



Higher National Unit specification

General information for centres

Unit title: Carpentry and Joinery: Specialist Doors

Unit code: F8P9 34

Unit purpose: This Unit is designed to enable a candidate to develop their knowledge, understanding and skills of the construction methods and installations of specialist doors. The Unit will allow candidates to learn the technical requirements and practical skills required to set out, manufacture and install shaped headed doors using best current practice and economy of materials. The candidate also will develop their knowledge and understanding of the purpose and use of door schedules and specifications.

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

- 1 Demonstrate knowledge and understanding of the construction and installation of specialist doors.
- 2 Use door specifications and schedules.
- 3 Produce scale drawings of doors and door frames.
- 4 Set out and manufacture a segmental headed door and frame.

Credit points and level: 1 HN 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 Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the centre. It would be beneficial if candidates have successfully completed the Professional Development Award (PDA) in Carpentry and Joinery at SCQF level 6 (G9AR 46) or have the equivalent level of industrial experience and prior learning.

Core Skills: There are opportunities to develop the Core Skills of *Problem Solving* and *Communication* at SCQF level 5 and *Information and Communications Technology* and *Numeracy* at SCQF level 4 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. This Unit was developed as part of the Professional Development Award in Carpentry and Joinery at SCQF level 7 and is aimed at candidates following a career in Carpentry and Joinery and receiving complementary industrial training.

General information for centres (cont)

Assessment: This Unit is assessed on the candidate's knowledge and actual performance of specialist door design and manufacture. The Unit will be achieved when the candidate presents sufficient evidence of the Knowledge and/or Skills and Evidence Requirements as specified for each of the Outcomes.

The assessment instrument used should follow the assessment guidelines specified for each of the Outcomes. Centres may use the instruments of assessment which they consider to be most appropriate but are advised to use the Carpentry and Joinery Training and Assessment Programme (TAP) SCQF level 7 which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP 7.

Outcome 1 will be assessed using an assignment to select appropriate doors for **five** given situations. The questions must include at least one external, one internal and a fire door, the distinctive method of construction, jointing methods, appropriate timber and ironmongery used must be suitable and explained, and supplemented by sketches, for each given situation.

Outcome 2 should be assessed using an assignment to extract information for four doors from a given door schedule and drawing and write a detailed requisition form for the same doors and door frames. Candidates should prepare a cutting list and calculate the cost of timber required for two types of doors and door frames. Cost of timber should be sourced by student using builders' merchants' catalogues and/or online websites.

Outcome 3 should be assessed using an assignment which will include scale drawings of four geometrical shaped headed doors and frames, scale drawings of three jointing details for geometrical shaped headed doors to include traditional and modern methods and pictorial drawings of glazed apertures at intersection of astragals and cross sections through fire doors.

In Outcome 4 the candidate will provide sufficient practical performance evidence through observation necessary to set out a rod and manufacture a segmental headed door and frame in accordance with the Evidence Requirements. Candidates should be provide with drawings and specifications for the practical task and should be carried out in a suitable workshop environment.

Accurate records should be made of the assessment instruments used showing how evidence is generated for each Outcome and given marking schemes, checklists and recorded candidate feedback. Records of candidates' achievements should be retained. These records must be made available for external verification.

Higher National Unit specification: statement of standards

Unit title: Carpentry and Joinery: Specialist Doors

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Outcome 1

Demonstrate knowledge and understanding of the construction and installation of specialist doors

Knowledge and/or Skills

- ◆ Factors influencing selection of doors
- ◆ Internal doors
- ◆ External doors
- ◆ Door designs
- ◆ Jointing methods
- ◆ Door construction methods
- ◆ Ironmongery
- ◆ Suitable timbers for door construction
- ◆ Fire doors
- ◆ Drawing

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can select an appropriate door for **five** given situations, including at least one external, one internal and a fire door.

For each door they must:

- ◆ accurately draw the jointing and construction methods used
- ◆ select appropriate ironmongery for each situation
- ◆ select appropriate timber for each situation

Evidence must be generated under controlled, supervised, open-book conditions.

Assessment Guidelines

This Outcome should be assessed using an investigative assignment requiring the candidate to select appropriate doors from a lecturer supplied brief for **five** given situations. The brief should also require candidates to investigate and select appropriate ironmongery for each door. The brief must include at least one external, one internal and a fire door.

This Outcome may be partly integrated with Outcome 2 for writing requisition forms and Outcome 3 for jointing drawings.

Higher National Unit specification: statement of standards (cont)

Unit title: Carpentry and Joinery: Specialist Doors

Outcome 2

Use door specifications and schedules

Knowledge and/or Skills

- ◆ Using door schedules
- ◆ Requisition forms
- ◆ Cutting lists
- ◆ Costing and measurement
- ◆ Sources of information
- ◆ Specifications

Evidence Requirements

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

- ◆ extract information for **four** doors from a given door schedule
- ◆ write detailed and accurate requisition forms
- ◆ prepare accurate cutting lists
- ◆ calculate the cost of timber for **two** types of doors and door frames at least one of which should contain curved work

Evidence must be gathered under controlled, supervised, open-book conditions.

Assessment Guidelines

This Outcome should be assessed in two parts:

- 1 Using an assignment to extract information for doors from a given door schedule and drawings. The candidate is required to write a requisition order form; this may either be the doors extracted from the above assignment or alternatively the ironmongery from Outcome 1.
- 2 Candidates should prepare a cutting list and calculate the cost of timber required for two types of doors and door frames, at least one of which should contain curved work. This may be integrated with Outcome 3. Cost of timber should be sourced by student using builders' merchants' catalogues and/or online websites.

Higher National Unit specification: statement of standards (cont)

Unit title: Carpentry and Joinery: Specialist Doors

Outcome 3

Produce scale drawings of doors and door frames

Knowledge and/or Skills

- ◆ Drawings to acceptable industry standards
- ◆ Geometrical shaped heads
- ◆ Construction and jointing methods
- ◆ Economic use of timber
- ◆ Glazed apertures

Evidence Requirements

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

- ◆ produce scale drawing of **four** geometrical shaped headed door and door frames
- ◆ produce detailed scale drawing of **three** jointing methods to shaped heads including traditional and modern methods
- ◆ describe methods of determining shaped heads from timber
- ◆ produce pictorial drawings of glazed apertures at intersection of astragals and through fire doors

Evidence must be gathered under controlled, supervised, open-book conditions.

Assessment Guidelines

This Outcome should be assessed using a graphical assignment:

- ◆ produce scale drawings of geometrical shaped headed doors and frames, this may be used in Outcome 2 costing exercise
- ◆ produce scale drawings of jointing details for geometrical shaped headed doors to include traditional and modern methods, this may be integrated with Outcome 1
- ◆ Produce pictorial drawings of glazed apertures

Higher National Unit specification: statement of standards (cont)

Unit title: Carpentry and Joinery: Specialist Doors

Outcome 4

Set out and manufacture a segmental headed door and frame

Knowledge and/or Skills

- ◆ Planning and setting out
- ◆ Workshop rods
- ◆ Economic use of timber
- ◆ Equipment and tools set up and use
- ◆ Jigs
- ◆ Jointing and assembly methods
- ◆ Hanging of doors in frames
- ◆ Current Health and Safety legislation
- ◆ Sustainability considerations

Evidence Requirements

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

- ◆ produce a full size rod including all components and jointing details
- ◆ manufacture a segmental door with a minimum height of 1,100mm and minimum width of 500mm. the door should have a minimum of five components
- ◆ manufacture a door frame with a laminated head using provided jig to suit door
- ◆ hang the door to the frame using appropriate ironmongery and door stops

Summary of Standards:

Rod	Height	+/- 1mm
	Width	+/- 1mm
	Components positioned	+/- 1mm
Door	Height	+/- 3mm
	Width	+/- 5mm
Door	Components positioned	+/- 3mm
	Square diagonal difference	+/- 3mm
	Wind	+/- 8mm
	Joints	70% no gaps, 30% 1mm max
Frame	Joints	70% no gaps, 30% 1mm max
Door hung to frame	3mm clearance	+/- 1mm
Door stops and ironmongery		fitted to recognised practice
All surfaces		free from marks and suitable to receive paint finish

Higher National Unit specification: statement of standards (cont)

Unit title: Carpentry and Joinery: Specialist Doors

The evidence will be gathered under supervised conditions. An assessor observation checklist should be completed to ensure that the candidate has met the required specification and tolerances and this observation checklist should be retained as evidence.

Assessment Guidelines

The candidate will provide sufficient practical performance evidence necessary to set out and manufacture a segmental headed door and frame in accordance with the Evidence Requirements. Candidates should be provide with drawings and specifications for the practical task and should be carried out in a suitable workshop environment. All working practices must be in accordance with current health and safety regulations.

Administrative Information

Unit code: F8P9 34

Unit title: Carpentry and Joinery: Specialist Doors

Superclass category: TG

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History of changes:

Version	Description of change	Date

Source: SQA

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Higher National Unit specification: support notes

Unit title: Carpentry and Joinery: Specialist Doors

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 has been developed as a mandatory Unit in the Professional Development Award (PDA) in Carpentry and Joinery at SCQF level 7.

This Unit is intended to equip candidates with all necessary underpinning knowledge and skills related to designing, manufacturing, jointing, assembling and installing specialist doors.

Building on existing underpinning knowledge and skills related to doors, it is intended that specialist designs, traditional and modern jointing methods and an extensive range of suitable ironmongery for specialist doors are covered. Tutors may consider covering the following subjects in appropriate depth:

- ◆ design criteria
- ◆ aesthetic v. practical design
- ◆ double sided door
- ◆ double margin doors
- ◆ fire doors
- ◆ shaped headed doors
- ◆ double action
- ◆ adhesives
- ◆ ironmongery
- ◆ use of templates jigs and accessories
- ◆ materials and cutting lists
- ◆ specifications
- ◆ costing methods
- ◆ current legislation

Exemplar drawings and or visual aids could be used to enhance the learning process.

Health and Safety and Sustainability are integral and key to the Construction Industry therefore throughout the Unit emphasis will be placed where appropriate on the application of Health and Safety and Sustainability. Safe working practices should be looked at in accordance with current safety codes of practice and regulations. Sustainability should include reference to criteria affecting sustainability, impact of not implementing sustainability on the environment and the legislation promoting sustainability. Emphasis should be placed on appropriate areas such as waste management and effective sourcing and use of materials.

Where feasible, centres should also incorporate modern methods of construction used in industry. Candidates should be made aware of current industry practice and emerging practice or technology which may become conventional in the future.

Higher National Unit specification: support notes (cont)

Unit title: Carpentry and Joinery: Specialist Doors

Guidance on the delivery and assessment of this Unit

As part of the Professional Development Award (PDA) in Carpentry and Joinery at SCQF level 7, this Unit may be delivered in a sequence suitable to individual candidates and centres. When completing this Unit as part of the PDA it is recommended that, where possible, opportunity is taken to integrate aspects of Constructional Technical Communication Skills (DW4D 34).

This Unit could be delivered through a series of formal lectures, guided student centred activities and practical workshop activities which will involve the candidate carrying out the activities outlined in the Outcomes. Candidates should be encouraged to produce a folio of visual evidence from the internet, textbooks and centre provided notes which illustrate the design, manufacture and installation requirements of specialist doors. The use of videos, visual aids drawings and manufacturers catalogues would assist in the understanding of underpinning knowledge required.

Outcome 1

Working individually and occasionally in pairs candidates will generate information for their portfolio related to the knowledge and Evidence Requirements. Assessments evidence should be conducted under open-book conditions.

Outcome 2

Delivered through guided lecturer instruction, candidates will, from a provided project brief:

- ◆ Extract information from door schedules and write detailed and accurate requisition forms.
- ◆ Prepare accurate cutting lists, source prices of materials and accurately cost doors.

Assessments should be conducted under open-book conditions.

Outcome 3

Candidates will through guided lecturer instruction produce the required scale drawings of jointing methods used in curved work and methods of obtaining geometrical shaped headed doors. Assessments should be conducted under open-book conditions.

Outcome 4

Candidates will work individually, to generate practical evidence in the manufacture of a segmental headed door and frame complemented by the lecturer's guidance and instruction in the production of jigs, templates, and safety procedures. A project brief, outlining the work to be undertaken for each Outcome, could be used to cover the Performance Criteria.

If feasible, site visits or information about modern and potential future methods of construction would be beneficial. This approach could be used to enhance the candidate's experience and understanding of how their skills and knowledge might be applied in real industry situations.

Centres may use the instruments of assessment which they consider to be the most appropriate but are advised to use the Carpentry and Joinery Training and Assessment (TAP) at SCQF level 7 which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP (level 7).

Higher National Unit specification: support notes (cont)

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Opportunities for developing Core Skills

There are opportunities to develop the Core Skill of *Problem Solving* at SCQF level 5. Candidates will need to take account of a range of factors in order to work efficiently and safely, such as the choice of tools, appropriate materials, safety issues, safety equipment and sustainability. Individual discussions with assessors and the use of role play will enhance the evaluation of efficient working practices.

There are opportunities to develop the Core Skill of *Communication* at SCQF level 5 throughout this Unit by the candidates selecting and describing specialist doors and their construction. Candidates will interpret specifications, workshop drawings and the workshop rod, effectively communicating component sizes and joint details required for product manufacture. As candidates complete practical tasks, they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

There are opportunities to develop the Core Skill of *Information and Communication Technology* at SCQF level 4 in Outcome 1 and 2 where the candidates will be encouraged to access information through internet research. They could also be encouraged to word process and generate information for their portfolio related to the knowledge and Evidence Requirements.

There are opportunities to develop the Core Skill of *Numeracy* at SCQF level 4 through the interpretation of information from 3 dimensional working drawings and the practical use of calculation and measuring scales.

Open learning

Although this Unit could be delivered in part by distance learning, it would require considerable planning by the centre to ensure the sufficiency and authenticity of candidate evidence. Arrangements would have to be made to ensure that:

- ◆ candidates have access to a suitable workshop with suitable equipment and tools
- ◆ health and safety considerations are fully taken into account
- ◆ the practical activities are supervised by a responsible person and clearly recorded (using an assessment checklist for the assessor)
- ◆ the assessor is, at some point, able to question the candidate on that performance
- ◆ assessment is carried out under the stated conditions

For information on open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (www.sqa.org.uk)

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website

www.sqa.org.uk/assessmentarrangements

General information for candidates

Unit title: Carpentry and Joinery: Specialist Doors

This Unit has been designed to further your career in the construction industry by developing your competence and improving your knowledge of specialist doors design, manufacture and installation. It has been written as part of the Professional Development Award (PDA) in Carpentry and Joinery at SCQF level 7, and is for experienced crafts persons working in the construction industry as carpenters and joiners.

The Unit will help develop your underpinning knowledge and skills related to specialist doors and on successful completion of this Unit you will be able to:

- ◆ demonstrate knowledge and understanding of the construction and installation of specialist doors
- ◆ use door specifications and schedules
- ◆ produce scale drawings of doors and door frames
- ◆ set out and manufacture a segmental headed door and frame

You will be assessed on:

- ◆ your knowledge of, designs, jointing, and installation of geometrical shaped headed and specialist doors
- ◆ your knowledge and ability to extract specifications from a project brief and door schedule
- ◆ your ability to accurately, and within recognised tolerance, produce scale drawings of doors and door frames
- ◆ setting out and manufacturing a segmental headed door and you will be observed to see how well you meet the set manufacturing tolerances

There are opportunities to develop the Core Skills of *Problem Solving* and *Communication* at SCQF level 5 and *Information and Communications Technology* and *Numeracy* at SCQF level 4 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

If you successfully complete this Unit and the full PDA at SCQF level 7, you will not only have advanced your craft skills, but will also automatically receive some credit for your achievement if you progress on to the HNC Construction.