e-Quals Unit Syllabus

Level 2 Using digital imaging to create and design presentations

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Unit 033 Using digital imaging to create and design presentations

Syllabus Overview

Rationale

The aim of this unit is to provide candidates with an intermediate level of skills and knowledge to competently prepare for, and perform a variety of *digital imaging related tasks* using Information and Communication Technologies (ICT). Candidates will develop a more demanding understanding of imaging applications and the operating system in everyday usage and the ability to work in a generally unsupervised role solving issues competently without direction.

Note: The emphasis is on the use of imaging applications to acquire, and edit images rather than on their artistic content or the use of advanced features of imaging hardware.

Learning outcomes

There are **five** outcomes to this unit. The candidate will be able to:

- Acquire digital still images from different sources
- Produce digital artwork and drawings using non-specialist software
- Manipulate digital still images
- Produce themed slideshows of digital still images using imaging software
- Acquire and manipulate digital moving images

Guided learning hours

It is recommended that 60 hours should be allocated for this unit. This may be on a full time or part time basis.

Connections with other qualifications

This unit contributes towards the knowledge and understanding required for the following qualifications:

IT Users N/SVQ (iTQ) Level 2

Outcome	Unit	
1,2,3	201	Make selective use of IT 2
1 2 3,4, 5	202	Operate a computer 2
1, 2, 3	203	IT troubleshooting for users 2
1, 2, 3	205	IT security for users 2
1, 2	208	Wordprocessing software 2
1,2,3, 4, 5	211	Web site software 2
1,2,3,4,	212	Artwork and imaging software 2
1,2,3	213	Presentation software 2
1,2, 3, 4, 5	217	Use IT systems 2

Assessment and grading

Assessment will be by means of a **set assignment** covering both practical activities and underpinning knowledge.

Unit 033 Using digital imaging to create and design presentations

Outcome 1 Acquire digital still images from different sources

Practical activities

The candidate will be able to:

1 use a simple digital camera to produce digital images of a range of subjects with a range of light levels eg sun, cloud, indoor, flash etc eg

- a portrait
- b group
- c landscape (including panoramic views using multiple adjacent images stitched together)
- d street scene

2 download digital photographs from a camera / storage medium to a pc

3 connect and use a flatbed scanner and software to acquire digital images of

- a monochrome photographs/graphics
- b monochrome documents using Optical Character Recognition (OCR) software
- c grey scale
- d colour photographs/graphics
- e colour documents

using basic software settings eg

- f image type
- g destination
- h resolution
- i scale

4 acquire digital images in various file formats from Internet or other network sources

5 organise and re-name digital image files in themed groups.

Underpinning knowledge

The candidate will be able to:

1 list the features of common digital imaging systems eg
   - a multiple file types
   - b file compression
   - c image acquisition from different sources
   - d peripherals such eg printers, scanners etc.
   - e image enhancement and manipulation
   - f produce hard copy in a variety of formats
   - g facilitates sharing of images between applications and locations

2 identify sources of digital images eg
   - a digital camera
   - b scanner
   - c infra-red photography
   - d Internet and network locations
   - e optical and removable media

3 describe the limitations of digital imaging when using
   - a digital camera
   - b scanner
   - c existing images from outside sources

4 explain the terms
   - a capture
   - b post-processing
   - c resolution
   - d pixel

5 describe scanning modes
   - a line
   - b tone
   - c rgb
   - d cmyk
   - e greyscale

6 outline the technical dangers of acquiring images from un-proved sources eg
   - a embedded viruses
   - b spyware/adware

7 outline the legal implications of downloading images from the internet and other public access sources including
   - a copyright issues
   - b data protection
   - c criminal offences (obscenity etc.)
   - d workplace restrictions.

Unit 033 Using digital imaging to create and design presentations

Outcome 2 Produce digital artwork and drawings using non-specialist software

Practical activities

The candidate will be able to:

1 produce outline designs for artwork that includes line drawing using auto and freehand shapes, colour painting and imported images

2 select and open applications eg advanced word-processor, desk top publishing (dtp), basic artwork application that include suitable drawing facilities to produce digital versions of artwork designs

3 produce digital artwork based on outline designs, using single and multiple images and using tools, including appropriate text eg

- a group/ungroup
- b grid
- c snap to grid
- d size
- e rotate/flip
- f crop
- g send back/bring forward

4 save the digital artwork using suitable file formats and convenient file sizes to specified local or remote location

5 close applications correctly.

Underpinning knowledge

The candidate will be able to:

1 identify the common functions and tools in software with drawing facilities eg

- a auto shapes
- b freehand drawing
- c line types and thicknesses
- d airbrush
- e paintbrush
- f eraser
- g colour selection (standard and custom)
- h sizing
- i aspect ratio lock
- j zoom
- k layout grid
- l snap

2 identify suitable file types for their artwork in websites and their limitations eg

- a .bmp
- b .gif
- c .jpg

and suitable file types for print publishing that are application specific and more common eg

- d .psd
- e .eps
- f .rtf
- g .html

3 explain the term 'lossy' image formats eg .jpg

4 outline the advantages and disadvantages of using a graphic tablet to input data

5 outline the advantages and disadvantages of methods of digital image storage eg

- a optical media
- b hard drive
- c removable/portable media
- d remote (network) location.

Unit 033 Using digital imaging to create and design presentations

Outcome 3 Manipulate digital still images

Practical activities

The candidate will be able to:

1 select appropriate software to adjust and enhance a variety of images including
   - a photographs
   - b clip art
   - c line drawings
   - d colour artwork
   - e text documents including Optical Character Recognition (OCR)

2 carry out basic adjustment and enhancement processes eg
   - a size of image and canvas
   - b brightness
   - c contrast
   - d colour balance
   - e crop
   - f filtering
   - g red-eye reduction
   - h convert to greyscale
   - i convert to sepia

3 use special effects tools to produce a number of different images from the same original eg
   - a stylise
   - b render
   - c pixelate
   - d texture
   - e distort

4 produce composite images using layers

5 produce panoramic images using image merging/stitching

6 using appropriate word processing applications, proof read and correct errors in documents scanned using Optical Character Recognition (OCR).

Underpinning knowledge

The candidate will be able to:

1 define the term 'image manipulation'

2 outline the problems associated with copying documents using Optical Character Recognition (OCR) eg

- a spelling errors
- b loss of style and format
- c mixed images and text
- d copyright implications

3 outline the basic features and tools found in image enhancing software eg

- a sizing of image and canvas
- b rotate/flip
- c adjust eg brightness, contrast, auto, sharpen
- d layer
- e crop/trim
- f zoom
- g filter
- h colour enhancement/reduction/saturation

4 Identify the commonly used colour modes eg

- a greyscale
- b rgb
- c cmyk
- d halftone
- e duotone
- f monotone
- g sepia

5 describe some of the basic problems associated with image editing eg

- a enlarging low-definition images
- b wide angle distortion
- c image not straight eg tilted horizon etc
- d over- sharpen
- e auto-correct not giving desired effect
- f cropping.

Unit 033 Using digital imaging to create and design presentations

Outcome 4 Produce themed slideshows of digital still images using imaging software

Practical activities

The candidate will be able to:

1 select images in different formats to convey information to a specified audience group eg
   - a jpeg .jpg
   - b bitmap .bmp
   - c .gif
   - d .pcx
   - e tiff .tif
   - f raw

2 standardise images eg
   - a file type
   - b image size

3 plan slideshows using storyboards for automatic display or contact sheets for user selected display

4 construct and configure slideshows following a theme, including
   - a timings
   - b transitions
   - c captions
   - d music

5 save slideshows on different media to enable viewing on different devices eg
   - a digital projector
   - b television
   - c computer monitor.

Underpinning knowledge

The candidate will be able to:

1 state the basic principles of image slideshows relating to

- a individual image display time
- b image order
- c overall time
- d captions
- e audio
- f background/framing

2 state the common methods of delivering slide shows eg

- a manually/thumbnails
- b automatically using a basic imaging application (usually images only)
- c automatically from a specially formatted file using a specialist 'presentation' application
- d automatically using multi-media software/html for website presentations.

Unit 033 Using digital imaging to create and design presentations

Outcome 5 Acquire and manipulate digital moving images

Practical activities

The candidate will be able to:

1 acquire moving images in different formats eg
   - a .mpg
   - b .wav
   - c 'Quicktime'
   - d 'Real Player' .rm
   - e .avi
   - f .mov
   - g .divx

2 use an application to carry out basic editing of moving images:
   - a add and remove sequences
   - b adjust total and scene run times
   - c add titles, effects and transitions
   - d add suitable music to a video clip

3 save finished files in different formats eg:
   - a .mpg
   - b .wav
   - c 'Quicktime'
   - d 'Real Player' .rm
   - e .avi
   - f .mov
   - g .divx

Underpinning knowledge

The candidate will be able to:

1 state the basic features of standard movie file formats eg

- a .mpg
- b .wav
- c 'Quicktime'
- d 'Real Player' .rm
- e .avi
- f .mov
- g .divx

2 state the meaning of the term CODEC

3 Outline the basic difficulties that are likely when manipulating movie files and converting them to other formats eg

- a requires specialist software
- b results in different image quality
- c converted file may not fit on a specific media
- d different CODEC(s) may be required to view revised format.

Unit record sheet

Use this form to track your progress through this unit.

Tick the boxes when you have covered each outcome. When they are all ticked, you are ready to be assessed.

Outcome		✓	Date
1	**Acquire digital still images from different sources**	☐	
2	**Produce digital artwork and drawings using non-specialist software**	☐	
3	**Manipulate digital still images**	☐	
4	**Produce themed slideshows of digital still images using imaging software**	☐	
5	**Acquire and manipulate digital moving images**	☐	

Candidate Signature ..... **Date** .....

City & Guilds Registration Number .....

Quality nominee (if sampled) ..... **Date** .....

Assessor Signature ..... **Date** .....

External Verifier Signature (if sampled) ..... **Date** .....

Centre Name ..... **Centre Number** .....

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