Accredited

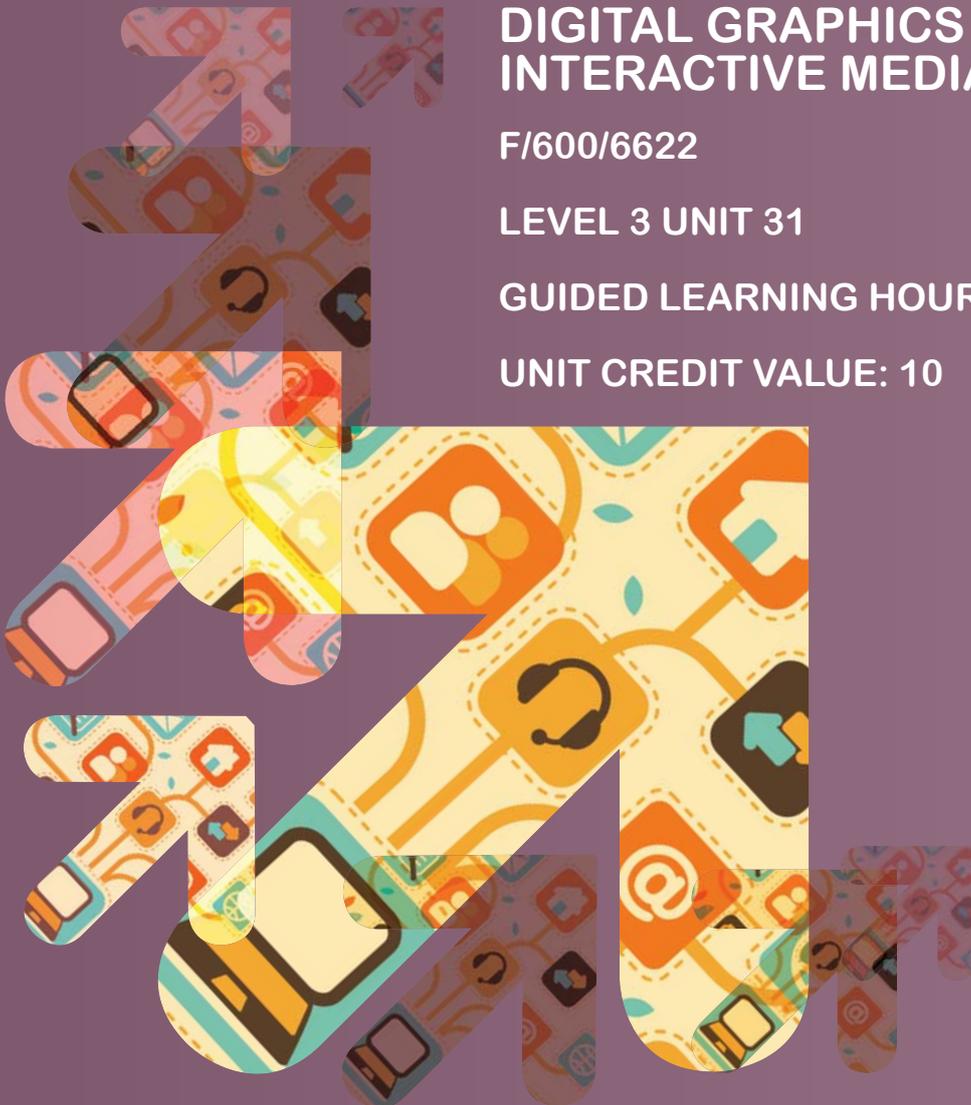# OCR LEVEL 3 CAMBRIDGE TECHNICAL
CERTIFICATE/DIPLOMA IN

IT

DIGITAL GRAPHICS FOR INTERACTIVE MEDIA

F/600/6622

LEVEL 3 UNIT 31

GUIDED LEARNING HOURS: 60

UNIT CREDIT VALUE: 10

DIGITAL GRAPHICS FOR INTERACTIVE MEDIA

F/600/6622

LEVEL 3

AIM AND PURPOSE OF THE UNIT

This unit aims to provide learners with the skills to design and create appropriate graphics to be used in interactive media e.g. websites and DVDs. Learners will study a variety of techniques using specialist graphic software to achieve this and they will be able to develop their understanding of the different formats available and when it is most appropriate to use them.

ASSESSMENT AND GRADING CRITERIA

Learning Outcome (LO)	Pass	Merit	Distinction
	The assessment criteria are the pass requirements for this unit.	To achieve a merit the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
The learner will:	The learner can:		
1 Understand theory and applications of digital graphics technology	P1 describe theory and applications of digital graphics technology with some appropriate use of subject terminology	M1 explain different settings used for different outputs	D1 critically evaluate a range of digital graphics for interactive media
2 Be able to generate ideas for digital graphics for an interactive media product	P2 generate outline ideas for digital graphics for an interactive media product working within appropriate conventions and with some assistance	M2 provide a detailed plan of ideas generated for digital graphics for an interactive media product	D2 justify decisions made in producing the detailed plan
3 Be able to create digital graphics for an interactive media product following industry practice	P3 create digital graphics for an interactive media product following industry practice, working within appropriate conventions and with some assistance		D3 enhance digital graphics for an interactive media product using advanced skills

TEACHING CONTENT

The unit content describes what has to be taught to ensure that learners are able to access the highest grade.

Anything which follows an i.e. details what must be taught as part of that area of content.

Anything which follows an e.g. is illustrative, it should be noted that where e.g. is used, learners must know and be able to apply relevant examples to their work though these do not need to be the same ones specified in the unit content.

LO 1 Understand theory and applications of digital graphics technology

Interactive Media Outputs

- Digital, (e.g. Interactive television, DVD/Blu-Ray Menus, Video Games, Dynamic Websites, Virtual Reality, Interactive Advertising, Social networking, Smart Phone Interface)
- Printed, (e.g. Board Games, Pop Up Books, Game Books, Magazines (with competitions)).

Applications of graphics

- Backgrounds, (e.g. plain, pattern, texture)
- website graphics, (e.g. logos, web banners)
- navigation methods, (e.g. bar, menu, rollover buttons, image links)
- interactive adverts
- animated graphics, (e.g. Flash)
- smart phone screen icons.

Digital Image Types (theory)

- raster
  - features, (e.g. pixels, dots per inch, scaling issues, file size, file formats TIFF, GIF, PNG, BMP, JPEG)
- vector
  - features, (e.g. lines, curves, objects, scaling ability, file size, file formats EPS, AI, CDR, DXF, SVG, WMF).

Compressions techniques (theory)

- lossy
- lossless
- optimising, (e.g. file size, dimensions, appropriateness for intended output).

Settings (theory)

- resolution, (pixel, PPI)
- bit depth, (1-bit, 8-bit, 16-bit, 32-bit)
- colour depth, (e.g. BPP – bits per pixel)
- colour mode, (e.g. Grayscale, RGB CMY(K), HSV, YUV, YCbCr).

Evaluation of digital graphics

- intended purpose and audience of the digital graphic(s)
- application of graphic
- interactive Media Output used
- settings used, (e.g. amount of graphics, sizes of graphics)
- types of image used, (e.g. raster, vector)
- positive and negative aspects
- potential improvements.

LO 2 Be able to generate ideas for digital graphics for an interactive media product

Requirements

- client needs
- audience, (e.g. primary, secondary, tertiary)
- criteria, (e.g. age, gender, location, income, education)
- house style
- copyright considerations, (e.g. using third party images, seeking permission, implications of not gaining permission)
- ethical considerations, (e.g. avoiding causing offence, ensuring images are appropriate for intended audience age).

Outline Design Methods

- visualisations, (e.g. mind map, mood boards)
- sketches, (e.g. individual graphic sketches).

Detailed Design Methods

- sketches, (e.g. multiple sketches or storyboards for rollovers or animated images)
- annotations, (e.g. planned resolution, bit depth, colour mode).

Planning

- **use of software**
  - project management software, (e.g. Open Proj)
  - gantt chart.

- **project stages**
  - planning
  - designing
  - creating
  - modifying
  - evaluating.

LO 3 Be able to create digital graphics for an interactive media product following industry practice

Create graphics

- **import images, (e.g. camera, scanner)**

- **graphics, (e.g. static, interactive, rollover, animated)**

- **drawing tools**

- **editing tools, (e.g. sizing, cropping, scaling, changing resolution, rotating)**

- **optimisation, (e.g. format, resolution, bit depth, dimensions, colour depth)**

- **file formats, (e.g. TIF, GIF, JPG, GNP).**

Advanced skills

- **layers**

- **effects, (e.g. built in effects, filters, masks, paths, feathering, sharpening, cloning)**

- **image adjustments, (e.g. adjusting colour attributes, contrast, brightness, saturation)**

- **frames, (e.g. animation, others).**

Industry practice

- **organisation, (e.g. appropriate file and folder structures and naming conventions, file backup and version control)**

- **time management, (e.g. time plan, Gantt chart)**

- **project life cycle, (e.g. planning, designing, creating, modifying, evaluation)**

- **review graphics, (e.g. quality, settings used, appropriateness for output media, future improvements)**

- **self-reflection, (e.g. time management, research skills, technical ability, creative ability, future improvements).**

DELIVERY GUIDANCE

Understand theory and applications of digital graphics technology

To enable learners to create their own digital graphics for an interactive product, it is necessary for them to firstly understand the applications of digital graphics and the theory behind them. Tutors must ensure that learners discuss, explore and consider a range of interactive media examples so that the uses of graphics can be assessed. These can take the form of printed as well as electronic outputs but a mix of the two is highly recommended. Although it is most likely examples will be from an American or British market, it would be beneficial to look at examples from other countries and learners could comment on differences and similarities.

In groups or in tutor led discussions, it would be useful to carry out an analysis of how graphics are used in interactive media products, in particular, looking at where images have been used effectively and enhance a product and then where they have not been used appropriately, as well as if they are suitable for a given audience. The activity will aim to give learners a wider understanding of the products and allow them to make judgments on the technical decisions, such as choice of file size, which would have needed to have been made for each example.

Tutors should encourage small and large group discussions with learners presenting back their findings. Time should be taken for learners to understand the importance of a target audience, the purposes and settings of the graphics and the styles used by different companies to attract a range of people to use their media product. This could be carried out as a review of previous research done or as a large group discussion.

Learners should be shown a range of different uses of software packages with the tutor identifying the main features and demonstrating that they can be used to create and/or edit graphics used for an interactive media product using both vector and raster software.

Learners should be made aware of the effects of using different types of image (raster, vector) and see the effects of using different settings on an image, such as resolution, bit depth, colour depth and colour mode. Tutors could show examples of images that have had different settings applied or alternatively learners could experiment with software packages, applying the changes to images themselves. If learners can visually see the effects of using different settings they will find it easier to discuss, explain and make informed choices when they come to create their own images as part of the assessment.

Be able to generate ideas for digital graphics for an interactive media product

Learners should be introduced to a range of planning documents and should review various examples of design documents and practice their creation as exercises such as:

- visualisations, mind maps, mood boards (showing initial idea planning)

- sketches (rough to detailed designs).

For good practice learners should look to annotate planning and design documents to assist in development and to clarify final details. To reinforce their skills, learners may also choose to complete documentation for existing graphics retrospectively; they could then review each other's work for gaps in detail and content.

Products can be researched as part of group work and used to identify the intended audience, purpose, and the house style. It will help to reinforce the need to use appropriate file sizes depending on the chosen method of delivery. Learners could then consider how the various interactive media products display their graphics, looking for similarities and differences. This could be delivered firstly as a class discussion, followed by research tasks in small groups feeding back responses to the whole group.

Learners should be taught to give careful consideration to the different stages of a project as per the teaching content. Tutors could show effective methods of time planning and through demonstration or step by step exercises learners can be taught how to use Gantt chart creation software or project management software. To reinforce understanding, short exercises with set tasks could be given out to small or large groups to identify which tasks are required and the length of time needed to complete them.

Learners should also research and consider the impact of copyright on sourced material e.g. using images from the Internet, as well as looking at the importance of graphics being targeted at the correct age group and not being offensive to certain groups (e.g. age, gender, ethical, cultural backgrounds). This could be covered with learners by looking at case studies within the media of where content has been used without seeking permission, and cases where companies have had action taken against them for using inappropriate or

offensive graphics. Individual findings from research carried out could then be presented back to the rest of the group as part of a class discussion.

Be able to create digital graphics for an interactive media product following industry practice

Learners will need a reasonable amount of time to practice creating static, rollover and animated images using one or a range of graphic editing and creation software. This could be taught by tutor demonstration, step by step tutorials or online video tutorials. It would also be beneficial for learners to become familiar with any image capture equipment, if being used.

Learners need to be taught the various considerations when creating, editing and saving graphics such as file formats, bit depth, dimensions and colour depth. Experimentation with settings will allow learners to select the most appropriate formats to save and optimise their graphic files ensuring file size is kept reasonable, and appreciating aspects such as the intended output for the graphics and their interactive media product.

Learners should be taught about industry practice and processes that should be adhered to. This ranges from basic file management, giving files appropriate names and keeping backups using version control to understanding the cycle of a project; and its different phases. Learners should be taught appropriate topics to discuss when reflecting on themselves and their work throughout the project, while considering how they could improve if they were to carry out a similar project. This can be taught through tutor led discussion.

SUGGESTED ASSESSMENT SCENARIOS AND TASK PLUS GUIDANCE ON ASSESSING THE SUGGESTED TASKS

Assessment Criteria P1, M1, D1

P1 could be evidenced by the use of a report or presentation supported by tutor observation and recorded evidence. Learners must include both digital and printed types of interactive media. Learners should describe each example and show the various graphics that have been used for each (e.g. background, navigation method). They must describe with examples the types, compression techniques and settings associated with digital images listed in the teaching content.

The merit criterion M1 could be completed as an extension of P1. Learners must explain the different settings used on graphics for use on different outputs. Explanations must be detailed and cover the settings and types of digital graphics as listed in the teaching content with supporting examples showing proper and improper use of settings.

The distinction criterion D1 could be completed as an extension of P1 and M1 or presented as a separate report or presentation. Learners must choose an example for each category listed in the teaching content for the different applications of graphic. Learners will critically evaluate a range (three or more) of digital graphics for interactive media as per the teaching content and suggest how the graphics could be improved, if applicable. Descriptions should be supported by appropriate images of reviewed graphics and should show they have fully understood the criteria covered as part of assessment criterion P1.

Assessment Criteria P2, M2, D2

For P2, learners should generate outline ideas for digital graphics for an interactive media product. They could generate an outline plan which will show their ideas for their graphics by firstly identifying the requirements needed for the graphics and then use outline design methods to produce design documentation as listed in the teaching content. Learners should plan to create at least four individual graphics. Learners should be encouraged to think creatively and not be penalised on their drawing ability. Designs can be electronic or hand drawn.

The merit criterion M2 is an extension of P2. Learners must provide a detailed plan of ideas generated with annotated designs. Appropriate settings must be identified for the graphics, covering each setting listed in the teaching content.

The distinction criterion D2 is an extension of P2 and M2 and could form part of the same evidence. Learners must justify the decisions they have made when producing their detailed plan. Justification must be detailed with appropriate reasons giving for the types of graphics to be created, linking to how they will fit together on the interactive media product. The justification must also cover the settings chosen.

Assessment Criteria P3, D3

For P3, learners should create digital graphics for an interactive media product. This could be evidenced by the created graphic files supported by a report, which will illustrate the key tools and techniques used when optimising their graphics following industry practice listed in the teaching content. This could be evidenced as a series of annotated screenshots and/or video screen capture. There should be a range of different graphics created from the listed criteria.

The distinction criterion D3 is an extension of P3; learners should use advanced skills to enhance the digital graphics that they have created. At least three of the advanced skills listed in the teaching content should be used to enhance graphics. Learners will work independently in creating their graphics. Evidence of techniques being used could be through before and after screenshots or video screen capture, which will demonstrate the use of advanced skills.

SUGGESTED SCENARIOS

- A detailed scenario could be introduced to allow learners to identify a purpose and audience for the graphics they will create using suggestions below. The scenario could be linked to a real company, a trip or fictional scenario, as it is not essential but would be beneficial for learners to create images from scratch, as opposed to editing existing images. Graphics for a DVD menu for a forthcoming film release (e.g. background, animated introduction, rollover menu options).

- Graphics for a video game (e.g. players, background image, collectable items etc).

- Graphics for an interactive television channel (background image, selectable rollover menu options, channel logo).

RESOURCES

Some centres may have issues with blocked websites as part of their Internet policy so it may be appropriate for a shortlist of sites/products for each category to be created which learners can select from.

- **Essential:** Graphics creation software to enable learners to meet the assessment criteria: (e.g. Fireworks, PhotoPlus, Photoshop, DrawPlus, Illustrator, Flash, Gimp).

- **Hardware:** Digital camera, scanner, graphics tablet.

MAPPING WITHIN THE QUALIFICATION TO THE OTHER UNITS

Unit 9   Project Planning with IT

Unit 17 Interactive media authoring

Unit 27 Digital graphics

CONTACT US

Staff at the OCR Customer Contact Centre are available to take your call
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