



National Unit specification

General information

Unit title: Manufacture Joinery Components (SCQF level 5)

Unit code: F1KX 11

Superclass: TG

Publication date: April 2016

Source: Scottish Qualifications Authority

Version: 02

Unit purpose

This Unit is suitable for learners who have little or no experience of craft practices in carpentry and joinery. The Unit require the learner to produce a workshop rod for and compile a cutting list for a panel door and frame. The work throughout will be based on recognised craft practices including working in an organised and safe manner. Learners who achieve this Unit should feel confident in progressing to other Units demanding higher level skills in this area when the range and level of work will be wider.

Outcomes

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

- 1 Produce in a workshop rod for a panel door and frame.
- 2 Compile a cutting list.
- 3 Manufacture a panel door and frame.

Credit points and level

1 National Unit credit at SCQF level 5: (6 SCQF credit points at SCQF level 5)

Recommended entry to the Unit

Whilst entry is at the discretion of the centre, it would be beneficial for the learner to have attained the following of equivalent:

- ◆ an aptitude for craft skills
- ◆ some prior practical experience (eg Skills for Work Construction Crafts)
- ◆ Develop Bench Joinery Skills (Intermediate 2)

National Unit specification: General information (cont)

Unit title: Manufacture Joinery Components (SCQF level 5)

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.

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.

National Unit specification: Statement of standards

Unit title: Manufacture Joinery Components (SCQF level 5)

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.

Outcome 1

Produce a workshop rod for a panel door and frame.

Performance Criteria

- (a) Produce a workshop rod in accordance with given specifications.
- (b) Identify all components on the workshop rod.
- (c) Detail all section sizes in accordance with given specification.
- (d) Detail the position and proportions of all joints in accordance with given specification.

Outcome 2

Compile a cutting list.

Performance Criteria

- (a) List all components.
- (b) Insert the lengths of components with allowance for waste.
- (c) Insert sawn and finished sizes for all components.

Outcome 3

Manufacture a panel door and frame.

Performance Criteria

- (a) Mark face and edge on all components in accordance with recognised practice.
- (b) Manufacture the door in accordance with given specification
- (c) Manufacture the door frame in accordance with given specification.
- (d) Label the door frame and the door clearly.

National Unit specification: Statement of standards (cont)

Unit title: Manufacture Joinery Components (SCQF level 5)

Evidence Requirements for this Unit

Learners must adhere to relevant Health and Safety regulations and legislation relating both to working practices within the construction environment, as well as those specific to any practical task they are requested to carry out (such as emphasising the importance of selecting and using the correct PPE at all times).

Evidence is required to demonstrate that learners have achieved all Outcomes and Performance Criteria.

Written and/or oral evidence is required which demonstrates that the learner has achieved Outcomes 1 and 2 to the standards specified in the Outcome and Performance Criteria. The evidence for this Outcome should be obtained through the production of a workshop rod and a cutting list.

Evidence of actual performance is needed to show the learner can:

- ◆ produce a workshop rod for a panel door and frame and clearly identify components, sizes, joint positions and proportions
- ◆ compile a cutting list for a panel door and frame
- ◆ complete task to the tolerances below.

Outcome 1

Rod drawn in pencil and labelled clearly	
Height and width drawn to size	within 2 mm
Section sizes drawn to size	within 2 mm
Position and proportions of all joints	within 2 mm

Performance evidence supplemented with an assessor observation checklist/record should be used to show that the learner has achieved Outcome 3 to the standard specified in the Outcomes and Performance Criteria. Each learner will be observed to show that they can achieve the following throughout the delivery of the Unit:

- ◆ manufacture a panel door and frame having minimum door dimensions of 0.500m wide and 1.100m high with a minimum section size of styles 40 mm x 70 mm and 120 mm bottom rail. Tenons will be cut by hand and where appropriate mortices may be cut by using the hollow chisel mortising machine.
- ◆ frame size to suit centre.
- ◆ complete task to the tolerances below.

National Unit specification: Statement of standards (cont)

Unit title: Manufacture Joinery Components (SCQF level 5)

Face and edge marks are marked on all components to recognised practice

Height of door	within 5 mm
Width of door	within 6 mm
Diagonal difference	within 6 mm
Out of wind (diagonal above plane)	within 10 mm
Joints (on surfaces)	within 1 mm
Joints (on edges)	within 2 mm

Inside edges dressed

Faces hand dressed to flush off joints and provide finish for painting

Beads mitred on one side of door

Beads pinned and punched

Door and frame clearly labelled

Inside sizes of frame	within 5 mm of finished door size
-----------------------	-----------------------------------

Housing of frame	within 1 mm
------------------	-------------

Material for Outcome 3 will be dressed red pine or other softwood having similar working characteristics. Joints for the frame will be through housing joints and joints for the door will be through haunched mortice and tenon joints.

Assessment of this Unit should be completed over a period of time and evidence should be gathered at appropriate intervals.



National Unit Support Notes

Unit title: Manufacture Joinery Components (SCQF level 5)

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 developed as an optional Unit in the National Progression Award in Construction and can also be delivered as a freestanding Unit.

This Unit is designed to develop the learner's skills in carpentry and joinery with particular focus on manufacturing components on the bench. The Unit will focus on using a range of tools, materials and workshop equipment to develop the use of workshop rods and cutting lists in the manufacturing process. Underpinning the practical skills is the need to ensure the learner appreciates the reasons for carrying out the tasks in the manner directed and the reasons for using specific tools, materials and equipment.

Outcome 1

This Outcome requires the learner to produce a rod for a panel door and frame from a workshop drawing. The width rod should show the overall width, section sizes, shoulder length and haunch depth. The height rod should show the overall height with mortice and haunch positions with a clearance at the foot of the door.

Outcome 2

This Outcome requires the learner to extract information from the workshop rod and compile a cutting list. The content of the cutting list should include the correct amount of material for the manufacture of the door and frame. Allowance for machining an additional length on components should be observed.

Outcome 3

This Outcome introduces the learner to manufacturing joinery components by using a workshop rod and to the essential requirement of working from face and edge marks. Selecting the most appropriate face and edge of a component for jointing purpose and the use of suitable cramps when pairing components when setting out is a most important process and should be fully understood. The correct positioning and retention of components during tool application should be practiced. The method of assembling framed components to ensure they are square and out of wind will also be included in the process.

National Unit Support Notes (cont)

Unit title: Manufacture Joinery Components (SCQF level 5)

Guidance on approaches to delivery of this Unit

The learner could be guided in the production of workshop rods and cutting lists for a similar type of manufactured product. Visual aids of rods, doors and joints would greatly assist the learner in understanding the manufacturing process. Recognised working practices and design criteria should be fully explained, demonstrated and practiced. Emphasis should be placed on ensuring the hands are kept in a safe position behind the cutting edge of sharp tools and on the need to work accurately and safely. This guidance should be established before the first component is marked out and cut. Formative assessment should inform the learner of his/her progress when emphasis should again be placed in working accurately and safely.

Guidance on approaches to assessment of this Unit

Centres may use the method of assessment which they consider to be most appropriate but are encouraged to use the Training Assessment Programme (TAP) developed centrally by SQA. It is expected that learners will have to demonstrate current knowledge and understanding of safe working practice and risk assessment methods, etc prior to being set the assessment tasks.

Knowledge and Understanding of the processes involved in *Manufacture Joinery Components (SCQF level 5)* should be assessed before any practical assignments are carried out by learners. This will include assessment of a learner's ability to prepare the work area for laying modular pavement.

Practical assignments should be carried out under supervised conditions and recorded in an assessor observation/operational checklist. Assessments should confirm that a learner has the ability to safely lay modular pavement using designated machinery or equipment correctly and safely, whilst adhering to current statutory Health and Safety regulations and legislation.

Adherence to current statutory working regulations and Health and Safety procedures will be observed during the practical exercise carried out by the learner towards all Outcomes.

Detailed assessment material for this Unit will be found in the relevant Training and Assessment Programme (TAP). Centres may use the instruments of assessment which they consider to be most appropriate but are advised to use the TAP which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP and have been prior verified.

National Unit Support Notes (cont)

Unit title: Manufacture Joinery Components (SCQF level 5)

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

The elements of the Core Skill of *Problem Solving*, such as planning and organising and critical thinking will be developed and enhanced as learners undertake this Unit. Learners 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 will enhance the evaluation of efficient working practices.

There are opportunities for learners to develop co-operative working skills, as they are required at all times to comply fully with health and safety requirements, which includes being aware of the safety of others, as well as themselves.

Opportunities also arise for learners to develop the Core Skill of *Information and Communication Technology (ICT)* by researching Health and Safety legislation affecting their area of work.

Numeracy skills will be naturally enhanced through the practical use of interpreting information from specifications, calculation and measuring scales required in the teaching and learning assessments for Outcomes 1 and 3.

Although *Communication* skills are not formally assessed, as learners 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 Written Communication skills to the standard required in the workplace in the teaching and learning assessments for all three Outcomes.

History of changes to Unit

Version	Description of change	Date
02	Clarification of Standards and updated to new Unit Specification Standard.	29/04/16

© Scottish Qualifications Authority 2007, 2016

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this Unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Business Development and Customer Support team, telephone 0303 333 0330.

General information for learners

Unit title: Manufacture Joinery Components (SCQF level 5)

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 is designed to develop your skills in carpentry and joinery with particular focus on manufacturing components on the bench. The Unit will focus on using a range of tools, materials and workshop equipment to develop the use of workshop rods and cutting lists in the manufacturing process.

You will also be provided with the knowledge to allow you to appreciate the reasons for carrying out the practical work in the manner directed and the reasons for using specific tools, materials, components and equipment.

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. Safety working practices will be looked at in accordance with current safety codes of practice and regulations.

There will be a series of training exercises followed by some practical task based assessment and multi choice knowledge assessment. Completion of the Unit will provide you with the basic skills necessary to enable you to progress to more complex aspects of manufacturing components on the bench which in turn will further develop your skills and knowledge.

The elements of the Core Skill of *Problem Solving*, such as Planning and Organising and Critical Thinking will be developed and enhanced as you undertake this Unit. You 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.

There are opportunities to develop co-operative working skills, where you will agree responsibilities and provide support and information to others.

Opportunities also arise to develop the Core Skill of *Information and Communication Technology (ICT)* by researching Health and Safety legislation affecting your area of work.

Numeracy skills will be naturally enhanced through the interpretation of information from 3-dimensional working drawings and the practical use of calculation and measuring scales.

Although *Communication* skills are not formally assessed, you will have the opportunity to develop Written and/or Oral Communication skills.