UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International Diploma in ICT
Foundation Level

Scheme of Work

5184
Computer Graphics
Optional Module

UNIVERSITY *of* CAMBRIDGE
International Examinations

Introduction

This optional module is about using computer graphics facilities to create, edit and place images within a document.

What is assessed in this Module?

- drawing images using graphics tools
- entering text
- copying an image
- resizing an image
- filling an image, using colours and patterns
- changing the orientation of images, using rotation and reflection
- saving and printing images
- saving and printing documents

Tutor Preparation Required to Deliver this Module

You will need:

- access to suitable computer graphics facilities (most basic 'paint' packages or most currently available integrated packages offering graphics facilities are likely to be adequate for work at foundation level)
- prepared sample or demonstration files
- prepared instructions for each activity students will undertake

In choosing software for this module, bear in mind that there is no need for very sophisticated graphics tools at this stage. If there are too many tools and menus to negotiate, this can make things more difficult for a beginner, rather than helping them. Check that all the activities you plan to set can be done with the software package you have chosen. Consider the range of possible strategies and solutions that students may employ for activities which do not have highly specific instructions.

Underpinning Knowledge

- basic keyboard and mouse skills
- selecting and de-selecting objects
- locating files and using save/ save as

General Principles and Procedures

There are relatively few assessment objectives, skills and performance criteria in this module. Each of them can be demonstrated quickly and simply. The key principle in teaching this module should be to give students plenty of opportunities to practise these new skills in a meaningful context.

There should be instructions and files available so that students who complete tasks quickly and well can move on at their own pace.

In choosing tasks and an appropriate teaching order, it is usually best to begin with simple logos and repeating patterns using regular, coloured shapes and straight lines along with copy, paste, reflect (flip) and rotate (60° or 90°). (You could also show how to produce squares and circles using the rectangle and ellipse tools plus shift key at this stage).
Next, add text boxes, starting with single words or short captions. Make sure that students know the difference between editing a box with text in it and editing the text in a box for font, point size or alignment.

Show how to rearrange objects so that they overlap in the correct order and so that text sits 'on top'.

Many students will find that drawing irregular shapes and using freehand drawing tools is quite hard to do well, and may need a surprisingly long time to complete tasks involving these skills.

If the package allows, it can be helpful to show students how to use a magnified or 'pixellated' view to achieve finer control in limited areas of an image by changing a pixel at a time. While it is important for students to be able to produce images to meet specifications, bear in mind that students are likely to learn more effectively if they are given opportunities to find their own solutions, rather than following a 'recipe' every time.

Scheme of Work

Assessment Objectives	Performance Criteria	Classroom Ideas	Resources	Notes
Computer Graphics				
Session Plan One				
• draw images using graphics tools • enter text • copy an image • resize image • fill image • change orientation • save and print image	1.1.1 1.2.1 2.1.1 2.2.1 2.3.1 2.3.2 2.4.1 3.1.1	• introductory activity • simple company logo • poster with border	• display of samples of work done by students in previous years • suitable graphics package • access to printer • prepared, printed instruction sheets for each task • prepared image files • printed 'model' versions of completed tasks, for comparison	• terms that students are likely to need over the first three sessions: graphics, page orientation, drawing /painting tools, pencil tool, brush tool, regular shapes, irregular shapes, fill, palette, fill colour/ fill pattern / line colour, select/ freeform select /'lasso', cut, copy, paste, drag/drop, spray /airbrush tool, pick/sample colour (eyedropper tool), curve, freeform, scribble, text box, resize, reflection /flip, rotation (free /fixed), arrange objects, layers, group objects, pixel • note: some of these will depend on the graphics package used • some of these terms are not specified in the syllabus, but may be useful for students to be familiar with • there should be instructions and files available so that students who complete tasks quickly and well can move on at their own pace
Session Plan Two				
• all	all	• flow diagram • office plan	• suitable graphics package • access to printer • prepared, printed instruction sheets for each task • prepared image files • printed 'model' versions of completed tasks, for comparison	

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Assessment Objectives	Performance Criteria	Classroom Ideas	Resources	Notes
Session Plan Three				
• all	all	• design for packaging sleeve /CD sleeve • logo	• as above	
Session Plan Four				
• all	all	• review /practice • specimen paper	• individual progress review sheet • printed specimen paper for each student • appropriate prepared files and facilities to support each of the tasks in the paper	• use the first part of the session for reviews and completion of work or further practice. The second half of the session should be for the specimen paper and should follow formal test procedures as closely as possible

Assessment Objectives	Performance Criteria	Classroom Ideas	Resources	Notes
Session Plan Five				
		• debrief from practice test • further practice	• marked specimen papers for each student • prepared 'model' answers, preferably for display via projector and whiteboard, or as print-outs, or read-only files • access to printing facilities if appropriate to further practice tasks • suitable graphics software • prepared image files for further practice tasks • prepared, printed instructions for further tasks	• the first part of the session should be used for feedback, and should identify specific skills and performance criteria for individual students to work on in the second half of the session
Session Plan Six				
• undertake Computer Graphics Module Assessment	All	• computer Graphics Assessment		