



National Unit Specification: general information

UNIT Woodmachining: Toolroom (Circular Saws) (SCQF level 6)

CODE F7GJ 12

SUMMARY

This Unit is suitable for candidates working towards a Modern Apprenticeship in Woodmachining and will develop the candidate's skills in sharpening and setting circular saw blades and fitting, saw blades, guards and ancillary equipment to machinery. This Unit is also designed to enable candidates to develop their knowledge and understanding of the terminology used relating to saw blades, tooth geometry and defects.

OUTCOMES

- 1 Demonstrate knowledge and understanding of circular saw blades.
- 2 Sharpen and set a circular saw blade.
- 3 Fit saw blades, guards and ancillary equipment safely.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates undertaking the Professional Development Award in Woodmachining at SCQF level 6 must meet the requirements of the Modern Apprentices which include being employed in a relevant craft industry. It is recommended that candidates are working towards or have achieved *Woodmachining: Breaking Out Machines (Circular Saws)* at SCQF level 6 before undertaking this Unit.

CREDIT VALUE

1 credit at SCQF level 6 (6 SCQF credit points at SCQF level 6*).

**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.*

Administrative Information

Superclass: TG

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CORE SKILLS

While there is no automatic certification of Core Skills or Core Skill components in this Unit, opportunities for developing aspects of the following Core Skills are highlighted in Support Notes of this Unit:

- ◆ *Information and Communication Technology* at SCQF level 3
- ◆ *Numeracy* at SCQF level 4
- ◆ *Communication* at SCQF level 4

National Unit Specification: statement of standards

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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 and understanding of circular saw blades.

Performance Criteria

- (a) Correctly identify types of saw blade.
- (b) Correctly identify tooth parts using appropriate terminology.
- (c) Correctly specify tooth geometries.
- (d) Correctly identify circular saw blade defects.

OUTCOME 2

Sharpen and set a circular saw blade.

Performance Criteria

- (a) Correctly check the blade for defects.
- (b) Select correct tools and equipment.
- (c) Accurately set the saw teeth.
- (d) Accurately file the saw teeth.
- (e) Comply with current health and safety regulations in all work methods and throughout all practical activities.

OUTCOME 3

Fit saw blades, guards and ancillary equipment safely.

Performance Criteria

- (a) Prepare machine for fitting new blade in accordance with instructions.
- (b) Mount blades correctly.
- (c) Make adjustments to the machine correctly.
- (d) Comply with current health and safety regulations in all work methods and throughout all practical activities

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that the candidates have achieved this Unit to the standard specified within all Outcomes and Performance Criteria. All working practices must be in line with relevant and current Health and Safety legislation and regulations. A risk assessment and method statement must be completed prior to any practical activities taking place.

Written and/or oral evidence is required to show that the candidate has achieved the standards specified in the Performance Criteria in Outcome 1. The candidate must demonstrate knowledge and understanding of technical terminology relating to circular saws, saw tooth geometries, angle of hook, clearance angle, sharpness angle and identifying defects such as cracks. Evidence for this Outcome will be obtained by a series of short answer question papers under closed book supervised conditions.

Performance evidence supplemented by an assessor observation checklist is required for Outcomes 2 and 3 to show the candidate can identify defects in saw blades, set and sharpen the teeth by hand and prepare and adjust machines after fitting **one** rip saw blade and **one** cross cut saw blade. All working practices must be in line with current and relevant health and safety legislation and regulations.

These evidence requirements will be met by the completion of the Training and Assessment Programme (TAP) Woodmachining.

National Unit Specification: support notes

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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 in Woodmachining at SCQF level 6, which is a mandatory component of the Modern Apprenticeship.

The successful completion of this Unit will help provide candidates with the underpinning knowledge and skills relating to the applications for circular saw blades, types of blades and basic filing, setting and maintenance of blades.

This Unit would be offered to candidates from the construction and related industries. The skills are transferable within different working environments but the unit is primarily aimed at candidates whose normal place of work would be a site, workshop, or similar environment.

The Unit deals with maintaining circular saws and the setting up for sawing and is complemented by Units dealing with related work in machine woodworking. It is recommended that candidates are working towards or have completed the Unit Woodmachining: Breaking Out Machines (Sawn) at SCQF level 6 before attempting to sharpen and set a circular saw. It should be delivered as part of a structured programme of training and orientated to the context of the candidate's work and area of responsibility.

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.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

The candidate should be introduced to all relevant machinery components, tooling and ancillary equipment through classroom teaching with the use of visual aids, electronic presentations, DVDs e-learning, reference books, classroom exercises and group discussions. This teaching approach should help ensure the candidate is acquiring the underpinning knowledge required for the Unit.

Outcome 1

The importance of positive hook for rip saw and negative hook with top and face bevels for crosscuts should be emphasised. Classroom scale drawings of tooth geometries may be useful. The candidate should be made aware of defects relating to circular saws and their causes.

National Unit Specification: support notes (cont)

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Outcome 2

No great degree or skill should be expected from candidates at this stage when filing saws, but the tooth geometry should be retained.

Outcome 3

The candidate must show knowledge and understanding of all health and safety requirements relating to the isolation of the machine and the setting of guards when mounting saw blades.

At the time of writing the following safety requirements apply: HSW (Health and Safety at Work etc.) Act; COSHH (Control of Substances Hazardous to Health) Regulations; Abrasive Wheels Regulations; PUWER (Provision and Use of Work Equipment Regulations).

Opportunities should be taken throughout delivery of this Unit to meet the requirements of the generic Units of the Training and Assessment Programme including:

- ◆ Conform to Efficient Working Practices
- ◆ Conform to General Workplace Safety
- ◆ Move and Handle Resources
- ◆ Confirm Work Activities and Resources for the Work
- ◆ Develop and Maintain Good Working Relationships
- ◆ Confirm the Occupational Method of Work

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Opportunities also arise for candidates to develop the Core Skill of *Information and Communication Technology* at SCQF level 3 by the use of a spreadsheet for risk assessment, e-learning and e-assessment.

Numeracy at SCQF level 4 could be developed through the interpretation of information from 3 dimensional saw tooth geometries.

Candidates will have the opportunity to develop *Communication* at SCQF level 4 throughout practical tasks, as they should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

National Unit Specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Section 7 of the Woodmachining Training and Assessment Programme (TAP) provides detailed assessment material for this Unit. It is advised to use the TAP which has been developed centrally by SQA. Any other instrument of assessment used must be comparable to the TAP and have been through prior verification. It is expected that candidates will be given as much practise as possible, prior to being set the assessment tasks.

A suitable method of assessing the candidate's knowledge and understanding of terminology, components, maintenance and repair in relation to circular saws would be through a series of short answer question papers and should be conducted under controlled, supervised conditions.

A series of practical activities will allow evidence to be gathered for Outcomes 2 and 3 through observation that the candidates have met the Performance Criteria. An assessor observation checklist can 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 communications 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)*.

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