	2-4 (Móide comhaid Leictreonaicha SolidWorks ar CD)
160					

Tasc an Dalta Gnáthleibhéal – Ardteistiméireacht 2012

Is é atá in araidín deisce ná coimeádan a choinnítear ar bharr deisce chun pinn, pinn luaidhe, rialóirí agus fáiscíní páipéir a choinneáil.

Baineann gnéithe breise le roinnt déantán amhail stóráil páipéir litreach, áireamhan comhtháite, clog, agus rí. Baineann cruth agus cuma níosach le cuid mháith de na dearaí agus déantar iad a mhonartú as éagsúlacht leathán ábhar.

(A) Déan imscrúduithe dearaídh i bhformáid ghráfach ar araidíní deisce atá ann cheana féin. Ba chóir go mbeadh anailís ar an gcruth agus ar an gcuma fisiceach, ar ghnéithe, datú, ábhair agus rí mar chuid den imscrúduithe.

(B) Taispeáin go ghráfach conas a dhéanfaí mionathrú ar araidín deisce roghnaithe chun feabhas a chur ar an dearadh foriomlán.

nó

Déan dearadh nua coincheapa d'araidín a thobairt agus a chur in iúl go ghráfach a bheid bunaithe ar théama roghnaithe nó ar spriocmharagadh.

U.	Ceamrú	Tuairisc	Lion le h. A3	Marc
1	Taighde Dearadh	Coimre a fhiosrú agus déantúsáin atá ann cheana féin a chur i	1-2	50
2	Comparáid leis an nGné Dhearadh	Roghnaigh 2 tomha agus léirigh/mingh na príomhghnéithe dearaídh. Cuir isteach na príomhghnéithe dearaídh an dá cheann i gcomparáid agus i gcodarsnacht agus úsáid á baint as sceití saorláimhe oiriúnacha agus as teicnící cur i láthair eile.	1-2	50
3	Léiriúcháin Grafach	Roghnaigh ceann amháin de na déantúsáin agus déan mionléiriúcháin grafach den déantúsáin sin. Ba chóir go mbeadh san áireamh ann líneáil léiriúcháin saorláimhe déanta d'ardchaighdeán i bhformáid 3D.	1	50
4	Páirteanna SolidWorks, Líneáil, Coimneáil agus eDrawing	Páirteanna 3 pháirt ar a laghad, Líneáil, Coimneáil agus eDrawing den déantúsáin atá roghnaithe. Cuirfead an struchtúr comhdhán is	Comhaid SolidWorks ar CD	60
5	Aschur cruachóipe SolidWorks	Mionchlónna ortagrafacha. Cíó pictiúrtha déanta. Cíó scartha.	1-3	60
6	Léiriú Fóiréalaíoch	Lomhána fóiréalaíochta den déantán, ar na cheapadh ar ríomhaire, a chur ar fáil	1	60
7	Fiosrú grafáice ar réitigh dhearadh	Anailís ar an gcoimre agus léiriú grafach ar réitigh fhéidearttha	1-2	50
8	Mionathrú/Deardh Coincheapa a chur i láthair	Mionchur i láthair grafach ar an Mionathrú/Deardh Coincheapa. Ba chóir a bheith san áireamh ann líneáil d'ardchaighdeán cur i láthair déanta go saorláimhe i bhformáid 3D.	1	50
9	Aschur cruachóipe SolidWorks	Samhail CAD (Páirt/Coimneáil, Líneáil agus eDrawing) agus na ortagrafacha agus pictiúrtha déanta chun an deardh mionathraithe/coincheapa a chur in iúl	1-3 (Móide comhaid leictreonacha SolidWorks ar CD)	160

Bronnfar marcanna faoi gach ceannteideal cuí ar phróiseas smaointeoiríochta, ar mhachnamh agus ar chur i láthair.

Cuid (B) - Mionathrú Dearadh nó Dearadh Coincheapa

Cuid (A) - Déantúsáin atá ann cheana féin

Grafaic Dhearaidh agus Chumarsáide (GDC) Tasc an Dalta Ardteistiméireacht 2012

Treoracha d'iarthóirí:

1. Ní mór dhá chuid a bheith san obair chúrsa le haghaidh measúnaithe:
 - Cumhdach dearaidh A3 idir clúdai gh
 - Ní mór uasmhéid de 12 leathanach a bheith sa chumhdach ag an nGnáthleibhéal agus uasmhéid de 14 leathanach ag an Ardleibhéal.
 - CD ar leith ina bhfuil:
 - Na comhaid SolidWorks go léir a bhaineann leis an tasc críochnaithe
 - Cóip leictreonach den chumhdach críochnaithe i **bhformáid PDF**.
2. Ní mór 1 phríomhfhiliteán a bheith sa CD. Ba chóir a bheith in ainm an fhiliteáin seo do scrúdúimhir san fhormáid seo a leanas “DCG SA 2012 (Aitheantóir an Iarrathóra)”.
3. Ní mór 2 fhó-fhíllteán a bheith sa príomhfhiliteán, a bhfuil tagairt dó thuas. Ní mór na leathanaigh go léir ón tasc críochnaithe a bheith i gceann de na fó-fhíllteáin sin i **bhformáid PDF**. Ní mór 2 fhó-fhíllteán a bheith san fhó-fhíllteán eile. Beidh gach ceann de na comhaid leictreonacha SolidWorks a bhfuil baint acu le Cuid A den tasc i gceann de na fó-fhíllteáin sin agus beidh na comhaid leictreonacha SolidWorks a bhfuil baint acu le Cuid B den tasc sa dara fó-fhíllteán. Níor cheart comhaid ar bith eile a bheith sa CD.

(Ní mór na comhaid CAD go léir atá ag teastáil a bheith i bhformáid SolidWorks 2009)

4. Is ortsa atá an fhreagracht a chinntiú go mbeidh na comhaid go léir atá ag teastáil ar an CD sula gcuireann tú an obair isteach. Mura ndéanann tú é sin **caillfidh tú marcanna** faoi na ceannteidil chui sa scéim mharcála. Bronnfar marcanna as cloí leis an struchtúr comhdúcháin a bhfuil cur síos air thuas.
Ba chóir cóip chúlaca de na comhaid atá ar an CD a bheith coinnithe i do scoil go dtí go mbeidh an próiseas measúnaithe críochnaithe.

5. Lena chosaint le linn dó bheith á iompar, ba chóir an CD a chur i gclúdach cosanta. Ba chóir an clúdach sin a bheith greamaithe gar don chiumhais cheangailte ar an gclúdach laistigh den chumhdach dearaidh.

6. Ní mór do chuid **bunseictsi** d'Aschuir 3 agus 8 a chur isteach – ní leor iomhána scanaithe.

7. Ní mór nach mbeadh san obair chúrsa a chuirtear isteach le haghaidh measúnaithe ach **do chuid oibre féin** agus ní mór **go gcuirfi i gcrích sa scoil i** faoi threoir mhúinteoir an ranga.

8. Ní mór foinsí taighde a úsáidtear, an tdiríon san áireamh, a admháil. Ní ghnóthóidh ábhar taighde a cóipeáladh go díreach ón tdiríon ná ó fhoinsí ar bith eile, agus é curtha i láthair mar do chuid oibre féin, marc ar bith.

9. Ní mór an obair chúrsa le haghaidh measúnaithe a chur i láthair ar bhealach tarraingteach agus bronntar marcanna ar an gcur i láthair.

10. Ní mór an obair chúrsa a bheith críochnaithe faoin **Aoine 20 Eanáir 2012**.



Scrúduití na hArdteistiméireachta, 2012

Grafaic Dhearaidh agus Chumarsáide

Tasc an Dalta

Gnáthleibhéal agus Ardleibhéal
160 marc

Tá sonraí maidir le Tasc an Dalta do Scrúduití na hArdteistiméireachta, 2012 le fáil thall.

Ní mór Tasc an Dalta a bheith críochnaithe faoin Aoine 20 Eanáir, 2012.

Ba chóir an obair a chur isteach tar éis do na scrúduitimhreacha iarrthóra a bheith eisithe do na scoileanna.