

SQA Advanced Unit specification: general information

Unit title: Information Technology: Information Systems and Services

Unit code: HR92 47

Superclass: CB

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Unit purpose

This Unit is designed to provide candidates with a broad understanding of information requirements and flows within a range of organisations, the contribution made by information systems to the performance of organisations and the value of information as an asset to a variety of organisations. Candidates will gain knowledge and understanding of how contemporary business software is used within organisations including an awareness of security requirements. Candidates will also be able to demonstrate the benefits deliverable within organisations from use of information systems.

On completion of the Unit the candidate should be able to:

- 1 Outline a range of typical internal and external information flows for an organisation.
- 2 Describe contemporary software used in information systems.
- 3 Evaluate the benefits of efficient information systems delivery within an organisation.

Recommended prior knowledge and skills

Access to this Unit will be at the discretion of the Centre, however it would be beneficial if candidates had achieved the Core Skills of *Communication*, *Working with Others* and *Information and Communication Technology (ICT)* at SCQF level 5.

Credit points and level

1 SQA Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from National 1 to Doctorates.*

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Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Unit specification: statement of standards

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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

Outline a range of typical internal and external information flows for an organisation.

Knowledge and/or Skills

- ◆ Operational Activities
- ◆ Decision making
- ◆ Planning
- ◆ Government Bodies
- ◆ Legal requirements

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ show successful completion of a **minimum** of 10 questions and responses of which a **minimum** of two from each of the above Knowledge and/or Skills are required. A different sample should be used for each assessment occasion. The assessment will take place under supervised open-book conditions.

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Outcome 2

Describe contemporary software used in information systems.

Knowledge and/or Skills

- ◆ Communication:
 - Mobile
 - Online
- ◆ Decision Support
- ◆ Server Management:
 - User management
 - File management
- ◆ Security:
 - Information Espionage
 - Hacking
- ◆ Expert Systems

Evidence Requirements

The evidence for Outcomes 2 and 3 will be covered by a single assessment and is listed under Outcome 3.

Outcome 3

Evaluate the benefits of efficient information systems delivery within an organisation.

Knowledge and/or Skills

- ◆ Information accessibility
- ◆ Economic Benefits
- ◆ File centralisation/sharing
- ◆ Customer satisfaction
- ◆ Decision making
- ◆ Market exposure

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Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ provide written and/or oral evidence of a sample of Knowledge and/or Skills from Outcomes 2 and 3. A different sample should be chosen for each assessment occasion. The evidence produced will be based on a case study/scenario of a realistic business information system and functional structure. Case study/scenario details should be issued early in the teaching and learning activities with a set of unseen tasks/questions issued after completion of the teaching/learning activities for the Unit. The assessment should be completed by candidates under supervised open-book conditions.

The candidate must:

- 1 Describe a minimum of three types of contemporary software from the Knowledge and/or Skills given in Outcome 2 including the use of the software in the context of the case study/scenario issued for the assessment.
- 2 Evaluate a minimum of three benefits of use for each of the types of software from the Knowledge and/or Skills for Outcome 3 and in the context of the case study/scenario issued for the assessment.

Candidates may produce evidence by recording of audio/audio visual files as an alternative to creation using software with online submission/file printout.

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Unit specification: support notes

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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. A suggested allocation of time is:

Organisational Information Flows	3 hours
Business simulation/games	6 hours
Importance of information to organisational efficiency (Discussion)	2 hours
Information as an asset	1 hour
Software Applications for organisations	4 hours
Investigation of application(s) of software	6 hours
Wiki contribution/building	4 hours
Wiki evaluation/review	2 hours
Organisational efficiency	2 hours
Customer/Market considerations	1 hour
Accessibility/sharing of information assets	2 hours
Organisational decision making	2 hours
The economics of organisations	1 hour
Assessment	4 Hours

Guidance on the content and context for this Unit

Evidence Requirements for all Unit Outcomes are assessed on a sample basis, however, all the content listed in the Knowledge and/or Skills section for all three Outcomes must be taught and available for assessment. Discussion of real organisational/businesses and functional areas should be encouraged in relation to all Outcomes for the Unit. There should be opportunities during the teaching/learning section of the course to visit/examine a number of organisations to examine the way their information systems function with group discussion opportunities to evaluate the systems seen. Candidates should be provided with every opportunity to work with others throughout the course of this Unit.

Guidance on the delivery of this Unit

This Unit is optional in the Group Awards: SQA Advanced Certificate in Computing, SQA Advanced Diploma in Computing, SQA Advanced Diploma in Computing: Technical Support, SQA Advanced Diploma in Computing: Networking and SQA Advanced Diploma in Computing: Software Development. The Unit is designed to develop in candidates' a knowledge of information flows within organisations in relation to: day to day business functions and activities, the range of software appropriate for use in information systems in relation to differing business organisations, and an appreciation of the benefits gained by use of information systems to support business operations.

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Where the Unit is being delivered to SQA Advanced Diploma candidates, it is expected that it will be scheduled within the first year of full-time study prior to presentation for the SQA Advanced Unit *Professionalism and Ethics in Computing*. In delivering the Unit, consideration should be given to the use of technology enhanced learning methods to improve candidate engagement with Unit content.

Delivery of the Unit should be designed to involve candidates in investigation of the way information systems contribute to business success and the importance of accurate and timely information for decision making. Consequently, the use of business simulation activities or business games (including online business games) would be useful to enhance candidate appreciation of information as a valuable asset to business organisations. Candidates should gain an overview of the relevance of current legislation alongside the understanding of contemporary software application to business functions. Candidate centred resource based learning using support materials for the Unit in, for example: printed, audio-visual, and computer assisted formats; as well as lectures, should be used throughout the Unit with a repository of support materials supplied by instructors, to support the learning process and to increase flexibility to take account of candidates preferred learning style(s). It is suggested that candidates should also be encouraged to contribute to a wiki or similar to gather and record attributes, application and benefits of contemporary software to promote candidate independent investigation and study. Formative activities may include peer group assessment, eg evaluation of wiki entries by candidates.

It would be beneficial to consider inclusion, in resources available to candidates, of podcasts using audio/audio visual content representing examples of business practices. An extensive range of reference material is available on the web and in print for all the topics within this Unit.

Guidance on the assessment of this Unit

There are two assessments for the whole Unit. One for Outcome 1 and Outcomes 2 and 3 have a combined assessment. More information of both assessments are detailed below.

Outcome 1

Outcome 1 is assessed by sampling the range of Knowledge and/or Skills. Candidates should complete a matching activity which consists of a **minimum** of 10 questions and responses (or 10 drag and drop alternatives). All of the Knowledge and/or Skills should be covered within the questions/alternatives which as a minimum should be equally weighted across all of the areas in the Knowledge and/or Skills. Candidates should match a minimum of 10 questions and responses correctly (or 10 drag and drop alternatives) to achieve the Outcome.

A different sample should be chosen for each assessment occasion. The activity should be made available to candidates under open-book supervised conditions (either online within a VLE or similar environment, or as a written/oral set of questions and responses) and be completed within 45 minutes.

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Outcomes 2 and 3

Outcomes 2 and 3 are assessed by a single assignment of written and/or oral work as outlined in the Evidence Requirements for Outcome 3. A different sample should be chosen for each assessment occasion. The evidence produced will be under supervised open-book conditions.

A detailed case study/scenario should be given to candidates after completion of the teaching/learning of the Unit with unseen questions issued for the assessment occasion. Questions may be asked of the Unit assessor by candidates for the purpose of clarification of the case study/scenario details prior to the assessment occasion. It is recommended that assessor responses and candidate questions be recorded as a shared resource for the Unit. The assessment is open-book and therefore candidates should be encouraged to gather and refine information/knowledge related to the range stated for Outcome 2 and 3 before the assessment occasion. The final assessment produced by candidates should be evaluated on the basis of the Evidence Requirements stated for the Unit and all stated minimum ranges within the Evidence Requirements should be included. Candidates should complete this assessment within 2 hours.

Online and Distance Learning

This Unit could be delivered by distance or online learning. It should be noted that this type of delivery may require additional scheduling and planning by the centre to arrange supervision of assessment completion and authenticity of evidence produced by candidates.

Opportunities for the use of e-assessment

E-assessment may be used in the assessment for Outcome 1 in the form of an e-test as indicated in the Evidence Requirements for the Outcome. E-assessment may be appropriate for the assessment for Outcomes 2 and 3: for example supervised completion of the assignment used for assessment may take place by creation and submission of appropriate file formats through a VLE or by use of on-line communication recorded by use of video/audio recording software to capture candidate attempt, similarly online conferencing software could be used by assessment supervisor and individual candidates for an assessment occurrence.

Opportunities for developing Core Skills

As candidates are doing this Unit there may be opportunities to develop aspects of the Core Skill of *Communication* at SCQF level 6.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

History of changes to Unit

Version	Description of change	Date

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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](#).

General information for candidates

Unit title: Information Technology: Information Systems and Services

This Unit is designed to allow you to gain a broad understanding of information requirements and flows within a range of organisations. You will also gain an appreciation of the contribution made by information systems to the performance of business organisations and the classification of information as a valuable asset. In studying this Unit, you will gain the knowledge and understanding of how a variety of contemporary software is used within business organisations including an awareness of security requirements in relation to information systems and the information contained in them. On completion of the Unit, you will be able to demonstrate the benefits to organisations of using efficient information systems.

The Unit consists of three Outcomes which inter-relate to one another, to assist you in development of a knowledge base and understanding of:

- ◆ the sort of information required in the day to day running of a business.
- ◆ the software which is useful to enhance the functioning of a business organisation and the software which is necessary to protect an information system and its information content.
- ◆ a variety of benefits which are gained by business organisation making use of efficient information systems.

Outcome 1 will be a question and response related activity which will be conducted under supervised open-book conditions within 45 minutes.

Outcomes 2 and 3 will be assessed by producing an assignment based on a case study/scenario of a realistic business information system and functional structure.

The case study/scenario details will be issued to you early in the teaching learning activities for the Unit. The assignment is later based on a set of unseen tasks/questions issued to you on an assessment occasion. You will have to complete the assignment task under supervised conditions within 2 hours and you will be permitted to access any resources which relate to the assessment tasks during your creation of the assignment.