

-SQA-SCOTTISH QUALIFICATIONS AUTHORITY

SQA ADVANCED UNIT SPECIFICATION

GENERAL INFORMATION FOR CENTRES

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| -Unit number- | HV75 47 |
| -Unit title- | FUNDAMENTALS OF QUALITY ASSURANCE |
| -Superclass category- | VD |
| -Date of publication- (month and year) | NOVEMBER 2017 |
| -Originating centre for unit- | SQA |

-DESCRIPTION-

GENERAL COMPETENCE FOR UNIT: Explaining the fundamental quality management principles and practices which are used to establish and manage the customer's requirements for a product or service.

OUTCOMES:

1. explain the fundamental principles of quality assurance;
2. explain the methods of controlling the purchase of manufactured products and services;
3. explain the methods of identifying and recording manufactured products and services.

CREDIT VALUE: 1 SQA Credit.

ACCESS STATEMENT: Access is at the discretion of the centre. However, it would be beneficial if the candidate had experience of industry.

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STATEMENT OF STANDARDS

Unit title: FUNDAMENTALS OF QUALITY ASSURANCE

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. EXPLAIN THE FUNDAMENTAL PRINCIPLES OF QUALITY ASSURANCE

PERFORMANCE CRITERIA

- (a) The explanation of quality assurance principles used in a well managed company is clear and accurate.
- (b) The influence of quality assurance on the Total Quality Management culture is explained correctly in terms of the perception of customers.
- (c) The description of the relationship between standardising the organisation to international standards and company certification is clear and accurate.

RANGE STATEMENT

Quality assurance principles: planning; motivating; organising; communicating; controlling; maintaining.

Standardised procedures: customer requirements; materials; methods; specifications; installation; service; disposal.

Customers: internal; external.

EVIDENCE REQUIREMENTS

Written and/or oral evidence is required that the candidate can explain the principles of quality assurance in a quality managed company covering all performance criteria.

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OUTCOME

2. EXPLAIN THE METHODS OF CONTROLLING THE PURCHASE OF MANUFACTURED PRODUCTS AND SERVICES

PERFORMANCE CRITERIA

- (a) The explanation of the role of quality assurance in purchasing goods or services is clear and comprehensive.
- (b) The identification of the methods for control of purchased goods is clear.
- (c) The methods adopted for the control of purchased goods are relevant for the organisation.

RANGE STATEMENT

Control of purchased goods: vendor rating; vendor surveillance; quarantining.

Process capability: specification tolerance; materials; machinery; methods and skills.

EVIDENCE REQUIREMENTS

Written and/or oral evidence is required that the candidate can explain the methods of controlling the purchase of manufactured products and services covering all performance criteria.

OUTCOME

3. EXPLAIN THE METHODS OF IDENTIFYING AND RECORDING MANUFACTURED PRODUCTS AND SERVICES

PERFORMANCE CRITERIA

- (a) The requirement for identification and recording of a product or service is explained correctly.
- (b) The need for preservation of product quality is explained correctly.

RANGE STATEMENT

Identification: order number; date and batch codes; lot traceability; product recall.

Product preservation: protective packaging; storage and handling.

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EVIDENCE REQUIREMENTS

Written and/or oral evidence is required that the candidate can explain the methods of identifying and recording of manufactured products and services covering all performance criteria.

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 Scottish Qualifications Authority (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.

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.

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SUPPORT NOTES

Unit title: FUNDAMENTALS OF QUALITY ASSURANCE

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.

PURPOSE: This unit can be taken as a free standing single-credit unit and can be used as part of the SQA Advanced programme. It is included in the frameworks of the SQA Advanced Certificate and SQA Advanced Diploma in Quality and the SQA Advanced Diploma in Engineering. Further information can be obtained from SQA.

On completion of this unit you will be able to explain the principles of quality assurance, the methods of controlling the purchase of manufactured products and services and identifying and recording manufactured products and services.

CONTENT/CONTEXT: Candidates should have access to current standards and specifications. These standards should be current revisions being updated as required.

The word “product” should be interpreted in the broadest possible sense, in terms of a physical product or a product with associated services or services only.

In general the teaching should be supported with current literature from quality organisations, eg DTI or others, and supported with videos from current examples of quality assurance issues.

APPROACHES TO GENERATING EVIDENCE: Corresponding to outcomes:

Outcome 1

Candidates should be given examples of how the principles of quality assurance are applied in a well-managed company. The TQM culture should be considered in relation to the customer’s perception of satisfaction and the use of standardised and documented systems to achieve this and the need to satisfy the requirements of ISO 9000; customers and the goals of the organisation should also be considered.

Outcome 2

Candidates should be given examples of the methods of controlling purchased goods and services, and the methods of determining and applying process capability. Assessment of suppliers, vendor rating, external audits, certificates of conformity, test inspections and capability to produce.

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Outcome 3

Candidates should be given examples of the methods of identifying and recording products and services, and how the quality of products can be preserved.

Traceability records, certificates, authorised signatures, test records, laboratory analysis, specification, batch and user identification.

ASSESSMENT PROCEDURES

Candidates could be assessed on:

- i. a scenario which closely relates to the type of work that they are involved in whilst addressing the issues of the requirements of ISO 9000
- ii. a case study which related to an area of work in which they are interested whilst addressing the issues of the requirements of ISO 9000
- iii. an appropriate method which complies with the SQA's Guide to Assessment

A series of restricted response questions based upon the performance criteria and the range statement should lead the candidate through the assessment with every response of an acceptable standard for a "Fundamental - level unit".

EXEMPLAR/ASSESSMENT SCENARIO

Introduction

All the assessments for this unit are based upon the scenario of the company outlined below. Consequently all the answers that you give should address the application of the theories learned to situations which are likely to prevail in the organisation. It may be possible to research the practicality of your proposed answers by relating them to similar situations in your own place of work.

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Organisational Background

The organisation upon which the questions are based is a major company in the manufacturing and support sector of project engineering. The type of work undertaken varies from maintenance, refurbishment, production of replacement components and remanufacture of equipment, which has been in service to new standards.

Much of the work undertaken by the company is at the customer's premises and involves dismantling, removal from site, refurbishment and return to the customer for reinstallation and re-commissioning.

There is a workforce of multi-skilled engineers and technicians who are capable of operating the wide range of machinery, testing and measurement equipment in their modern workshops. Where it is not possible to carry out work to the standard required by the customer or specialist equipment is necessary to complete tasks, subcontracting to approved companies is undertaken.

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The client base is predominantly in the petrochemical, product manufacturing, and offshore oil production installations.

This results in a need for the company to address many standards for their diverse customer base and in order to ensure that their quality system is properly controlled are in the process of becoming ISO 9002 approved.

PROGRESSION: This unit is one of two fundamental units and is included in both the engineering framework and the quality framework.

REFERENCES

1. Guide to unit writing, SQA, 1993 (Code: A018).
2. Guide to assessment, SQA, 1993 (Code: B005).
3. Guide to certification, SQA, 1996 (Code: F025).
4. Notes for unit writers, SQA, 1995 (Code: A041).

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

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