



National Unit Specification: general information

UNIT Woodmachining: Carpentry and Joinery Hand Skills
(SCQF level 6)

CODE F7GE 12

SUMMARY

This Unit is suitable for candidates working towards a Modern Apprenticeship in Woodmachining and on completion of this Unit the candidate will be competent in the use of the most common woodworking hand tools used to manufacture small timber components. It is also designed to enable candidates to develop their knowledge and understanding in woodworking terminology, techniques and current safe working practices.

OUTCOMES

- 1 Demonstrate knowledge and understanding of a range of woodworking hand tools.
- 2 Maintain a range of hand tools.
- 3 Perform a range of woodworking skills to given specification.

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 the relevant craft industry.

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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National Unit Specification: general information (cont)

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CORE SKILLS

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

- ◆ *Problem Solving* at SCQF level 4
- ◆ *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 a range of woodworking hand tools.

Performance Criteria

- (a) Correctly identify a range of woodworking hand tools.
- (b) Correctly identify the function of each hand tool.
- (c) Correctly identify adjustable parts associated with setting up various hand tools.
- (d) Correctly identify legislation associated with hand tools and their maintenance.

OUTCOME 2

Maintain a range of hand tools.

Performance Criteria

- (a) Grind hand tools to the prescribed profile and grinding angle.
- (b) Hone hand tools to the prescribed profile and honing angle.
- (c) Comply with current health and safety regulations in all work methods and throughout all practical activities.

OUTCOME 3

Perform a range of woodworking skills to given specification.

Performance Criteria

- (a) Select and set out components and materials for specific activity.
- (b) Correctly select tools appropriate to task.
- (c) Correctly use hand tools to perform woodworking skills.
- (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 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 for Outcome 1 which demonstrates the candidate understands the terminology and can name and describe the function of a range of woodworking hand tools and legislation associated with woodworking hand tools. Evidence for this Outcome will be obtained under closed-book supervised conditions.

Performance evidence supplemented with assessor observation checklist/feedback should be used to show that the candidate has achieved Outcomes 2 and 3. The candidate must be able to show they can grind and hone three forms of plane iron and two forms of wood chisel in a safe manner. Product evidence is required for Outcome 3 by manufacturing four angle joints, two widening joints, one through dovetailed joint and two components.

Candidates work methods and activities must be correct in terms of:

- ◆ sequencing operation
- ◆ minimum wastage
- ◆ use of lubricant
- ◆ satisfying current safety 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 PDA in Woodmachining at SCQF level 6 which is a mandatory component of the Modern Apprenticeship. The content and context of this Unit is aimed at candidates who are pursuing a career in the craft of Woodmachining.

The candidate successfully completing this Unit will develop underpinning knowledge and skills relating to the practical applications of joinery hand tools, the design and use of equipment for specific purposes and manufacturing processes including the correct sequencing of operations, safe working practices and safety legislation.

This Unit would be offered to candidates from the construction and related services. 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 the theory and practice associated with the setting up, servicing and use of woodworking hand tools in joinery work and is complemented by Units dealing with work in Woodmachining. 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. Safety 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

Outcome 1

The candidate should be introduced to all woodworking hand tools in the range. Workshop safety and tool safety can be explained with demonstrations given on the correct methods of using each hand tool. It is important to stress the need for strict adherence to the instructions and safety requirements applicable to each hand tool. Correct terminology should be used throughout.

A typical range of hand tools could be: rule, tape measure; square bevel; marking gauge; mortise gauge; panel saw; tenon saw; hand plane; firmer chisel; bevel edged chisel; ratchet brace and bits; wheel brace and drills; claw hammer; nail punch; screwdriver; sawing board; cramps.

National Unit Specification: support notes (cont)

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Outcome 2

The tutor/trainer should introduce the candidate to the use of a grinding machine by demonstrating safe working practices in grinding a tool and highlighting the need to use coolant to prevent burning. Relevant regulations with particular reference to the content of *The Abrasive Wheels Regulations* should form the basis of group discussion. Honing tools should also be demonstrated with emphasis placed on the reason for using lubricant and the position and method of honing the tool on the oilstone. The tutor/trainer should demonstrate the correct methods to be employed to achieve the Outcome with an emphasis on safe working practices and sequencing of operations.

Outcome 3

The candidate should be presented with workshop drawings to manufacture timber components. The tutor/trainer should demonstrate the correct methods to be employed to achieve the Outcome with an emphasis on safe working practices and sequencing of operations. The candidate should become proficient in the use of woodworking tools and equipment by continuity of their use and from continuous formative assessment by the tutor/trainer. At the appropriate time for summative assessment, the candidate should be provided with appropriate material, a workshop drawing and a specification for each joint or component outlining the demands of the practical exercise and the Performance Criteria.

Dimensions of components could be re-negotiated during formative assessment if the component when assembled would not meet the dimensional tolerance stated in the specification. The new re-negotiated dimension should be at least 20 mm less than the original dimension. It should be noted that the re-negotiated dimension must meet the minimum dimension stated in the specification. To facilitate this re-negotiation process, centres must provide workshop drawings of components having dimensions at least 20 mm bigger than the minimum requirement.

The candidate should be given the opportunity to further develop the skills through classroom teaching with visual aids, electronic presentations, DVDs, e-learning, reference books, classroom exercises and group discussions. The function of each component should be thoroughly demonstrated. Safe working practise methods should be demonstrated and attempted by candidates showing good technique in measuring and marking out of materials, setting and safe operation of machine. This teaching approach should ensure the candidate is acquiring the underpinning knowledge required for the Unit.

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, Approved code of practice (ACOP), Provision and use of work equipment (PUWER).

National Unit Specification: support notes (cont)

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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

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 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 *Numeracy* at SCQF level 4 through the interpretation of information from 3 dimensional 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.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Section 4 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 contained within the TAP.

The candidate's knowledge and understanding of terminology and components in relation to various hand tools will be assessed through a question paper and be conducted under controlled, supervised conditions.

A series of practical activities will allow candidates to produce the required small joints. A suitable task that would allow candidates to demonstrate competence could be hand tool skills involved in the manufacture of a frame ledged and braced door; a framed raised panel or an eight-panel glazed door, small stool or other craft projects. An assessor observation checklist can be used to record this evidence.

National Unit Specification: support notes (cont)

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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)*.

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