



Higher National Unit specification

General information

Unit title: Architectural Professional Practice: Design Management (SCQF level 7)

Unit code: F39F 34

Superclass: TD

Publication date: August 2008

Source: Scottish Qualifications Authority

Version: 02 (July 2016)

Unit purpose

This Unit is designed to develop learners' knowledge of the contribution made by the architectural technician or technologist in the professional practice procedures of architectural design management. It will enable learners to understand the principal design, management, administrative and technical contribution made by the architectural technician or technologist in the resolution of a building project.

Outcomes

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

- 1 Explain the architectural design process.
- 2 Explain the design and technical contribution of the architectural technician or technologist in architectural design management.
- 3 Explain the administrative and management contribution of the architectural technician or technologist in architectural design management.

Credit points and level

1 Higher National Unit credit at SCQF level 7: (8 SCQF credit points at SCQF level 7)

Higher National Unit specification: General information (cont)

Unit title: Architectural Professional Practice: Design Management (SCQF level 7)

Recommended entry to the Unit

No prior knowledge or skills are required for this Unit, with access at the discretion of the delivering centre. However, it would be advantageous for learners to have a basic understanding of the architectural design process and/or construction industry. This could be evidenced by the possession of suitable Higher or National Units at SCQF level 6 in related disciplines such as Construction Management, Construction Practice, or equivalent. Alternative prior knowledge or skills might also be evidenced by a collection of suitable NC modules at SCQF level 5 from awards such as NC Construction or NC Foundation in Design.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for 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.

The Assessment Support Pack (ASP) for this Unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

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.

Higher National Unit specification: Statement of standards

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

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

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. Learners 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 the architectural design process.

Knowledge and/or Skills

- ◆ Design Models
- ◆ RIBA Plan of Work
- ◆ Contribution of architectural technician or technologist
- ◆ Contribution of architect
- ◆ Contribution of consultants
- ◆ Project feasibility studies

Outcome 2

Explain the design and technical contribution of the architectural technician or technologist in architectural design management.

Knowledge and/or Skills

- ◆ Survey
- ◆ Design contribution
- ◆ Drawing production
- ◆ Specifications
- ◆ Technical specifications
- ◆ Environmental sustainability
- ◆ Document control
- ◆ Communication structure (client, consultants, contractor, authorities)

Higher National Unit specification: Statement of standards (cont)

Unit title: Architectural Professional Practice: Design Management (SCQF level 7)

Outcome 3

Explain the administrative and management contribution of the architectural technician or technologist in architectural design management.

Knowledge and/or Skills

- ◆ Contract administration
- ◆ Procurement
- ◆ Resource management
- ◆ Team leader
- ◆ Quality control
- ◆ Health and safety
- ◆ Professional standards

Evidence Requirements for this Unit

Outcome 1

Evidence for the Knowledge and/or Skills sections for this Outcome will be provided on a sample basis. In any assessment of this Outcome, an explanation of design models and the contribution of the architectural technician or technologist must always be assessed, plus **one** other Knowledge and Skills element. In order to ensure that learners will not be able to foresee what items they will be assessed on, the sample will be unseen, closed-book and supervised and a different sample of Knowledge and/or Skills items is required on each assessment occasion.

A learner's response can be judged to be satisfactory where the evidence provided is sufficient to meet the requirement for all items, by showing that the learner is able to explain:

- ◆ the role, key responsibilities and limitation of authority of the architectural technician or technologist in the architectural design process.
- ◆ design models used in the architectural design process.

and **one** from:

- ◆ the RIBA Plan of Work in the architectural design process.
- ◆ the role, key responsibilities and limitation of authority of the architect in the architectural design process.
- ◆ the role, key responsibilities and limitation of authority of the consultant in the architectural design process.
- ◆ the main elements of a project feasibility study in the architectural design process.

Higher National Unit specification: Statement of standards (cont)

Unit title: Architectural Professional Practice: Design Management (SCQF level 7)

Outcome 2

Evidence for the Knowledge and/or Skills sections for this Outcome will be provided on a sample basis. In any assessment of this Outcome a minimum of **four out of eight** Knowledge and/or Skills items should be sampled, **three** of which **must be** design contribution, communication control and environmental sustainability. In order to ensure that learners will not be able to foresee what items they will be assessed on the sample will be unseen, closed-book and supervised and a different sample of Knowledge and/or Skills items is required on each assessment occasion.

A learner's response can be judged to be satisfactory where the evidence provided is sufficient to meet the requirement for all items by showing that the learner is able to explain:

- ◆ the role, key responsibilities and limitation of authority of the architectural technician or technologist in architectural design management.
- ◆ the architectural technician or technologist's key responsibilities and activities in document control and communication between three key partners in the architectural design management process.
- ◆ the role, key responsibilities and limitation of authority of the architectural technician or technologist to environmental sustainability in architectural design management.

and **one** from:

- ◆ in relation to three different survey activities, explain the key survey responsibilities of the architectural technician or technologist in architectural design management.
- ◆ the architectural technician or technologist's role, key responsibilities and limitation of authority responsibilities in drawing production in architectural design management.
- ◆ the architectural technician or technologist's role, key responsibilities and limitation of authority in the production and use of technical specifications in architectural design management.

Outcome 3

Evidence for the Knowledge and/or Skills sections for this Outcome will be provided on a sample basis. In any assessment of this Outcome a minimum of **five out of seven** Knowledge and/or Skills items should be sampled, **one** of which **must be** procurement. In order to ensure that learners will not be able to foresee what items they will be assessed on the sample will be unseen, closed-book and supervised and a different sample of Knowledge and/or Skills items is required on each assessment occasion.

A learner's response can be judged to be satisfactory where the evidence provided is sufficient to meet the requirement for all items by showing that the learner is able to explain:

- ◆ the role, key administrative responsibilities and limitation of authority of the architectural technician or technologist in the procurement phase of the architectural design projects.

and **four** from:

Higher National Unit specification: Statement of standards (cont)

Unit title: Architectural Professional Practice: Design Management (SCQF level 7)

- ◆ the role and key contract administration responsibilities of the architectural technician or technologist in architectural design management.
- ◆ the role and key resource management responsibilities of the architectural technician or technologist in architectural design management.
- ◆ the team leader role and key responsibilities of the architectural technician or technologist in architectural design management.
- ◆ the key quality control responsibilities of the architectural technician or technologist in architectural design management.
- ◆ the role and key health and safety responsibilities of the architectural technician or technologist in architectural design management.
- ◆ the importance of maintaining the professional standards of the architectural technician or technologist in architectural design management.



Higher National Unit Support Notes

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

Unit Support Notes are offered as guidance and 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 has been devised to allow learners to develop knowledge, understanding and skills in the following areas: the architectural design process, the various contributions of the architectural technician or technologist in the architectural design processes and the administrative and management contribution of the architectural technician or technologist during the architectural design processes.

It is critical to this Unit that the learner acquires an appreciation of the complexity and variety of the role of the architectural technician/technologist in typical building design projects. It is also important that they perceive the range of authority, responsibilities and limitations of the role, the contribution made by other involved professionals and the systems and methods routinely utilised in the architectural design and construction process which leads to the resolution of a successful project. Learning and achievement may be enhanced by case studies, site visits, lectures by visiting professionals and involvement with established practice. The learners' willingness to extend their own learning by reference to established texts, manuals and other technical resources such as publications produced by associated institutions such as CIAT, RIBA, CIOB, RICS, etc. would further enhance the learners' appreciation of the design process through to the resolution of the building project. Learners are strongly advised to apply for student membership to these institutions.

The Unit is designed to progress learner's skills and knowledge to the level of competence required of staff employed at technician level in architectural technology.

In designing this Unit, a range of possible learning topics that could be covered by lecturers has been suggested. A list of suggested learning topics for each Outcome is given below.

Higher National Unit Support Notes (cont)

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

Outcome 1

Explain the architectural design process.

In this Outcome the learner is introduced to the architectural design process, and the variety of systems applied in the resolution of a building project. The purpose of such systems is to provide structure and clarity for design procedures, based on established and routine industrial practice.

Topics covered, determining the responses required, should include the following:

- ◆ Design Models:
 - Generic
 - Architecturally detailed
 - RIBA focused
 - Traditional
 - Design and build
 - Construction management
- ◆ RIBA Plan of Work:
 - Stages A — M inclusive
 - Associated tasks and activities
 - Involvement of Architectural Technician/Technologist
 - Involvement of third parties
- ◆ Contribution of Architectural Technician/Technologist:
 - Overview
- ◆ Contribution of Architect:
 - Lead role
 - Principal duties
- ◆ Contribution of Consultants:
 - Quantity Surveyor
 - Planning Supervisor
 - Specialist Consultant (Structural, Building Services, Project Manager, Contractor, Supplier)
- ◆ Project feasibility studies:
 - Investigation
 - Brief analysis
 - Outline proposals

Higher National Unit Support Notes (cont)

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

Outcome 2

Explain the design and technical contribution of the architectural technician or technologist in architectural design management.

In this Outcome the learner is introduced to the specific design and technical contribution of the architectural technician or technologist and the variety of roles, responsibilities and duties involved in the resolution of a building project.

- ◆ Survey:
 - Site survey
 - Building investigation
 - Feasibility studies

- ◆ Design Contribution:
 - Client meetings
 - Outline design
 - Detailed design

- ◆ Drawing Production:
 - Outline proposals
 - Detailed design
 - Construction details
 - Service details
 - Approval drawings
 - Pictorial/Presentation drawings/Models
 - Associated production data

- ◆ Specifications:
 - From drawings and schedules
 - Client requirements
 - Building technologies
 - Building materials
 - Construction information

- ◆ Technical Specifications:
 - Regulatory compliance:
 - Planning and building approval
 - Material technology
 - Performance Criteria:
 - Production information

Higher National Unit Support Notes (cont)

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

- ◆ Environmental — Sustainability:
 - Whole life strategy
 - Inception to disposal
 - Energy efficiency
 - Costs in use
 - Whole life specifications
 - Products
 - Technologies
 - Systems and services

- ◆ Document Control:
 - Digital management of resources
 - Drawing management
 - Tender management
 - Architects instructions
 - Variations

- ◆ Liaison:
 - Office practice
 - File controls
 - Internal liaison
 - External liaison

- ◆ Communication structure (client, consultants, contractor, authorities). The liaison and control responsibilities of the architectural technician or technologist.
 - Project organisation

Outcome 3

Explain the administrative and management contribution of the architectural technician or technologist in architectural design management.

In this Outcome the learner is introduced to the specific administrative and management contribution of the Architectural technician or technologist and the variety of roles, responsibilities and duties involved in the management of a building to the resolution of the building project.

- ◆ Contract Administration:
 - Engagement and appointment
 - Services and fees
 - JCT contracts
 - Certification

- ◆ Procurement:
 - Traditional
 - Design and build
 - Construction management
 - Project management role

Higher National Unit Support Notes (cont)

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

- ◆ Resource Management:
 - Time, quality and cost
 - Physical resources
 - Products, material, men

- ◆ Team Leader:
 - Architectural Technologist as Lead Consultant

- ◆ Quality Control:
 - Management
 - Site procedures (inspection)

- ◆ Health and Safety:
 - Issues in the design process
 - Issues in the construction process

- ◆ Professional Standards:
 - Institutional recognition
 - Minimum standards
 - Professional conduct
 - CPD

Guidance on approaches to delivery of this Unit

The Unit is at SCQF level 7 and is a mandatory Unit within the HNC and HND Computer Aided Architectural Design and Technology awards. However, this does not preclude the use of the Unit in other awards where award designers feel this to be appropriate. Throughout the Unit emphasis will be placed on the individual role, responsibilities and contribution of the architectural technician/technologist.

Guidance on approaches to assessment of this Unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

An integrated assessment approach for all Outcomes is recommended. This could consist of a closed-book examination, conducted under controlled, supervised conditions. Such an examination could contain a combination of short answer, restricted and extended response questions and an assessment time of no more than 3 hours should be sufficient for the learner to generate all evidence.

Higher National Unit Support Notes (cont)

Unit title: Architectural Professional Practice: Design Management
(SCQF level 7)

Much of the evidence is assessed on a sample basis. Where sampling is used, on each sampling occasion, the type of evidence required should be the same irrespective of the Knowledge and/or Skills element selected.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

Although no automatic certification of Core Skills, or Core Skills components exist within this Unit, opportunities to develop the Core Skills of *Communication* at SCQF level 6 exist as learners are working in a context which requires them to analyse, produce and present information and materials to standards acceptable in industry. The learners are encouraged to express essential ideas and information accurately and coherently and to develop study skills to enable them to communicate ideas and solutions appropriate to the assessment instruments used. Oral or Written Communication may be developed dependant upon the learner's choice of evidence submission.

History of changes to Unit

Version	Description of change	Date
02	No change to context. Some minor changes to correct errors/typos and transferred to the current template.	06/07/16

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General information for learners

Unit title: Architectural Professional Practice: Design Management (SCQF level 7)

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

This Unit will provide you with the knowledge and understanding of the architectural profession, the architectural design process and the specific contribution of the architectural technician or technologist throughout the architectural design process to the resolution of the building design project.

You will gain knowledge about the variety of design models used in the realisation of a building design project, including formal systems such as the RIBA Plan of Work, methods which provide guidance through the complexities of typical projects and what the technician or technologist's contribution within these processes are.

On completion of this Unit you will have developed knowledge and understanding relevant to the architectural design process, the various contributions of the architectural technician or technologist in architectural design processes and the administrative and management contribution of the architectural technician or technologist to architectural design processes.

Assessment for this Unit is by means of sampling. All assessments will be unseen, closed-book and supervised.

As you are working to a remit which involves extensive communication activities, developing a variety of study skills, and developing underpinning knowledge in areas directly related to clear and effective communication in industrial practice, opportunities exist within the Unit for you to further develop your Core Skill of *Communication* to SCQF level 6.