

**-SQA- SCOTTISH QUALIFICATIONS AUTHORITY**

**HIGHER NATIONAL UNIT SPECIFICATION**

**GENERAL INFORMATION**

**-Unit Number-**            **8412505**  
**-Superclass-**            **CX**  
**-Title-**                    **INFORMATION TECHNOLOGY APPLICATIONS 2**

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**-DESCRIPTION-**

**GENERAL COMPETENCE FOR UNIT:** Using advanced features of computer application packages to produce documents and store, manipulate and retrieve data.

**OUTCOMES**

1. produce well formatted and organised documents;
2. produce numeric models and graphical representations of data;
3. maintain a data storage and retrieval system;
4. describe and use a telecommunications system to access an information source.

**CREDIT VALUE:**        1 HN Credit

**ACCESS STATEMENT:** Candidates should have prior experience of using applications packages. This may be evidenced by the possession of HN unit 8412495 Information Technology Applications 1, relevant NC modules or practical experience.

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For further information contact: Committee and Administration Unit, SQA, Hanover House, 24 Douglas Street, Glasgow G2 7NQ.

Additional copies of this unit may be purchased from SQA (Sales and Despatch section). At the time of publication, the cost is £1.50 (minimum order (£5.00)).

**HIGHER NATIONAL UNIT SPECIFICATION**

**STATEMENT OF STANDARDS**

**UNIT NUMBER:** 8412505

**UNIT TITLE:** INFORMATION TECHNOLOGY APPLICATIONS 2

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

**OUTCOME**

1. PRODUCE WELL FORMATTED AND ORGANISED DOCUMENTS

**PERFORMANCE CRITERIA**

- (a) Document text is error free.
- (b) Choice of typefaces is appropriate to the document content and specification.
- (c) Document layout is appropriate to content and specification.
- (d) Package features are used to automate document production.
- (e) Multi-column tables are established and formatted as appropriate to content.
- (f) Graphic elements are correctly positioned within documents.
- (g) Documents are correctly annotated and indexed.
- (h) Documents conform to organisational standards.

**RANGE STATEMENT**

Formatting/layout: paper size/type; page centring; page numbering; headers and footers; top and bottom margins; tabs; left and right margins; indents; justification; line spacing.

Typeface: font; size; appearance (bold, italic, underlined); sub and super scripts.

Automation features: macros; templates (master documents).

Graphic elements: figure; line; equation.

Annotation/indexation: paragraph numbering; endnotes; footnotes; table of contents; index.

**EVIDENCE REQUIREMENTS**

Performance evidence that the candidate can enhance the appearance and organisation of formatted documents as detailed in Performance Criteria (a) to (h). This may be demonstrated by the production of 3 or more printed documents of different types totalling at least 15 pages covering all range classes.

**OUTCOME****2. PRODUCE NUMERIC MODELS AND GRAPHICAL REPRESENTATIONS OF DATA****PERFORMANCE CRITERIA**

- (a) Worksheet cell contents and types accurately model specification.
- (b) Cell properties and layout are appropriate to content and specification.
- (c) Functions and formulae used are appropriate to specification.
- (d) Dynamic links are established to consolidate data from multiple worksheets.
- (e) package features are used to facilitate worksheet production.
- (f) Selected data sets are represented graphically and annotated in a manner appropriate to their content.
- (g) Dynamic links are established to maintain relationships between data and graphic representation.

**RANGE STATEMENT**

Functions/formulae: arithmetic; mathematical; statistical; financial.

Features: macros; cell protection.

Data sets: cell row or column; cell block.

Graphic representations: pie; graph; bar; stacked bar.

Annotation: axes (scaled and labelled); legends; title.

**EVIDENCE REQUIREMENTS**

Performance evidence that the candidate has enhanced the appearance and production of data models as detailed by Performance Criteria (a) to (g). This may be demonstrated by worksheets and graphs covering all of the critical classes.

**OUTCOME**

**3. MAINTAIN A DATA STORAGE AND RETRIEVAL SYSTEM**

**PERFORMANCE CRITERIA**

- (a) A data structure is correctly implemented to meet a given specification.
- (b) Data records are entered and manipulated correctly.
- (c) Queries are carried out efficiently and meet given requirements.
- (d) Reports produced meet given criteria and are appropriately formatted.
- (e) Data structure is modified to satisfy new requirements without loss of existing data.
- (f) Relationships are established between multiple files on specified key fields.
- (g) Contents of groups of records are updated in accordance with given specification.
- (h) Storage of information conforms with appropriate legislation.

**RANGE STATEMENT**

Data structure: field names; field types (to include text, number and date); field size; key fields.

Manipulation: data editing; sorting; insertion; deletion and merging of records.

Query: alphanumeric; numeric; combinational; exact; wildcard.

Report format: report and page headers; column titles; totals and subtotals; fonts and tpestyles.

**EVIDENCE REQUIREMENTS**

Performance evidence that the candidate can maintain a data storage and retrieval system as detailed in PCs (a) to (h). This may be provided by hardcopy listings of data structures, records and reports covering the critical classes.

**OUTCOME**

**4. DESCRIBE AND USE A TELECOMMUNICATIONS SYSTEM TO ACCESS AN INFORMATION SOURCE**

**PERFORMANCE CRITERIA**

- (a) Components of a telecommunications system are correctly described.
- (b) Connection is established to a host computer.
- (c) Access is gained to required information source.
- (d) Specified information is located and transferred to local computer.

- (e) Retrieved information is incorporated in a document, worksheet or data structure.

## **RANGE STATEMENT**

Components: local computer; modem; software; host computer.

## **EVIDENCE REQUIREMENTS**

Performance evidence that the candidate can use a telecommunications system as detailed in PCs (b) to (d) and that the retrieved information has been used as detailed in PC (e).

Evidence that the candidate can describe the components of an information system as detailed in PC (a).

**MERIT** A candidate who achieves all performance criteria for all outcomes will be awarded a pass. A pass with merit may be awarded where the candidate demonstrates superior performance by producing a document integrating text, worksheet and data structure elements and incorporating retrieved information.

### Organisational Standards

A statement of organisational standards to which documents should be prepared is required and must be made available to candidates. This statement should, at minimum, cover the following areas:

- (i) page format;
- (ii) line layout;
- (iii) choice and appearance of typeface;
- (iv) paragraph style.

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## **ASSESSMENT**

In order to achieve this unit, candidates are required to present sufficient evidence that they have met all the performance criteria for each outcome within the range specified. Details of these requirements are given for each outcome. The assessment instruments used should follow the general guidance offered by the SQA assessment model and an integrative approach to assessment is encouraged. (See references at the end of support notes).

Accurate records should be made of the assessment instruments used showing how evidence is generated for each outcome and giving marking schemes and/or checklists, etc. Records of candidates' achievements should be kept. These records will be available for external verification.

**SPECIAL NEEDS**

Proposals to modify outcomes, range statements or agreed assessment arrangements should be discussed in the first place with the external verifier.

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**HIGHER NATIONAL UNIT SPECIFICATION**

**SUPPORT NOTES**

**UNIT NUMBER:** 8412505

**UNIT TITLE:** INFORMATION TECHNOLOGY APPLICATIONS 2

**SUPPORT NOTES:** This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

**NOTIONAL DESIGN LENGTH:** SQA allocates a notional design length to a unit on the basis of time estimated for achievement of the stated standards by a candidate whose starting point is as described in the access statement. The notional design length for this unit is 40 hours. The use of notional design length for programme design and timetabling is advisory only.

**CONTENT/CONTEXT** The candidate should achieve the level of competence required of a regular user of information technology applications in a commercial or professional situation. Achievement of the outcomes will require access to a personal computer or workstation on an individual basis. Current versions of commercially-available software should be used. The component parts of an integrated software package may be used to achieve the outcomes. Where the principle package utilised does not cover all of the critical classes required any missing items can be an alternative package.

Documents, data etc. should be relevant to the candidate's vocational area wherever possible. Final versions of reports, worksheets etc should be of a quality suitable for external presentation.

Corresponding to Outcomes:

1. A range of realistic document types should be produced (eg. menus, quotations, business letters). Documents need not be fully entered by the candidate - plain text can be provided on disk for enhancement.
2. Cashflows, job costing, the results of scientific or technical investigations or other vocationally inspired problems should be provided. Graphical representations would normally be produced using facilities of the package used to generate the worksheets however an external or additional package may be used providing the PCs are met in full.
3. A database package or the database component of an integrated package would normally be used to achieve these outcomes however any package which covers the PCs and ranges could be used.
4. Connection to a simple information source (such as PRESTEL or a bulletin board) is sufficient.

**APPROACHES TO GENERATING EVIDENCE** A candidate-centred, resource-based learning approach is recommended. During the course of the unit candidates should have several opportunities to develop their practical skills and should be assessed at appropriate points. Concepts and terminology should be presented in context throughout the unit.

Where the candidate is unsuccessful in achieving an outcome provision should be made for remediation and reassessment.

**ASSESSMENT PROCEDURES** Centres may use the instruments of assessment which are considered by the tutor/trainer to be the most appropriate. Examples of instruments of assessment which could be used are:

- practical exercises
- log books
- assignments.

**PROGRESSION** This unit contributes towards SQA Higher National Certificates, Higher National Diplomas and Professional Development Awards.

## REFERENCES

1. Guide to unit writing.
2. For a fuller discussion on assessment issues, please refer to SQA's Guide to Assessment.
3. Information for centres on SQA's operating procedures is contained in SQA's Guide to Procedures.
4. For details of other SQA publications, please consult SQA's publications list.

An exemplar assessment pack for this unit is available from SQA. Please call our Sales and Despatch section on 0141 242 2168 to check availability and costs. Quote product code C046.

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