

National Unit Specification: general information

UNIT Working with Wood: An Introduction (Intermediate 1)

NUMBER D6DE 10

COURSE

SUMMARY

This unit will be suitable for candidates having limited or no experience of working with woodworking hand tools. The outcomes require the candidate to select, use and sharpen a range of woodworking hand tools commonly associated with the first principles in introductory woodworking. Candidates who achieve this unit should feel confident in progressing to other units in working with wood to further develop their skills.

OUTCOMES

- 1 Select tools for specific operations.
- 2 Perform a series of tool skills.
- 3 Manufacture a product in wood.

RECOMMENDED ENTRY

Candidates enrolling for this unit do not need any prior experience in this area.

CREDIT VALUE

0.5 Credit at Intermediate 1.

CORE SKILLS

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

Administrative Information

Superclass: WK

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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 the Scottish Qualifications Authority.

Note on range for the unit

The range statement for this unit is fully expressed within the performance criteria.

Current health and safety legislation must be complied with throughout.

OUTCOME 1

Select tools for specific operations.

Performance criteria

- a) The selection of hand tools is appropriate for the work.
- b) The care and use of hand tools is in accordance with recognised practice.
- c) The storage of hand tools is in accordance with instructions.
- d) Work methods and activities comply with current health and safety regulations.

Evidence requirements

Please refer to *Evidence requirements for the unit* at the end of the Statement of Standards.

OUTCOME 2

Perform a series of tool skills.

Performance criteria

- a) Honing a plane iron and a chisel is carried out in accordance with recognised practice.
- b) Setting out materials is in accordance with the specification.
- c) Tool skills are performed in accordance with the specification.
- d) Work methods and activities comply with current health and safety regulations.

Evidence requirements

Please refer to *Evidence requirements for the unit* at the end of the Statement of Standards.

National Unit Specification: statement of standards (cont)

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OUTCOME 3

Manufacture a product in wood.

Performance criteria

- a) The product is set out in accordance with recognised practice.
- b) The completed product satisfies its design function.
- c) The completed product is in accordance with the given specification.
- d) Work methods and activities comply with current health and safety regulations.

Evidence requirements

Please refer to *Evidence requirements for the unit* at the end of the Statement of Standards.

EVIDENCE REQUIREMENTS FOR THE UNIT

Outcome 1

Evidence of actual performance is needed to show the candidate can, select, use, care for and store at least, five setting out tools, five cutting tools, three boring and or drilling tools and three driving tools.

Written and or oral evidence, assessed by closed book, is needed to show the candidate can identify at least eight woodworking hand tools and state their function.

Outcome 2

Evidence of actual performance is needed to show the candidate can, position, secure and use an oilstone to hone a plane iron and a chisel, set out materials as instructed and carry out at least fourteen skilled tasks with woodworking hand tools in a safe and organised manner.

Outcome 3

Evidence of actual performance is needed to show the candidate can, from a given workshop drawing and given suitable materials, set out and manufacture a wooden product incorporating at least two forms of jointing the use of adhesive and at least one other method of joint retention. Hand tools must be used throughout and all activities must be carried out in a safe and organised manner.

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 20 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This unit is designed to introduce the candidate to basic skills in woodworking. It is envisaged that many candidates will have little or no previous experience of working with woodworking tools or materials. Whilst it is imperative that all activities are carried out in accordance with current relevant health and safety regulations it is intended that only a basic compliance is summatively assessed.

Corresponding to outcomes 1 to 3:

Outcome 1

This outcome covers the selection, care and use of woodworking hand tools when the candidate is likely to be exposed to the majority or all of the following:

Setting out tools - rule; tape; square; sliding bevel; marking gauge; mortise gauge; compasses; scribes; hard pencil.

Cutting tools - panel saw; tenon saw; dovetail saw; jack plane; smoothing plane; rebate plane; plough plane; router; firmer chisel; bevel edged chisel; mortise chisel.

Boring and drilling tools - ratchet brace; wheel brace; auger bit; countersink bit; twist drills.

Driving tools - claw hammer; pein hammer; mallet; screwdrivers; nail punches.

Outcome 2

This outcome entails setting out material and the subsequent application of tool skills. Emphasis should focus on the importance of working accurately in setting out and thereafter on, proper stance, posture and positioning of hands in order to minimise the risk of accidents. The use of holding devices such as the woodworking bench vice and cramps should be fully utilised. Tool skills are likely to include the majority or all of: measuring; marking; planing; sawing; gauging; rebating; grooving; chamfering; chiselling; boring; drilling; screwing; nailing and honing. These skills may be carried out on two lengths of wood around 300mm long x 50mm x 25mm fixed to each other by one nail and one screw.

This outcome should enable the candidate to, develop practical skills in working with wood and, make a jointed wooden product such as: a box; frame; cassette rack; tool rack or other item of a similar rigour. Joints used are envisaged to be from: through housing; corner housing; shoulder housing; butt; mitre; corner halving; tee halving and be secured by such as: adhesive; dowels; nails; panel pins; woodscrews; corrugated fasteners or gusset plates.

National Unit Specification: support notes (cont)

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GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Emphasis throughout this unit should focus on treating tools with great care and attention whilst working accurately in setting out and during tool applications. The tutor/trainer should fully explain how cutting tools lose their sharpness and therefore their efficiency. Recognised working practices should be fully explained and demonstrated prior to the candidate being exposed to the 'hands on' experience. These recognised working practices should include: setting out with a sharp hard pencil when the use of pens should not be tolerated; marking in components in pairs; use of face and edge marks; material retention during tool application; use of a bench hook; avoiding cutting edges of tools coming into contact with metal such as bench vice; cramps; nails; correct posture including the positioning of feet and hands; maintaining a clean and tidy working space; working in a safe and organised manner. Outcome 1 should be fully integrated with Outcome 2 and or Outcome 3.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Centres may use the Instruments of Assessment which they consider to be the most appropriate. Examples are provided below:

Outcome 1

Practical Exercise

The candidate should be provided with clear instructions to enable tools to be selected and used for specific purposes. During this exercise competence in meeting the performance criteria will be based on care in handling, use and storage of tools and safe working practices.

Completion Questions

The candidate will be presented with a worksheet showing the pictorial representation of ten woodworking hand tools. Competence will be based on the candidate correctly identifying and stating an appropriate function for at least eight handtools.

A checklist will be developed to record the evidence.

Outcome 2

Practical Exercise

The candidate will be presented with the requisite materials, a working drawing showing the position and size of each operation to be carried out and acceptable tolerances. Acceptable tolerances are shown in the specification:

SPECIFICATION

Measures and marks wood	-	to size
Faces and edges wood to square	-	without plane marks
Planes wood	-	to gauge lines
Rebates wood to prescribed dimensions	-	within 2mm
Grooves wood to position and depth	-	within 2mm
Chamfers wood to prescribed size	-	within 2mm
Cross cuts wood	-	within 1mm

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Cross cuts wood to depth	-	within 1mm
Rips wood	-	within 1mm
Bores hole to prescribed position	-	within 1mm
Drills hole to prescribed position	-	within 1mm
Countersinks hole for a countersunk screw	-	below and within 2mm of surface
Removes housings with bevel edged chisel	-	to gauge lines
Cuts stub mortice to lines with mortice chisel	-	within 3mm of depth
Screws timber to timber without burring screwheads	-	securely
Nails timber to timber with lost head nails or oval brads	-	no hammer marks
Punches nails	-	below and within 2mm of surface

Satisfactory performance in this outcome will be based on the candidate meeting the performance criteria including gaining at least fourteen items from the above specification.

A checklist will be developed to record the evidence

Outcome 3

Practical Exercise

The candidate will be presented with the requisite materials, a working drawing showing the project including joint details and acceptable tolerances. Acceptable tolerances are shown in the specification:

SPECIFICATION

Overall height, width and depth of completed product	-	within 5mm
Product square	-	within a diagonal difference of 4mm
Out of wind (diagonal above plane)	-	within 6mm
50% of joints to have no gaps	-	exceeding 1mm
50% of joints to have no gaps	-	exceeding 2mm
All nails punched	-	below and within 2mm of surface
Hammer marks	-	none
Excess adhesive	-	none visible
All components flushed off	-	within 1mm
Plane marks or bruising	-	none

Satisfactory performance in this outcome will be based on the candidate meeting the performance criteria including gaining the first five items and at least any other three items on the above specification.

A checklist will be developed to record the evidence.

National Unit Specification: support notes (cont)

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SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).