

SQA Advanced Unit specification

General information for centres

Unit title: Construction Technical Communication Skills

Unit code: HR4X 47

Unit purpose: This Unit is designed to enable candidates to effectively communicate in a construction environment using a variety of media. Graphical, Written and Verbal forms of communication are covered ensuring the candidates ability to identify, communication and record information in the most suitable medium.

On completion of the Unit the candidate should be able to:

- 1 Understand the various purposes, methods of communications and media available.
- 2 Use freehand sketching to communicate and correctly clarify construction technology details.
- 3 Produce written records of construction activities.
- 4 Report on construction site activities.

Credit points and level: 1 SQA Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*).

**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: It would be an advantage for candidates to have a basic knowledge and understanding of basic drawing concepts and some practical knowledge of construction site activity however this is not essential as the Unit covers all the basic principles required.

Core Skills: There are opportunities to develop the Core Skills of Communication and IT, in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

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.

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Assessment: It is possible to assess candidates either on an individual Outcome basis, combinations of Outcomes or by a single holistic assessment event combining all outcomes. A single holistic assessment should last not more than two hours.

Where evidence for Outcomes is assessed on a sample basis, the whole 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 discrete assessment occasion.

An exemplar instrument of assessment and marking guidelines have been produced to provide an example of the type of evidence required to demonstrate achievement of the aims of this Unit and to indicate the national standard of achievement at SCQF level 7.

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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.

Throughout the unit emphasis will be placed where appropriate on the application of Health & Safety and Sustainability. Safe working practises should be looked at in accordance with current safety codes of practise and regulations. Sustainability should include reference to criteria affecting sustainability, impact of not implementing sustainability on the environment and the legislation promoting sustainability.

Outcome 1

Understand the various purposes, methods of communications and media available

Knowledge and/or skills

- ◆ Purpose of communications
- ◆ Communication media

Evidence Requirements

In any assessment of this Outcome **all** knowledge and/or skills items should be included. Candidates must provide a satisfactory response to all items.

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify the purpose and method of a particular communication
- ◆ select the most appropriate medium for a particular communication

Questions used to elicit candidate evidence should be take the form of an appropriate balance of short answer, restricted response and structured questions. Assessments should be conducted under supervised, controlled conditions.

Assessment guidelines

Evidence for the knowledge and skills in this Outcome could be generated by one supervised open book assessment.

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Outcome 2

Use freehand sketching to communicate and correctly clarify construction technology details

Knowledge and/or skills

- ◆ Freehand sketching
- ◆ Freehand drawing of geometric shapes
- ◆ Sketching in perspective view
- ◆ Use of sections in sketching details
- ◆ Recording measurements on plans, section and elevations

Evidence Requirements

In any assessment of this Outcome **all** knowledge and/or skills items should be included. Candidates must provide a satisfactory response to all items.

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ explain effectively construction details from contract drawings by use of freehand sketches
- ◆ prepare freehand sketches appropriate for use in the survey of a building or other structure
- ◆ enhance the effectiveness of freehand sketches with clear and appropriate annotation

Evidence for the knowledge and/or skills for this outcome will be provided from opportunities offered by site visits and/or case studies. The candidate is required to explain details of connections, building elements, and components from general arrangement drawings supplied.

Assessment guidelines

Evidence for the knowledge and skills in this Outcome should be generated over the teaching period of the Unit and gathered in the form of a portfolio of sketches.

Outcome 3

Produce written records of construction activities

Knowledge and/or skills

- ◆ Paper-based forms of recording written site instructions and activities
- ◆ Non paper-based forms of recording written site instructions and activities

Evidence Requirements

In any assessment of this Outcome **all** knowledge and/or skills items should be included. Candidates must provide a satisfactory response to all items.

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ prepare accurate written site instructions and records of site activities

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Questions used to elicit candidate evidence should be take the form of an appropriate balance of short answer, restricted response and structured questions. Assessments should be conducted under supervised, controlled conditions.

Assessment guidelines

Evidence for the knowledge and skills in this Outcome could be generated by one supervised open book assessment.

Structured tasks, based on a locally available construction site scenario, or given case study, might be used to elicit candidate evidence. For this Outcome, a 60 minute assessment is required.

Outcome 4

Report on construction site activities

Knowledge and/or skills

- ◆ Verbal communication
- ◆ Non-verbal communication

Evidence Requirements

In any assessment of this Outcome **all** knowledge and/or skills items should be included. Candidates must provide a satisfactory response to all items.

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ Satisfactorily communicate in one-to-one and group situations

Evidence for the knowledge and / or skills in this outcome will be generated through participation in at least one simulated formal meeting and one verbal and one non-verbal role-play scenario.

Assessment guidelines

Candidates must participate in structured activities which may be based on a locally available construction site scenario, or a given case study, such as that used in Outcome 3.

The meetings/role-play elements should be either observed by the assessor or be recorded using video recording equipment.

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Administrative Information

Unit code:	HR4X 47
Unit title:	Construction Technical Communication Skills
Superclass category:	TF
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SQA Advanced Unit specification: Support notes

Unit title: Construction Technical Communication Skills

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 40 hours.

Guidance on the content and context for this Unit

This Unit at SCQF level 7 is a mandatory unit within the new SQA Advanced Certificate and SQA Advanced Diploma in Built Environment and Civil Engineering awards.

In designing this Unit the unit writers have identified the range of topics they would expect to be covered by lecturers. The writers have also given recommendations as to how much time should be spent on each outcome. This has been done to help the lecturers decide what depth of treatment should be given to the topics attached to each of the outcomes. While it is not mandatory for a centre to use this list of topics, it is strongly recommended that it does so, to ensure continuity of teaching and learning and because the assessment exemplar pack for this Unit is based on the knowledge and/or skills listed in each of the outcomes.

The list of topics is given below. Lecturers are advised to study this list of topics in conjunction with the assessment exemplar pack so that they can get a clear indication of the standard of achievement expected of candidates in this Unit.

Outcome 1

Communication purpose, method and media (4 hours)

Purpose: Information, News, Understanding, Persuasion, Reassurance, Teaching, Explanation, Transaction etc

Method: Informal, Formal, Direct, Indirect, Legal etc

Medium: Advertisement, Article, Book, Brochure, Catalogue, email, Letter, Manual, Multimedia, Newsletter, Notice Board, Press Release, Proposal, Q&A/FAQ's, Signage, Speech, Task Description, Video, Web Site etc

Outcome 2

Freehand Sketching Skills (16 hours)

Sketching: Importance of pencil grades, notebooks. Use of parallel lines, drawing lines freehand, orthographic projection.

Free drawing of geometric shapes: Solids, boxing in, exploded views, alternative viewpoints.

Sketching in perspective: Vanishing points to boxing in lines, bulky and long components and elements.

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Use of elevations: Situations when convenient, slender components, detailing fixings and finishes.

Sketching plans for surveys: Plans, sections and elevations, conventions for recording measurement, ties and heights, sufficiency of detail.

Outcome 3

Communicating Written Site instructions and activities (10 hours)

Methods of recording written site instructions and activities:

Paper-based: reports, instructions, directions, letters, memorandums, Facsimile.

Non-paper-based: email, text, power point presentations, white board presentations, graphical.

Site Diary entries: Resident Engineer, Site Clerk of Works, Site Manager/Agent

Instructions: Site Directives, Architects Instructions.

Site Records: Requisitions, delivery notes, memorandums, work schedules, day-works, statutory safety pro forma, expenditure, manpower and plant utilisation, materials specifications and data, weather.

Site progress: Planned progress monitoring system, pouring records, tests.

Site Health and Safety: Handbook, accident book, signage.

As fitted drawings: Services pop ups, servicing routing, ducting, access points, changes in dimensions and materials.

Outcome 4

Communicating verbal/non-verbal site activities and instructions (10 hours)

Methods of verbal/non-verbal communication:

Verbal: face-to-face, meetings, telephone, and video conferencing.

Non-verbal: Facial gestures, hand and body movements.

Chairing and Presentation of information in meetings: Clarity in speaking, speaking with written reports, speaking with visual aids (eg Power point), reinforcement using diagrams, using positive body language, tone of voice and speed of delivery, confirmation through feedback from other members regarding understanding and clarity of information given.

Reporting to a variety of clients/workforce: Importance of information, clarity of speech, correct choice of language, body language and facial expression, tone of voice and speed of delivery, positive feedback of understanding.

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Guidance on the delivery and assessment of this Unit

This Unit is designed to provide candidates with ‘soft’ underpinning skills required by competent technical practitioners who often combine with other disciplines in a project environment. It is suggested that the unit should be studied early in the first year of the programmes. Local site construction activities or local case studies are particularly important in raising awareness of the importance of technical communications within the diverse construction industry. In addition, role-play; oral presentations, and group work encourage discussions and present opportunities to generate appropriate evidence to contribute to the assessment of Core Skills units.

Where available, evidence from the workplace can also be incorporated to enhance the learning outcomes, provided that this evidence is appropriate and authenticated as the student’s own work.

The volume of evidence required for each assessment should take into account the overall number of assessments being contemplated within this Unit and the design of the overall teaching programme.

Although assessments must be focused on the individual achievement of each student, group work and role-play activities may contribute to the assessment. Integrative assignments and project work will help to link this Unit with other related units.

Opportunities for developing Core Skills

The following grid provides a general guide to opportunities for the development of Core Skills in this Unit. Opportunities for the development of Core Skills at the output level are more fully identified in the Core Skills Signposting Guide.

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Core Skill	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
1 Communication					
Reading	3	3	3	3	
Writing	3	3	3	3	
Oral				3	
2 Numeracy					
Using Number					
Using Graphical Information					
3 IT					
Using Information Technology				3	
4 Problem Solving					
Critical Thinking					
Planning and Organising					
Reviewing and Evaluating					
5 Working with Others					

Open learning

This Unit could be delivered by distance learning, which may incorporate some degree of on-line support. However, with regard to assessment, planning would be required by the centre concerned to ensure the sufficiency and authenticity of candidate evidence. Arrangements would be required to be put in place to ensure that assessments were conducted under controlled supervised conditions.

For information on normal open learning arrangements, please refer to the SQA guide *Assessment and Quality of Open and Distance Learning (SQA 2000)*.

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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General information for candidates

Unit title: Construction Technical Communication Skills

This Unit has been designed to introduce you to technical construction communication methods and skills. On completion of this Unit you should be able to:

- 1 Understand the various purposes, methods of communications and media available.
- 2 Use freehand sketching to communicate and correctly clarify construction technology details.
- 3 Produce written records of construction activities.
- 4 Report on construction site activities.

Evidence that you can satisfy the knowledge and skill elements of this Unit will be obtained by written assessment, the assembly of a portfolio of explanatory sketches and the participation in oral presentation of data, in a simulated meeting and conversational role-play element.