

## National Unit Specification: general information

|               |                                                       |
|---------------|-------------------------------------------------------|
| <b>UNIT</b>   | Bench Skills 1 – Wood Flat-Frame Construction (Int 1) |
| <b>NUMBER</b> | D182 10                                               |
| <b>COURSE</b> | Woodworking Skills (Intermediate 1)                   |

### SUMMARY

Applying practical skills and adopting safe working practices in the manufacture of a range of joints and a flat-framed wooden component.

### OUTCOMES

- 1 Use a range of common hand tools.
- 2 Make a range of woodworking joints.
- 3 Manufacture a flat-framed wooden product from a working drawing.

### RECOMMENDED ENTRY

While entry is at the discretion of the centre, the candidates would normally be expected to have had some previous experience in Craft Skills.

### CREDIT VALUE

1 credit at Intermediate 1.

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### Administrative Information

|                          |                                   |
|--------------------------|-----------------------------------|
| <b>Superclass:</b>       | WK                                |
| <b>Publication date:</b> | May 2006                          |
| <b>Source:</b>           | Scottish Qualifications Authority |
| <b>Version:</b>          | 04                                |

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## National Unit Specification: general information (cont)

**UNIT**      Bench Skills 1 – Wood Flat-Frame Construction (Intermediate 1)

### CORE SKILLS

This course gives automatic certification of the following:

**Complete core skills for the unit**

None

**Core skills components for the unit**

Planning and Organising      Acc 3

Additional information about core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

## **National Unit Specification: statement of standards**

### **UNIT        Bench Skills 1 – Wood Flat-Frame Construction (Intermediate 1)**

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.

#### **OUTCOME 1**

Use a range of common hand tools.

##### **Performance criteria**

- (a) Instruction on the care and use of tools is interpreted and implemented correctly.
- (b) Correct terminology is used when referring to common hand tools.
- (c) Tools to be used are checked for satisfactory condition and corrective action is taken when required.

##### **Note on range for the outcome**

Hand tools: rule, try square, marking gauge, chisels, saws and planes.

Corrective action: adjusting a plane, honing a chisel and lubrication.

##### **Evidence requirements**

Performance evidence of the candidate adjusting a plane and honing a chisel.

Performance evidence of the methodology, care and use of tools and work methods being implemented.

Written and/or oral evidence of the terminology related to hand tools and recognised safety procedures.

#### **OUTCOME 2**

Make a range of woodworking joints.

##### **Performance criteria**

- (a) Wood is planed accurately to within specified tolerances.
- (b) Woodworking joints are marked out within specified tolerances.
- (c) Woodworking joints are manufactured to within specified tolerances.

##### **Note on range for the outcome**

Joints: butt, dowel, halving, stub mortise and tenon (no haunch) and bridle joints.

##### **Evidence requirements**

Practical exercise demonstrating planing to a tolerance of  $\pm 2$  mm, marking out of three types of joints to a tolerance of  $\pm 3$  mm, and manufacture of joints to a tolerance of  $\pm 3$  mm.

## **National Unit Specification: statement of standards (cont)**

**UNIT**          Bench Skills 1 – Wood Flat-Frame Construction (Intermediate 1)

### **OUTCOME 3**

Manufacture a flat-framed wooden product from a working drawing.

#### **Performance criteria**

- (a) The material provided is checked against the cutting list and confirmed as correct for quantity and size.
- (b) The product is marked out correctly in accordance with the working drawing.
- (c) The product is manufactured within specified tolerances.
- (d) Work methods and activities are in accordance with recognised procedures and safe working practices.

#### **Evidence requirements**

A completed flat-frame manufactured in accordance with the working drawing, working to tolerances of  $\pm 3$  mm for marking out,  $< 2$  mm for joint gaps. A given cutting list showing check-off marks should also be produced.

Observational evidence of adherence to safe working practices related to the tasks being undertaken.

## National Unit Specification: support notes

### UNIT Bench Skills 1 – Wood Flat-Frame Construction (Intermediate 1)

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

This unit provides candidates with the opportunity to acquire knowledge, understanding and skills in fundamental areas of practical woodworking. Candidates should be encouraged to be responsible, and to start making choices in the use of tools and materials. They should also be expected to learn the importance of safety and conduct themselves in a manner suitable for an industrial area.

#### GUIDANCE ON CONTENT AND CONTEXT FOR THIS UNIT

This unit is practical in nature and requires the candidate to develop skills in:

- reading and interpreting simple workshop drawings
- using basic marking-out tools to mark out simple artefacts/joints
- using a range of woodworking tools to manufacture a flat-frame-type artefact
- adhering to safe working practices at all times

#### GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

##### ***Reading and interpreting simple workshop drawings***

Through a variety of practical work, candidates should learn to interpret workshop drawings. Initially, simple pictorial views should be used. Orthographic drawings should be used as the course/unit proceeds. Reading and interpretation of workshop drawings culminates in the more complex drawing required for the flat-framed artefact to be produced for Outcome 3.

##### ***Using a range of marking-out and woodworking hand tools to manufacture a flat-frame type artefact***

Through a variety of practical work, candidates should use a range of common marking-out and woodworking hand tools. They should acquire knowledge of tool names and their component parts, as well as the ability to set a plane and sharpen a chisel as and when required.

The candidate will make a range of woodworking joints and it is recommended that this should be done as part of an artefact which reflects the purpose for which the candidate is taking the course.

Artefacts produced should require the identification and preparation of materials, setting out and making of a range of basic joints, and simple assembly procedures used in flat-frame joinery fabrications and structures. For the purposes of assessment, biscuit and comb (finger) joints are acceptable alternatives to dowels.

Typical products may be a mirror frame, tea tray or framed wall clock, or larger products such as the top of a garden cold frame, requiring larger sections of timber.

In all cases, candidates should be encouraged to use varied sections of materials and varying types of manufactured board. The value of this experience should not be underestimated.

## **National Unit Specification: support notes (cont)**

### **UNIT            Bench Skills 1 – Wood Flat-Frame Construction (Intermediate 1)**

If outcomes have to be reassessed, then it may be necessary to use ‘test pieces’ to develop the necessary skills.

The unit should culminate with the manufacture of a framed product from a working drawing. This will include the teaching and learning of the use, application and possible modification of working drawings; the practical use of cutting lists; setting out, using rods and templates; drawing in; selection and use of appropriate joints; frame assembly, including squaring and cramping.

The framed product produced for Outcome 3 could be part of a bigger artefact that would incorporate skills from the other units in the course. An example of this framed product may be the door for a dartboard box or bathroom cabinet, with handles turned on the woodwork lathe being fixed to a carcass construction. This would incorporate skills and knowledge from other areas of the course. Alternative artefacts could be used that would provide the same experience but in a more vocational context, with setting-out skills being used over greater lengths and areas. An example of such an artefact that would use larger sections of timber is a cold frame with a hinged and glazed top, fixed to a carcass construction base, made from appropriate exterior materials.

At first glance, the complexity of the suggested integrated project above may seem unnecessary, but this approach could serve any or all of the following three purposes:

- as a rehearsal for the course assignment, during which the candidate is expected to work with a degree of independence
- as a means of reassessing certain performances from other areas of the course
- as a means of employing a holistic approach to assessment, whereby much of the evidence for the other two units of the course could be found in the artefact as it is described

### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

Whenever possible, the dynamic nature of this course should not be hindered by overburdening assessment of the candidate.

The candidate should be aware that certain performances (including safe working practice) are being monitored constantly and recorded on an observation checklist, and that finished artefacts will be tested against the stated criteria for accuracy and quality. Lengthy written tests are not required for tool, process or equipment recognition and use. A preferred technique would be to display the tools and equipment and ask the candidates to write or state their names and uses.

## National Unit Specification: support notes (cont)

### UNIT Bench Skills 1 – Wood Flat-Frame Construction (Intermediate 1)

#### **Observational checklists**

The checklists will be set against performance evidence and applied as the work proceeds.

An example of this might be:

| OPERATION                                           | TOLERANCES |
|-----------------------------------------------------|------------|
| Plane to given sizes leaving surfaces even and flat | ±2 mm*     |
| Mark, saw and chisel                                | ±3 mm*     |
| Joints' gaps should not exceed:                     | 2 mm*      |
| Overall sizes                                       | ±5 mm      |

\* These tolerances would depend upon the size and scale of the work.

#### **Safety**

Candidates should be aware of ongoing monitoring and that failure to comply to safe working practices will result in unattained performance criteria, failed outcomes and ultimately failed units.

#### **Approaches to generating evidence**

Assessment evidence for this unit should be able to be drawn from the manufacture of artefacts. In situations where candidates fail to achieve the required standard of performance in one area, this weakness can be targeted in the next part of the course, when the next artefact is manufactured.

In situations where candidates fail to achieve the required standard of performance in more than one area, it may be necessary to provide tasks aimed specifically at the areas to be reassessed.

Some candidates may require additional support and help to ensure success in the manufacturing of the framed artefact. However, candidates must also be aware that the overall course assessment takes into account the amount of practical assistance given by the teacher/lecturer and that a degree of independence is ultimately expected from the candidate.

A practical approach is recommended, and candidates will produce a range of work, which should be retained for assessment and external sampling. The culmination of the unit is the manufacture of a flat-framed artefact, and generally the best joint should be considered for assessment.

### **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 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).