SQA Advanced Unit Specification

General information for centres

Unit title: Corporate Information Systems

Unit code: HR0E 48

Unit purpose: The Unit is designed to enable candidates to identify and evaluate information as a corporate resource, and manage and apply information for decision making. It is primarily intended for candidates who expect to take up a career in financial administration and accounting. It would also be relevant to those with appropriate work experience who either wish to formalise their qualifications or progress in their accounting career.

On completion of the Unit candidates should be able to:

1. explain how systems theory is used to meet corporate organisational objectives, and describe the nature and value of information.
2. describe the security implications of and responsibilities for maintaining management information systems and storing information.
3. prepare a presentation which explains the implications of current developments in management information systems.
4. describe the first three stages of the information systems development life cycle.
5. describe the final four stages of the information systems development life cycle.

Credit value: 2 SQA Credits at SCQF level 8: (16 SCQF credit points at SCQF level 8*)

**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.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. However, candidates would normally be expected to have attained an appropriate IT applications eg IT in Business – Spreadsheets: HP78 47 and IT in Business – Word Processing and Presentation Applications: HP6G 47.

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 is delivered as part of the SQA Advanced Diploma in Accounting Group Award. It is recommended that it should be taught and assessed within the subject area of accounting. However if the Unit is delivered as part of a framework of another Group Award, it is recommended that it should be taught within the context of that award.

Assessment: The Unit should be assessed by a combination of Closed and Open-book assessments. Outcomes 1 and 3 will be assessed under Open-book conditions. For Outcome 1 candidates will be required to produce a Case study report. For Outcome 3 candidates will be required to give an oral presentation. Candidates will have access to class notes and text books for both Outcomes. Outcomes 2, 4 and 5 will be assessed under Closed-book examination conditions i.e. they will not have access to any class notes or text books.

An exemplar instrument of assessment, and marking guidelines, has been produced to indicate the national standard of achievement required at SCQF level 8. If the centre wishes to use a different mode of assessment they should seek prior moderation of the assessment instruments that you intend to use. Any changes to conditions of assessment may alter the current professional Accounting Bodies exemption policies.

To achieve this Unit candidates should attain 70% of available marks for each Outcome.

SQA Advanced 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

Explain how systems theory is used to meet corporate organisational objectives, and describe the nature and value of information.

Knowledge and/or skills

- Basic tenets of systems theory (multiple components, relatedness, subsystems, purpose, system decomposition, and interdependency.
- Difference between data and information and the internal and external sources of information (financial and non financial transactions, performance information upwards, budgets and planning information downwards, customer, supplier and stakeholder information flows, feedback).
- Information needs corresponding to different levels of management and the role of the Management Information System in supporting the management function (top management, middle management, operations management, and operations personnel in relation to time and detail required).
- Costs and benefits, including competitive advantage, of a management information system.
- Different organisational information philosophies in the context of centralised and distributed management information systems.

Evidence requirements

Candidates should demonstrate their knowledge and or/skills by producing a report which:

- identifies the basic tenets of systems theory;
- differentiates between data and information and the internal and external sources of information;
- identifies the information needs corresponding to different levels of management; and
- identifies the role of the Management Information System in supporting the management function.
- identifies the costs and benefits, including competitive advantage, of Management Information Systems; and
- describes the different information philosophies in the context of centralised and distributed management information systems.

The evidence must be a written response using appropriate diagrams and should be generated under Open-book conditions.

To achieve this Outcome candidates must attain 70% of available marks.

Assessment guidelines

The assessment of this Outcome should be conducted as a single Case study and is designed to enable the average candidate to complete it in one and a half hours. The assessment should be presented as a Case study from management requesting the candidate to explain, in their report, the application of systems theory to meet organisational objectives and to discuss the nature and value of information. The report should be between 800 and 1,000 words in length.

Outcome 2

Describe the security implications of and responsibilities for maintaining management information systems and storing information.

Knowledge and/or skills

- Principles of secure systems (transaction authorisation, segregation of duties, supervision, and independent verification).
- Principal threats to the operating system (accidental failures, intentional threats by privileged personnel, individuals browsing the system, insertion of a computer virus) and the control techniques used to minimise the possibility of exposure (controlling access privileges, password control, control against viruses and other destructive programmes, controlling audit trails).
- Techniques used to control access to (access controls, user defined procedures, back-up controls) and protect the database and computer centre (air conditioning, fire suppression, and power supply)
- Purpose of a systems audit (authenticity tests, accuracy tests, completeness tests, redundancy tests, access tests, audit trail tests, rounding error tests) and the techniques which can be used (test date, integrated test data, and simulation).
- Schedule 1 of the Data Protection Act 1998 and Computer Misuse Act.

Evidence requirements

Candidates should demonstrate their knowledge and/or skills by answering 6 extended response questions. Questions must be sampled from each of the knowledge and/or skills identified i.e. the candidate must be questioned on all of the bullet points listed above.

The evidence must be generated under Closed-book examination conditions.

To achieve this Outcome a candidate must attain 70% of available marks.

Assessment guidelines

The assessment is designed to enable the average candidate to complete it in one and a half hours. Candidates should continue to use the same Case study from Outcome 1.

Outcome 3

Prepare a presentation which explains the implications of current developments in management information systems.

Knowledge and/or skills

- Legacy systems, Database Management Systems (DBMS).
- Enterprise Resource Planning (ERP), Data Mining, Data Warehousing.
- Decision Support Systems, Executive Information Systems, Expert Systems, and Electronic Data Interchange (EDI).

Evidence requirements

Candidates will demonstrate their knowledge and/or skills by producing a presentation which describes the essential features of Legacy and DBMS in the context of the progression from Legacy systems to DBMS systems and describes the essential features of Enterprise Resource Planning systems, Data Warehousing, and Data Mining. They should also distinguish between decision support systems, executive information systems and expert systems and describe the main features of Electronic Data Interchange.

The evidence will be a group presentation using appropriate computer software (e.g. PowerPoint, Word, Excel). The group must be small (maximum of three members) and all members must be conversant with each issue and be able to respond to questions arising from the presentation. The presentations will be comprehensive and show strong evidence of all members taking part in the presentation.

To achieve this Outcome candidates must attain 70% of the available marks.

Assessment guidelines

The assessment of this Outcome should be conducted as a presentation using the same organisation detailed in the assessments for Outcomes 1 and 2. The candidate(s) should give a group presentation which they have prepared beforehand (under open conditions), to the management board using appropriate media technology. The notional time for the presentation should be thirty minutes. A checklist should be used to assess performance.

Outcome 4

Describe the first three stages of the information systems development life cycle.

Knowledge and/or skills

- Three initial stages of the systems life cycle (systems planning, systems analysis, and conceptual design).
- Role of the systems plan in meeting the strategic plan.
- Project activities required for the development of an MIS (recognising and defining the problem, specifying system objectives, determining project feasibility, preparing a formal project proposal, evaluating and prioritising competing proposals, producing a project schedule, announcing the new system project).
- Methods used in systems analysis (systems survey of current systems and user survey) and fact gathering techniques (observation, task participation, personnel interviews and reviewing key documents)
- Alternative design approaches used in conceptual system design (structured design approach and object-oriented design approach).

Evidence requirements

Candidates will demonstrate their knowledge and or/skills by describing correctly the initial three stages of the systems life cycle, discussing how the strategic objectives of an organisation are met through the business plan and defining project activities for the development of an MIS. They must also explain the methods used in systems analysis and describe the process of the conceptual design stage and two alternative design approaches.

The candidate must give written responses to 4 extended response questions generated under Closed-book examination conditions.

Candidates will continue to use the same Case study from Outcomes 1, 2 and 3.

To achieve this Outcome candidates must attain 70% of available marks.

Assessment guidelines

The assessment of this Outcome is designed to enable the average candidate to complete it in one and a half hours.

Outcome 5

Describe the final four stages of the information systems development life cycle.

Knowledge and/or skills

- Final four stages of the systems life cycle (systems selection, detailed design, system implementation, and system maintenance).
- Purpose and structure of systems evaluation and selection (technical feasibility, legal feasibility, operational feasibility, schedule feasibility, and economic feasibility) and cost benefit analysis. Purpose of systems design(creation of a data model of the business process, defining conceptual user views, designing normalised database tables, designing the physical user view, developing the process modules, specifying the system controls, and performing a system walk through).
- Systems implementation (managing the system implementation through PERT and Gantt charts, software selection, conversion of existing databases, implementation, testing and review (systems design adequacy, accuracy of time, cost and benefit estimates)).

Evidence requirements

Candidates will demonstrate their knowledge and or/skills by showing that they can: identify the final four stages of the systems life cycle and describe the purpose and structure of feasibility study in system selection and cost benefit analysis. They must also briefly explain the purpose of systems design and explain the purpose and structure of systems implementation and testing and a post implementation review.

The evidence must be written responses to 5 extended response questions and generated under Closed-book examination conditions.

Candidates will continue to use the same case study from Outcomes 1, 2, 3, and 4.

To achieve this Outcome candidates must attain 70% of the available marks.

Assessment guidelines

The assessment of this Outcome is designed to enable the average candidate to complete it in one and a half hours.

Administrative Information

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SQA Advanced Unit specification: support notes

Unit title: Corporate Information Systems

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 80 hours.

Guidance on the content and context for this Unit

The Unit is part of the framework of the SQA Advanced Diploma in Accounting. It is designed to enable candidates to understand the importance of Information Systems in the context of organisations. On completion of the Unit candidates will be able describe the application of systems theory to meet organisational objectives, and the nature and value of information, and to describe the security implications and responsibilities of maintaining management information systems and storing information. Candidates will have the opportunity to use their presentation skills to explain the implications of current developments in information systems. Finally candidates will be able to describe each of the stages of an information systems development life cycle. On entry the candidates would have expected to have attained a Unit in Information Technology or equivalent.

There may be opportunities for candidates who successfully achieve this unit to gain exemptions from a number of professional accounting bodies. Centres should contact the relevant professional bodies to ascertain their current exemption policies.

Guidance on the delivery and assessment of this Unit

It is suggested that the assessment should be in the form of a developing case study in which the candidate will play the role of a member of the organisation management team.

To achieve this Unit candidates must attain 70% of available marks for each Outcome.

Open learning

This Unit could be delivered by distance learning. However, it would require planning by the centre to ensure the sufficiency and authenticity of candidate evidence. Arrangements would have to be made to ensure that the evidence for all Outcomes is generated by assessment undertaken in the mode(s) detailed in the Assessment guidelines for each Outcome.

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.

General information for candidates

Unit title: Corporate Information Systems

The Unit introduces you to the use of information systems in the management of all types of organisations.

It can be studied as a stand-alone Unit if you wish to gain knowledge of the use of corporate information systems in organisations, or it could be studied as part of the SQA Advanced Certificate/Diploma in Accounting.

The assessment for this unit is made up of five tasks. In each of these tasks you must attain 70% of the available marks to achieve this Unit. The tasks cover the following:

- the explanation of systems theory and how it is used to meet corporate organisational objectives and the description of the nature and value of information
- the security implications of and responsibilities for maintaining management information systems and storing information
- a presentation, using an appropriate software package(s), which explains the implications of current developments in management information systems
- the first three stages of the information systems development life cycle
- the final four stages of the information systems development life cycle

Three of the assessments will be under Closed-book examination conditions and two assessments will be under Open-book conditions.

When you achieve this Unit there may be opportunities for you to gain exemptions from a number of professional accounting bodies. Ask the centre with whom you are studying this Unit to contact the relevant professional bodies to ascertain their current exemption policies.