

SVQ for IT Users (ITQ) — level 3 (SCQF level 6)

F9C9 04: Design Software 3

5 SCQF credit points at SCQF level 6

Description: This is the ability to use a software application designed to create, modify and layout artwork for display in print or on a screen (eg vector graphics for design and drawing; raster graphics for illustration).

Outcome	Skills and Techniques	Knowledge and Understanding
On completion of this Unit the candidate should be able to:		
1 Obtain, insert and combine information for designs.	1 Obtain, input and prepare designs to meet needs. 2 Use appropriate techniques to organise and combine information of different types or from different sources. 3 Store and retrieve files effectively, in line with local guidelines and conventions where available.	1 Explain what designs are needed. 2 Explain how the context affects the way designs should be prepared. 3 Provide guidance, on what and how any copyright or other constraints may apply to the use of own and others' designs. 4 Explain how file format affects quality, format and size and how to choose appropriate formats for saving designs.
2 Use design software tools to create, manipulate and edit designs.	1 Select and use suitable techniques to create designs . 2 Use guide lines and dimensioning tools appropriately to enhance precision. 3 Select and use appropriate tools and techniques to manipulate and edit for designs. 4 Check designs meet needs, using IT tools and making corrections as necessary. 5 Identify and respond to quality problems with designs to make sure that they meet needs.	1 Explain what technical factors affecting designs need to be taken into account and how to do so.

Note: The **emboldened** items are exemplified in the Support Notes.

Evidence Requirements

Completion of a portfolio (manual, electronic or combination) to cover all of the Skills and Techniques and Knowledge and Understanding points stated above. The evidence generated should adhere to the Assessment Strategy for this award and encompass a range of evidence types.

NB: It is possible to achieve this Unit by Accreditation of Prior Achievement (APA), however, the relevant evidence must be referenced within the portfolio.

General information

This Unit equates to NOS (National Occupational Standards for IT Users 2009) code DIS: Design and Imaging Software level 3. It has a stated number of SCQF credit points = 5 at SCQF level 6.

Support Notes

Summary

A SCQF level 6 (ITQ level 3) user can select and use a wide range of advanced design software tools and techniques to complex and non-routine designs.

Design software tools and techniques will be defined as 'advanced' because:

- ◆ the software tools and functions used will be complex and at times require new learning, which will involve having the idea that there may be a tool or function to do something (eg improve efficiency or create an effect), exploring technical support, self-teaching and applying
- ◆ the inputting, manipulating and outputting techniques will be multi-step and complex, and will involve research, identification and application
- ◆ the user will take full responsibility for inputting, structuring, editing and presenting the information

Examples of context which illustrate typical activities which might be undertaken by users:

- ◆ logo for a company

Examples of content are given separately for highlighted text, where explanatory notes are required on terminology in the Outcomes, and do not form part of the standards. Such examples are not meant to form a prescriptive list for the purposes of assessment but rather to amplify and interpret the generic terms used in the Performance Criteria in the light of current usage of ICT systems and software. These examples are subject to change as new tools and techniques become commonplace and older ones drift out of use.

The examples given below are indicative of the learning content and are not intended to form a prescriptive list for the purpose of assessment.

Outcome 1

Designs: Designs will vary according to the task for example, scanned, graphic elements, drawings, clip art.

Copyright constraints: Effect of copyright law (eg on use of other people's images), acknowledgment of sources, avoiding plagiarism, permissions.

Combine information: Insert, size, position, wrap, order, group, layer, import data, links and references to external data, version control, export data.

Context for designs: Contexts will vary according to the software and task, for example: on screen display, publishing on a web site, hard copy print out, digital file.

File formats for designs: Will vary according to the content, for example jpeg for internet photo display, png for internet drawing display, svg for graphic designs (the ISO standard most likely to be fully supported by web browsers).

- ◆ digital picture format (eg jpeg. and psd)
- ◆ bitmap or raster picture formats (eg raw bitmaps, bmp and compressed formats jpeg and png)
- ◆ vector graphics (eg svg, wmf, eps, ai)
- ◆ open formats (eg html, odf, pdf and rtf)
- ◆ proprietary formats (eg pub and qxd)
- ◆ method of compression (lossy, non-lossy)
- ◆ converting files between different formats (eg JPEG to TIFF)

Store and retrieve: Files (eg create, name, open, save, save as, print, close, find); folders (eg create, name); archive (backup, restore).

Outcome 2

Technical factors affecting designs: Page or canvas size; colour mode; file size and format; method of display or printing; colour depth; technical differences between vector and bitmap or raster graphics.

Create designs: Draw basic shapes and edit vector properties to create new and more complex shapes; scan and resize; add text and other elements such as lines, boxes and arrows; create more complicated designs using painting, drawing software; use layers for different elements (eg background text); use bleeds and crossovers; three dimensional (3D) objects and designs.

Manipulate and editing techniques: Basic techniques — align, rotate, flip, arrange, cut, paste, resize, change font, text and colour, group, ungroup.

Illustration software: Masks and layers; rendering three dimensional (3D) objects; tracing.

Advanced techniques: Change resolution, colour depth and file format to suit different uses; adjust to ensure compatibility between different software and operating systems.

Check designs: Size, alignment and orientation, suitability of file format, appropriate choice of colour mode and use of filters, fitness for purpose.

Quality problems with designs: Will vary according to the content, for example, levels, contrast, resolution, colour balance, unwanted content.

Guidance on examples of evidence

Typical examples of evidence for Outcomes 1–2

Production of a logo for a company.

To assess competence in the Knowledge and Understanding sections for all of the Outcomes a knowledge test in the form of multiple-choice questions (say 16–20 questions) or candidate statement or expert witness testimonial statements or a semi structured interview could be employed. Either one or a combination of these methods would be appropriate. If oral questioning techniques are employed it is essential to keep a record of the questions asked, together with a record in a suitable format of the candidate's responses to these for evidence purposes.

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements