



National Unit specification: general information

Unit title: Furniture: Machine Woodworking

Unit code: H3MB 11

Superclass: WK

Publication date: April 2013

Source: Scottish Qualifications Authority

Version: 02

Summary

This Unit provides candidates with an introduction to the practices required for the safe set up and use of a specified range of wood working machinery. It will develop the candidate's understanding in the correct selection of tooling, legislation and Personal Protection Equipment (PPE) required to operate machinery safely. This Unit is suitable for school leavers, adults returning to education and full time students wishing to gain employment within the furniture manufacturing industry or timber allied trades.

Outcomes

- 1 Demonstrate knowledge of the parts of a range of woodworking machines.
- 2 Describe the safe working practices of a range of machines.
- 3 Demonstrate the safe working practice of a range of woodworking machines.

Recommended entry

Entry for this is at the discretion of the centre.

Credit points and level

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

**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.*

General information (cont)

Unit title: Furniture: Machine Woodworking

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

Complete Core Skill None

Core Skill component Critical Thinking at SCQF level 4

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

National Unit specification: statement of standards

Unit title: Furniture: Machine Woodworking

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

Demonstrate knowledge of the parts of a range of woodworking machines.

Performance Criteria

- (a) Identify parts of woodworking machines from a specified range.
- (b) List tooling for a range of specified machines.

Outcome 2

Describe the safe working practices of a range of machines.

Performance Criteria

- (a) List appropriate safety devices.
- (b) Identify appropriate PPE
- (c) Complete a risk assessment.

Outcome 3

Demonstrate the safe working practice of a range of woodworking machines.

Performance Criteria

- (a) Correctly adjust and use guards and safety devices.
- (b) Use jigs and holding equipment safely.
- (c) Produce components to a specified dimension.
- (d) Demonstrate the correct use of PPE.

National Unit specification: statement of standards (cont)

Unit title: Furniture: Machine Woodworking

Evidence Requirements for this Unit

Evidence is required to that the candidate has achieved this Unit to the standard specified within all Outcomes and Performance Criteria. All working practices must be in line with current health and safety legislation and regulations.

Written and/or oral evidence is required for Outcome 1 which demonstrates the candidates knowledge of the parts of at least six woodworking machines and the tooling required to machine individual components, including types of saw blade, rip and crosscut, types of cutters for planing machines, drill bits and bandsaw blades. The candidate should be able to identify the parts of machinery, and the tooling required from the machines listed below.

- ◆ Overhand Planer
- ◆ Panel Planer
- ◆ Radial arm Cross cut
- ◆ Dimension or rip saw
- ◆ Pillar drill
- ◆ Band saw

Written and/ or oral evidence is required for Outcome 2 which demonstrates the candidate can describe the safe working practices of the above machinery, this should include safety devises such as machine guards, push sticks, wedge jigs, tapering jigs and false tables. The candidate should also be able to identify the correct PPE required such as safety glasses, hearing protection and dust masks and clothing, a risk assessment should be carried out by the candidate on at least six machines.

Evidence of actual performance is required for Outcome 3 to show that the candidate can set up a range of six woodworking machines to safely to produce components parts accurately to given tolerances adjusting and setting guards and fences correctly, using safety devises such as push sticks, tapering jigs, false tables, clamps, push blocks, and demonstrate the correct selection and the safe use of PPE (personal protection equipment).

- | | |
|------------------------|-------------------|
| ◆ Overhand Planer | tol $\pm 2^\circ$ |
| ◆ Panel Planer | tol ± 1 mm |
| ◆ Radial arm Cross cut | tol ± 1 mm |
| ◆ Dimension or rip saw | tol ± 1 mm |
| ◆ Pillar drill | tol ± 1 mm |
| ◆ Band saw | tol ± 2 mm |

National Unit specification: support notes

Unit title: Furniture: Machine Woodworking

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 within the Furniture National Certificate at SCQF level 5.

The successful completion of this Unit will provide candidates with the required underpinning knowledge of the safe set up and operation of a range of machinery integral to the manufacture of furniture pieces and their components. The candidate will also gain experience of working to given tolerances and dimensions when operating machinery and knowledge of the current safety legislation and regulations relating to woodworking machinery and the personal protection equipment required to complete a risk assessment.

The Unit would be offered to candidates who have a desire to attain employment within the furniture industry. The skills are transferable within different working environments within the timber trades.

The Unit deals with the theory and practice associated with the safe use of the Overhand planer, Surface planer, Radial arm cross Cut, Rip or Dimension saw, Pillar Drill and Bandsaw. It should be delivered as part of a structured program of training. This Unit can also be delivered as a free-standing Unit.

Guidance on learning and teaching approaches for this Unit

The candidate should be introduced to all the relevant machinery parts, tooling and safety devices and legislation through classroom teaching with the use of appropriate presentations, online material, DVDs, VLE, reference books, classroom exercises and group discussions. The operation of each machine should be demonstrated thoroughly. Safe working practices should be observed at all times. The teaching approach should ensure the candidate is gaining the underpinning knowledge and practical experience to complete the Unit.

National Unit specification: support notes(cont)

Unit title: Furniture: Machine Woodworking

Guidance on approaches to assessment for this Unit

Outcome 1

Evidence for this Outcome could be obtained by a short answer question paper under closed-book supervised conditions.

Outcome 2

Evidence for this Outcome could be obtained by a short answer question paper under closed-book supervised conditions for Performance Criteria A and B, Performance Criteria C could be evidenced on a continuous project basis carried out within the machine woodworking area.

Outcome 3

Evidence for this Outcome could be gathered through observation that the candidate has met the given standards during the practical activity, an assessor observation checklist could be used to record this evidence.

Opportunities for the use of 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 e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

Opportunities for developing Core Skills

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

There are opportunities to develop the Core Skill of *Communication* at SCQF level 4 throughout practical tasks, as candidates should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

Outcome 1 provides an opportunity for candidates to develop the Core Skill of *Working with Others* at SCQF level 4 through discussions within group activities.

National Unit specification: support notes (cont)

Unit title: Furniture: Machine Woodworking

There are opportunities to develop the Core Skill of *Problem Solving* at SCQF level 4. Candidates will need to take account of a range of factors in order to work efficiently and safely, such as the choice of tooling, safety issues and safety equipment. Individual discussions with assessors and the use of role play will enhance the evaluation of efficient working practices.

This Unit has the Critical Thinking component of Problem Solving embedded in it. This means that when candidates achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 4.

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

History of changes to Unit

Version	Description of change	Date
02	Core Skills Component Critical Thinking at SCQF level 4 embedded.	22/04/2013

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