SQA Advanced Unit Specification

General information for centres

Unit title: Information Technology: Applications Software 2

Unit code: HP12 48

Unit purpose: This Unit is designed to enable candidates to attain an advanced level of proficiency in Information Technology (IT). As such, it aims to further develop the candidate's knowledge of the theoretical concepts, principles, boundaries and scope of IT applications. The intention of the Unit is to develop in the candidate the importance of the integration of complex information through the sharing of information between applications and users and by use of advanced features of software applications packages. Emphasis should be placed throughout on creating active links to other software application packages and especially to the Internet.

On successful completion of the Unit candidates will be able to:

1. Use advanced techniques of software application packages for automation

2. Use advanced techniques of software applications packages for integration

3. Use data communications to share data with other users

4. Use software application presentation tools.

Credit value: 1 SQA Credit(s) at SCQF level 8: (8 SCQF credit points at SCQF level 8)

SCQF (the Scottish Credit and Qualifications Framework) brings Scottish qualifications into a single framework of 12 levels ranging from SQA National 1 to doctorates. The SCQF includes degrees; SQA Advanced Certificate/Diplomas; SQA National Qualifications; and SVQs. Each SQA Unit is allocated a number of SCQF credit points at a specific level. 1 SCQF point = 10 hours of learning. Candidates are normally expected to input a further number of hours, matched to the credit value of the Unit, of non-contact time or candidate-led effort to consolidate and reinforce learning.

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre, however as it relies on the skills attained in the SQA Advanced Unit HP6L 47 *Information Technology: Applications Software 1* it is strongly recommended that this Unit be achieved by candidates before undertaking HP12 48 *Information Technology: Applications Software 2*. Alternatively, candidates with appropriate National Units in software applications and/or with Information Technology core skills Units at National 5 or Higher, or equivalent experiential competence, may have the prior knowledge and skills required to

undertake this Unit. A thorough familiarity with computers and software applications packages, particularly in terms of the actual software used by centres, will also be required.

General information for centres (cont)

Core skills: There may be opportunities to gather evidence towards core skills in this Unit, although there is no automatic certification of core skills or core skills components.

Context for delivery: This Unit provides candidates with an advanced level of skills using Information Technology applications. It should enable candidates to use IT systems as effective communication tools with minimal support. Electronic data sources are to be used, candidates are expected to achieve effective results when using IT software by using online help facilities and suppliers handbooks. Files should be provided for candidates as appropriate to negate the need for them to enter large amounts of text or data. It is not intended for this Unit to re-teach the knowledge and skills taught in HP6L 47 *Information Technology: Applications Software 1*, appropriate to the work they are doing. This Unit builds upon knowledge and skills attained in HP6L 47 *Information Technology: Applications Software 1*. This Unit will therefore be best placed if it follows after HP6L 47 *Information Technology: Applications Software 1* in a course of study.

This Unit is included in the framework of the SQA Advanced Certificate in Computing, the SQA Advanced Diploma in Computing: Technical Support and the SQA Advanced Diploma in Computing: Software Development, and as such, it is recommended that it be taught and assessed within the group award to which it contributes.

Access to the Internet and to appropriate software must be provided for this Unit.

Assessment: This Unit has four Outcomes and two assessments. Candidates will be required to submit a portfolio of evidence to demonstrate their final product and a presentation about their final product. Portfolio evidence for the final product and the presentation will be in the form of printouts, listings, screen dumps and/or electronically stored files. An observation checklist covering all the knowledge and/or skills for the Unit must also be submitted as part of the portfolio of evidence.

Assessors are at liberty to criticise poor layout and presentation even though it is not expressly mentioned in the knowledge and skills of any of the Outcomes.

Where the candidate is unsuccessful in achieving an Outcome, provision should be made for remediation and re-assessment. In line with SQA Guidelines, a candidate may present work for assessment on two separate occasions. If the work has still not reached the required standard then the candidate has not achieved the Outcome. Following this, further remediation and re-assessment is permissible but remains at the discretion of the centre.

Where the candidate is learning in a workplace situation, care should be taken to ensure that it provides sufficient opportunity to meet the evidence requirements of the Unit. It may be appropriate for centres to ensure in advance that a particular workplace will enable candidates to generate sufficient and suitable evidence e.g. that appropriate software and hardware is available and that access to it does not cause undue problems for either the candidate or the workplace. Arrangements for adequate supervision will also be required; it may be that assessment is not done in the workplace.

SQA Advanced Unit specification: statement of standards

Unit title: Information Technology: Applications Software 2

Unit code: HP12 48

The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Use advanced techniques of software application packages for automation

Knowledge and/or skills

- How to use advanced software application package techniques to produce, manipulate and integrate data
- How to create, use and amend/adjust macros to produce and manipulate data
- How to import/export objects from/to other software applications

NB: the software application packages can be any three from word processing, spreadsheet, database, simulation, graphics, communications (e.g. Internet, intranet, email, etc), audio/music, animation, video, multimedia, desktop publishing, presentation, data logging and retrieval, control or other packages.

Evidence requirements

The evidence requirements for Outcome 1 are integrated with Outcome 3. See Outcome 3 for evidence requirements.

Assessment guidelines

See assessment guidelines in Outcome 3 for indication of level of knowledge and skills expected.

Outcome 2

Use advanced techniques of software application packages for integration

Knowledge and/or Skills

- How dynamic links are established to consolidate data from multiple documents, designs, compositions or models in different software application packages
- How to use functions for complex activities

NB: the software application packages can be any three from word processing, spreadsheet, database, simulation, graphics, communications (e.g. Internet, intranet, email, etc), audio/music, animation, video, multimedia, desktop publishing, presentation, data logging and retrieval, control or other packages.

Evidence requirements

The evidence requirements for Outcome 2 are integrated with Outcome 3. See Outcome 3 for evidence requirements.

Assessment guidelines

See assessment guidelines in Outcome 3 for indication of level of knowledge and skills expected.

Outcome 3

Use data communications to share data with other users

Knowledge and/or skills

- How to share data with others
- How to publish products online
- How to send data to local/remote users
- How to access and incorporate data from local and remote data sources

NB: the software; application packages can be any three from word processing, spreadsheet, database, simulation, graphics, communications (e.g. Internet, intranet, email, etc), audio/music, animation, video, multimedia, desktop publishing, presentation, data logging and retrieval, control or other packages.

Evidence requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can use the advanced techniques of at least three different software applications packages. Candidates must produce a portfolio of work that demonstrates that s/he has applied advanced techniques of the software applications packages to meet complex integrative information requirements. The evidence for this Outcome and Outcomes 1 and 2 should be in the form of a final product, i.e. a document or a design or a composition or a model.

The evidence for this Outcome and Outcomes 1 and 2 should be by submission of an observation checklist covering all the knowledge and/or skills above. In addition, portfolio evidence for the final product will be in the form of printouts, listings screen dumps and/or the final product will be in the form of printouts, listings, screen dumps and/or the final product stored on disk/CD-ROM, or other media, as appropriate.

Assessment guidelines

The following provides an indication of level of knowledge and skills expected for a number of software applications packages. The intention is that candidates should enhance the knowledge and skills developed in HP6L 47 *Information Technology: Applications Software 1*

from that of 'using the features' of software applications packages to those of being able to create their own, for example, templates, styles, macros, etc.

If centres choose to use other software applications packages than those shown in the examples below then they should ensure that candidates are taught and assessed to comparable standards. It is recommended that emphasis be placed on creating active links to other packages and also to the Internet.

1. **Word processor**

   Create:

   Templates, styles, auto correct, mail merge, table of contents, index, footnotes, autoformat, captions, different styles, merge documents, dictionaries, macros, shared documents, protect documents

   Include:

   Web links, charts, graphs, graphics, table, columns, figures, hyperlinks, and labels

2. **Spreadsheet**

   Create:

   Templates, conditional formatting, create custom formatting, Pivot Tables, lookup tables, named ranges, customise toolbars, macros, trace dependencies, data grouping, apply data filters and extract data, 'what if' scenarios, merge workbooks, label worksheets, shared workbooks, trend analysis, reports, protect cells, protect documents,

   Include:

   Web links, charts, graphs, graphics, hyperlinks, passwords, change workbook properties,

3. **Database**

   Create:

   Validation criteria, input mask, lookup fields, form design and modification, control properties, switchboard, apply filters, advanced queries e.g. use of logical and Boolean functions, action queries, indexes, establish relationships, (1:1, many: many), reports — group, ordered reports e.g. alpha, set start up options, export to other applications e.g. spreadsheet, word processor.

   Include:

   Web links, graphics, hyperlinks, passwords, change database properties

4.   **Desk Top Publishing**

Create:

Templates, styles, auto correct, table of contents, index, footnotes, autoformat, captions, different styles, import graphics (resize/crop), macros, shared documents, protect documents, output for commercial printers/copying

Include:

Web links, graphics, hyperlinks, charts, graphs, and storyboards

5.   **Graphics / photo retouching / image editing / colour painting**

Create:

Scanning (editing), use complex tools, layers (reposition, mode change, duplicate, linking), features (shading, colour onto black & white), colour correction, import / export images from remote / local sources, filters, sizing / cropping / rotating images, converting

Include:

Web links, graphics, hyperlinks, charts, graphs, and storyboards

6.   **Web page**

Create:

A web page incorporating, embedding / importing – text, graphics, charts, graphs¸ navigation tools.

Candidates should be provided with files that may be used to cover the required evidence requirements. It is recommended that the files relate to each other so that a coherent final product and design could be produced. However, centres may wish to encourage candidates to seek out and/or produce their own data.

Outcome 4

Use application software presentation tools

Knowledge and/or Skills

- How to use advanced software application package techniques to produce a presentation
- How to import objects from other software applications packages and from other external sources
- How to create and use dynamic links to other software applications packages
- How to use animation within the presentation.

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Evidence Requirements

Candidates must produce and demonstrate a presentation. The presentation must demonstrate the evidence for Outcomes 1, 2 and 3 to the user and show that it meets with the user requirements.

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can use the advanced techniques of a presentation software application package. Candidates must produce a presentation that demonstrates that s/he has applied the advanced techniques of the software application package to meet complex integrative information requirements.

The presentation must include at least one object from each software application package used in Outcomes 1, 2 and 3, one object from an external source (e.g. internet, intranet), one dynamic link and one animation.

The evidence for this Outcome should be by submission of the final presentation stored on disk/CD-ROM, or other media, as appropriate.

Assessment Guidelines

The following provides an indication of the level of knowledge and skills expected for a presentation software application package. The intention is that candidates should enhance the knowledge and skills developed in HP6L 47 *Information Technology: Applications Software 1* from that of 'using the features' of software applications packages to those of being able to create their own, for example, templates, styles, macros, etc.

If centres choose to use another software application package than the one shown in the example below, then they should ensure that candidates are taught and assessed to comparable standards. It is recommended that emphasis be placed on creating active links to other packages and also to the Internet.

Presentation software

Create:

Audio, video, objects, animation, action buttons, actions settings, macros, slide transition, import data from external sources (internet / intranet / files), access data from external sources

Include:

Web links, graphics, hyperlinks, charts, and graphs.

SQA Advanced Unit Specification

Administrative Information

Unit code: HP12 48

Unit title: Information Technology: Applications Software 2

Superclass category: CY

Publication date: August 2017

Version: 01

History of changes:

Version	Description of change	Date

Source: SQA

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our Centre Feedback Form.

SQA Advanced Unit specification: support notes

Unit title: Information Technology: Information Technology Applications 2

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This unit focuses on the integration of the different software applications to produce work that is "media rich". In essence, work produced in each software application is then integrated into a complex product and presentation, suitable for communication over the Internet. Where HP6L 47 *Information Technology: Applications Software 1* tended to study software applications individually, HP12 48 *Information Technology: Applications Software 2* goes a step further to integrate and communicate with others.

Candidates for this Unit should achieve the level of competence required of an advanced user of information technology applications software in a commercial or professional situation. Successful achievement of the Unit will require individual access to a personal computer/workstation. It is suggested that, wherever possible, commercially available current versions of industry standard software be used. The component parts of an integrated software applications package along with its operating environment can be used to achieve all Outcomes. Access to the Internet and to appropriate software must be provided for this Unit. This should not be prohibitive in the case of centres, but may be an issue if being undertaken in the workplace.

It is generally assumed that the environment for this Unit will be, for example, Microsoft Windows and Office 97/2000 or Lotus, or other vendor equivalents, however, this is not specified and the requirements are deliberately generic in nature.

This Unit can be related to a single case study to enable candidates to operate in an appropriate context for assessment.

Guidance on the delivery and assessment of this Unit

It is not intended for this Unit to re-teach the knowledge and skills taught in HP6L 47 *Information Technology: Applications Software 1*. It is assumed that candidates will use skills learned in HP6L 47 *Information Technology: Applications Software 1*, appropriate to the work they are doing. This Unit builds upon knowledge and skills attained in HP6L 47 *Information Technology: Applications Software 1*. This Unit will therefore be best placed if it is delivered after HP6L 47 *Information Technology: Applications Software 1* in a course of study.

Candidates will have access to online help, tutorial support and/or supplier's manuals as required. Files should be provided for candidates as appropriate to negate the need for them to enter large amounts of text or data.

Assessment should be by one project or case study and one presentation. Candidates will be required to produce a portfolio of evidence from the project or case study and demonstrate a presentation.

See the Assessment Guidelines for the Unit (under Outcome 3 and Outcome 4) for further details.

If this Unit is being delivered as part of a Professional Development Award which receives endorsement from a vendor such as Microsoft, it must be delivered and evidence generated as detailed in the document '*Approval to Certification*' which is associated with that particular vendor and the Professional Development Award.

VQ Incorporation

Depending on how this Unit is taught by centres, it is considered possible to cover the knowledge and understanding components for the following VQ Units. These Units may also help to serve as a guide to centres as to the level of competence required by candidates.

VQ	VQ Unit No	VQ Element No	Outcome in this Unit
Using IT Level 3	312	1, 2 and 3	2 and 4
Using IT Level 3	326	1, 2, and 3	4

Links to Vendor qualifications

For information on links to vendor qualifications please refer to *Guide to Vendor Qualifications* documentation.

Open learning

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance.

A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes.

For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (SQA, February 2001 — publication code A1030).

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**

General information for candidates

Unit title: Information Technology: Applications Software 2

This Unit is designed to enable you to attain an advanced level of proficiency in IT applications. As such, it aims to further develop your knowledge and skills in the use and areas of application of software application packages. The Unit very much encourages the idea that it is the ability to use, integrate and interpret information from a wide range of disparate sources that is important in today's 'knowledge economy'. Therefore, having the knowledge and skill to be able to use the advanced features of applications software to integrate and interpret information is vital to making a contribution to the 'knowledge economy'.

In this Unit you will learn how to:

- Use advanced software application package techniques to produce, manipulate and integrate data
- Establish dynamic links to consolidate data from multiple documents, designs, compositions or models in different software application packages
- Import / export objects from / to other software applications
- Share data with other users
- Publish products online
- Use functions for complex activities
- Access and incorporate data from local and remote data sources
- Send data to local / remote users
- Create, use and amend / adjust macros to produce and manipulate data
- Present a production.

On successful completion of the Unit you will be able to:

1. Use advanced techniques of software application packages for automation
2. Use advanced techniques of software applications packages for integration
3. Use data communications to share data with other users
4. Use software application presentation tools

This Unit has two assessments that will assess your ability to integrate information using at least three different software application packages to produce a final product, i.e. a document or a design or a composition or a model **and** a presentation that will enable you to present your final product.

To complete this Unit successfully, you must produce a portfolio of evidence in the form of printouts, listings, screen dumps and/or disk copies of your final product and presentation.

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More detailed guidance on the content, amount, style and quality required of your work will be made available to you during your progress through the Unit.

Your assessor will also observe you carrying out the assessment tasks and will complete an observation checklist to certify that each part of your portfolio evidence is your own work and whether or not it has reached the required standard.