

National Unit Specification: General Information

UNIT Construction Industry Studies (Intermediate 2)

NUMBER D916 11

COURSE

SUMMARY

This unit is suitable for candidates who have no prior knowledge of the construction industry. The unit is intended to introduce candidates to the nature, organisation and operation of the British construction industry.

On completion of the unit, candidates should be able to describe the structure and organisation of the industry, the nature of the work undertaken by the various sectors within it and the roles and responsibilities of the different members of design and construction teams. They will have a sound knowledge of the contribution of the industry to society and to the national economy. They will also be able to describe construction activities on a particular site and report on a site visit.

The unit will stimulate an interest in the construction industry and will provide the basis for further studies in specialist areas of construction activity.

OUTCOMES

- 1 Describe the different sectors of the construction industry and explain the contribution of the industry to society and to the national economy.
- 2 Identify the principal bodies and organisations which make up the construction industry and explain their functions.
- 3 Identify the various members of design and construction teams and explain their roles and responsibilities.
- 4 Prepare a report on a visit to a construction site.

Administrative Information

Superclass: TE

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RECOMMENDED ENTRY

Candidates undertaking this unit do not require any prior knowledge of the construction industry.

CREDIT VALUE

0.5 Credits at Intermediate 2.

CORE SKILLS

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

National unit specification: statement of standards

UNIT Construction Industry Studies (Intermediate 2)

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 the Scottish Qualifications Authority.

OUTCOME 1

Describe the different sectors of the construction industry and explain the contribution of the industry to society and to the national economy

Performance Criteria

- a) The sectors within the construction industry and the nature of the work undertaken by each sector are correctly described.
- b) The contribution of the construction industry to society and to the national economy is correctly explained.

Note on range for the outcome

Sectors: building; civil engineering; public; private.

Contribution: employment; achievement of social objectives; tax revenue; management of the natural and built environments.

Evidence Requirements

For this outcome, written and/or oral evidence is required indicating a knowledge of:

- i) the key sectors of the industry mentioned in the note on the range – this could be by the candidate identifying these sectors and providing examples of the work undertaken by each sector;
- ii) the contribution of the industry to society and the economy – this could be by the candidate explaining an important contribution, in each of the categories of the note on the range.

Precise statistics on the contribution of the construction industry are not required in the candidate's answers but the answers should provide evidence that the range of significant contributions is understood.

Assessment should be 'closed book'.

National unit specification: statement of standards (cont)

UNIT Construction Industry Studies (Intermediate 2)

OUTCOME 2

Identify the principal bodies and organisations which make up the construction industry and explain their functions.

Performance Criteria

- a) Principal bodies and organisations of the industry are correctly identified.
- b) The roles of the bodies and organisations are accurately explained.
- c) Principal craft occupational areas of construction activity are correctly identified.

Note on the range for the outcome

The range statement for this outcome is fully expressed within the performance criteria.

Evidence Requirements

For this outcome, written and/or oral evidence is required to show that the candidate has a knowledge of the key bodies in five categories of professional bodies and organisation - this could be by the candidate identifying one key body in each category and explaining the role of the body.

All categories listed in the Guidance on Content and Context for this unit should be covered.

Evidence is also required that the candidate knows the occupational areas within the industry. At least six important areas should be identified.

Assessment should be 'closed book'.

OUTCOME 3

Identify the various members of design and construction teams and explain their roles and responsibilities.

Performance Criteria

- a) Typical design and construction teams for a large building project are correctly identified.
- b) The roles and responsibilities of the individual members of the design and construction teams are correctly explained.

Note on range for the outcome

Design team: client; architect; quantity surveyor; estimator; specialist engineers; planner.

Construction team: contractor; sub-contractor; contracts manager; site agent; site engineer; craft operatives.

National unit specification: statement of standards (cont)

UNIT Construction Industry Bodies (Intermediate 2)

Evidence Requirements

For this outcome, written and/or oral evidence is required to show that the candidate has a detailed knowledge of the various personnel contributing to the construction process. Candidates should be required to list, or illustrate diagrammatically, the members of typical design and construction teams for a large project. All categories listed in the guidance on content and context should be covered by the answer. The role and responsibilities of each member should also be explained.

Assessment should be 'closed book'.

OUTCOME 4

Prepare a report on a visit to a construction site.

Performance Criteria

- a) The construction project and activities observed on site are accurately recorded and described.
- b) The relevance of the construction processes observed on site are clearly explained.
- c) The report prepared is well structured and accurate.

Evidence Requirements

For this outcome, written and/or oral evidence is required that a candidate understands the nature of the activities observed on the site of a particular construction project and can describe such activities. A brief, logical report is required, outlining the project and describing the construction processes observed. The construction project may be of any scale.

Assessment should be 'open book'.

National unit specification: support notes

UNIT Construction Industry Studies (Intermediate 2)

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

GUIDANCE ON CONTENT AND CONTEXT

This unit is designed to introduce candidates to the role and operation of the construction industry, to stimulate an interest in the industry and to provide important underpinning knowledge for further studies and employment within the industry.

Corresponding to outcomes 1 to 4:

- 1 This outcome should provide the candidate with a knowledge of the various sectors of the construction industry and the types of work undertaken by each sector. The main sectors covered should be building and civil engineering, with a distinction being made between public and private sector work. Other sectors covered should include housing, industrial, commercial, repair and maintenance and demolition. The classification of construction firms into small, medium and large should be considered. Typical local and national examples of the work within each key sector should be provided for candidate examination.

The contribution of the industry to society and to the national economy should be covered. Although it is not expected that candidates reproduce statistical data, reference to published statistics, such as the DOE 'Housing and Construction Statistics', will ensure that information used is current. The areas covered should include: employment (industry is labour intensive), financial contribution to the national economy through tax revenues, contribution to the balance of trade through international projects, achievement of governmental objectives in providing housing, hospitals, libraries, etc, improvements in the quality of the built environment and protection of the natural environment.

- 2 This outcome should provide the candidate with a detailed knowledge of the structure and operation of the construction industry within the UK. The principal bodies and organisations which make up the industry should be considered under the following headings:
 - a) National Building and Civil Engineering Contractors' Federations.
 - b) Professional bodies such as CIOB, ICE, RIBA, RICS, CIBSE and I.Struct.E.
 - c) Commercial bodies and trade associations such as TRADA and BCA.
 - d) Trade Unions.
 - e) Industry Lead Bodies/National Training Organisations such as CITB and SBATC.

The candidate must demonstrate knowledge of the key bodies in each of the categories above.

National unit specification: support notes (cont)

UNIT Construction Industry Studies (Intermediate 2)

The roles of the foregoing bodies should be considered. The principal craft occupational areas should be covered including bricklaying, carpentry and joinery, painting and decorating, plumbing, plastering, scaffolding, general building and civil engineering operations, plant maintenance and operation, and wood machining. The role of SVQs within the industry should also be considered.

- 3 This outcome should provide the candidate with a knowledge of the composition of design and construction teams for projects of various scales. Typical team structures for both the building and civil engineering sectors should be considered. The role and responsibilities of the following personnel should be covered. Design team: client (private and public), architect, quantity surveyor, estimator, structural engineer, civil engineer, services engineer, planner, landscape designer. Construction team: main contractor, sub-contractor, contracts manager, site agent, craft operatives. The specific responsibilities relating to safety and the environmental impact of construction should be highlighted. The system for control of design and construction should also be covered briefly through reference to the roles of the local authority planning, building control and environmental health personnel, the clerk of works and the health and safety inspector.
- 4 This outcome should enable the candidate to describe a local construction project, to record the activities observed on site and to prepare a brief report. The site should be carefully selected by the tutor, so as to provide the candidate with an understanding of a number of routine site processes or of a recent technological development. A well selected and prepared visit will provide an early stimulus to learning.

GUIDANCE ON TEACHING AND LEARNING APPROACHES

When commencing this unit, many candidates will not have decided which career route, within the construction industry, to pursue. Others may not be convinced that the industry offers a suitable career for them. It is therefore important that the unit is delivered in a way which stimulates early interest in construction and exposes candidates to as many branches of the industry as possible. Carefully selected visits to local construction sites, both small and large, will assist candidates to appreciate the scale and nature of work undertaken by different branches of the industry.

Although the unit does not cover the technology of construction, construction processes should be explained briefly and simply, to enable candidates to make the most of the site visits and to prepare a report on one such visit, as required by outcome 4.

National unit specification: support notes (cont)

UNIT Construction Industry Studies (Intermediate 2)

Written classroom work can be kept to a minimum through use of partly completed worksheets on such topics as the structure of the industry, nature of the work undertaken and the personnel making up design and construction teams. Visiting speakers from construction companies, local authorities and the CITB will be helpful in strengthening candidates' contact with the industry.

Useful construction career videos are available from the CITB and CIOB, which introduce viewers to trade occupations and professional careers. Personal peer group experiences are related in such videos and these can have a motivating effect on candidates.

Delivery of the unit should stress the exciting challenge of construction problems, the innovative nature of many projects and the satisfaction which may be found from working as a member of a construction team. The importance of good communication in any successful project should also be stressed.

GUIDANCE ON APPROACHES TO ASSESSMENT

Examples of suitable Instruments of Assessment are provided below.

Outcome 1

Short questions paper, 'closed book'.

Candidates could be set a short question paper comprising a number of restricted and extended response questions, in which they are required to:

- i) identify and describe the two major sectors of the construction industry which are responsible for the completion of the work, ie building and civil engineering, and provide examples of the work undertaken by each;
- ii) explain what is meant by the terms 'public sector work' and 'private sector work' and provide examples of each type of work;
- iii) explain, under a series of given headings, the contribution of the construction industry to society and to the national economy.

National unit specification: support notes (cont)

UNIT Construction Industry Studies (Intermediate 2)

Outcome 2

Short assignment, 'closed book'.

Candidates could be provided with a worksheet, on which the categories of construction bodies and organisations are listed, and be required to name one major body or organisation in each category. An explanation of the role of each named body or organisation would also be required.

Candidates could also be required to prepare a list of six separate craft areas within the construction industry.

Outcome 3

Short assignment, 'closed book'.

Candidates could be issued with a comprehensive list of personnel employed within the industry and be required to select, from the list, the appropriate members of the design team and the construction team for a large building project. The assignment would also require that the role and responsibilities of each team member be stated.

Outcome 4

Assignment, 'open book'.

Candidates could be required to prepare a record of a visit to a construction site and to prepare a brief report, describing the nature of the project and the construction processes observed. The report should include an explanation of the relevance or importance of the observed processes and it should be well structured and accurate.

SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements* (SQA, 1998).