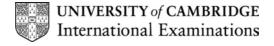
## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

# Cambridge International Diploma in ICT Advanced Level

Scheme of Work

5207 Advanced Graphics Optional Module





#### Introduction

This optional module is about manipulating multiple images and layers to create graphical documents.

#### What is assessed in this module?

- importing and acquiring images from external sources, for example, scanner, digital camera and file
- transformation of images by rotating, flipping, stretching, skewing and scaling
- manipulation of objects by copying, cropping, resizing, mirroring and erasing
- arrangement of objects by positioning with grids, combining and grouping
- · ordering, re-arranging and flattening layers
- entering text and editing colour, size, orientation and appearance
- · positioning and ordering text
- · controlling colour by sampling and adding to a palette
- applying and removing colour using fill, colour, palette, mixing, texture, spot colours and colour separations
- adjustment of brightness, contrast, hues, saturation, density and graduations
- · saving images in different formats, and having an awareness of differences in file size
- · printing to paper, film and slide, use of screen shots to show layers
- printing directories/folders

### **Tutor preparation required to Deliver this Module**

- · suitable graphics software
- · documentation showing what the students have to do
- · scanner and digital camera
- · film and slide for output of images
- appropriate documentation from 'general principles and procedures' below

#### Underpinning Knowledge

- the application of layers in an image
- · acquiring images from a scanner and a digital camera
- importing an image from a file
- understanding of the need for colour separations
- differences between bitmap and vector graphics, and common formats
- · image compression

### **General Principles and Procedures**

In preparation for this module you could produce notes on the following topics:

- · common graphics formats, and how they differ in file size
- · image scanning
- · downloading images from a digital camera
- the concept of layers
- basic methods for arranging, transforming and manipulating images and text
- how to use the palette, and how to add colours by sampling
- · reasons for using colour separation

# **Scheme of Work**

Assessment Objectives	Performance Criteria	Classroom Ideas	Resources	Notes
Advanced Graphics				
Session Plan One				
<ul> <li>import image</li> <li>control image</li> <li>enter text</li> <li>control colour</li> <li>save image</li> <li>output image</li> </ul>	1.1.1 2.1.2 2.2.1 2.2.2 2.3.3 3.1.1 3.2.1 3.2.2	<ul> <li>scan an image</li> <li>adjust colours as specified</li> <li>resize and crop as specified</li> <li>add a title to the image</li> <li>print using colour separations</li> <li>save image as BMP and JPG</li> </ul>	<ul> <li>image for scanning</li> <li>instructions for editing to be performed</li> <li>instructions for saving</li> <li>instructions for printing</li> </ul>	<ul> <li>provide an image to be scanned, that requires editing such as brightness, contrast, hues, saturation, resizing cropping</li> <li>demonstrate the method for printing colour separations</li> <li>demonstrate the differences between saving as BMP and JPG, in particular the difference in file size</li> <li>explain the JPG compression settings</li> </ul>
Session Plan Two				
<ul> <li>import images</li> <li>control images</li> <li>enter text</li> <li>save image</li> <li>output image</li> </ul>	1.1.1 2.1.1 2.1.2 2.1.3 2.1.4 2.2.1 2.2.2 3.1.1 3.2.1 3.2.2	<ul> <li>import images, each into a separate layer</li> <li>transform as specified</li> <li>manipulate as specified</li> <li>arrange as specified</li> <li>enter text, and edit as specified</li> <li>save and print as specified</li> </ul>	<ul> <li>images</li> <li>instructions on use of layers</li> <li>instructions for editing to be performed on images and text</li> <li>instructions for saving</li> <li>instructions for printing</li> </ul>	<ul> <li>provide images to be transformed by rotating, flipping, stretching, skewing and scaling; manipulated by copying, cropping, resizing, mirroring and erasing; arranged by combining and grouping; and positioned using a grid</li> <li>each image should be placed on a separate layer</li> <li>suggest a title which could be used, and provide instructions for editing</li> </ul>

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Assessment Objectives	Performance Criteria	Classroom Ideas	Resources	Notes
Session Plan Three	<u>.</u>			
<ul> <li>import images</li> <li>control images</li> <li>enter text</li> <li>control colour</li> <li>save image/s</li> <li>output images</li> </ul>	1.1.1 2.1.1 2.1.2 2.1.3 2.1.4 2.2.1 2.2.2 2.3.2 2.3.3 3.1.1 3.2.1 3.2.2	exercise 1 could be used to reinforce work undertaken so far	<ul> <li>documentation and resources for exercise 1</li> <li>instructions for saving and printing</li> </ul>	<ul> <li>exercise 1 could be used</li> <li>provide an assortment of images for scanning</li> <li>candidates could look at web pages on the Internet for design ideas</li> </ul>
Session Plan Four	, v.=.=		l	
<ul> <li>control images</li> <li>enter text</li> <li>control colour</li> <li>save images</li> <li>output images</li> <li>print directories/folders</li> </ul>	2.1.1 2.1.2 2.1.3 2.1.4 2.2.1 2.2.2 2.3.1 2.3.3 3.1.1 3.2.1 3.2.2 3.3.1	exercise 2 could be used	documentation and resources for exercise 2     instructions for saving and printing	exercise 2 could be used     candidates could look at web pages on the Internet for design ideas     provide instructions for the following:         drawing basic shapes, which can be filled         using selection tools         using sampling tools         adding colours to the palette         instructions for printing appropriate directories/folders
Session Plan Five				
<ul> <li>undertake         Advanced         Graphics         Specimen paper     </li> </ul>		<ul> <li>use for assessment of student</li> </ul>	specimen paper	provide necessary documentation and resources required by the assignment

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Assessment Objectives	Performance Criteria	Classroom Ideas	Resources	Notes			
Session Plan Six							
Session Plan Seven		debrief     further practice	marked papers				
undertake     Advanced     Graphics     Assessment	All	Advanced Graphics Assessment					

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