



## National Unit Specification: general information

**UNIT** Woodmachining: Craft Projects (SCQF level 6)

**CODE** F7H2 12

### SUMMARY

This Unit is suitable for candidates working towards a Modern Apprenticeship in Woodmachining and will develop the candidate's skills in craft project work, including planning, compiling material requisitions, specifying components and materials, calculating costs, problem solving and carrying out practical activities. This Unit is also designed to enable candidates to develop their knowledge and understanding of the terminology used relating all aspects of manufacture including time management and researching cost and working to deadlines.

### OUTCOMES

- 1 Plan craft projects.
- 2 Demonstrate knowledge and understanding of current legislation requirements for specific craft operations.
- 3 Requisition components and materials for specific works.
- 4 Calculate material costs for projects.
- 5 Operate machinery and ancillary equipment safely to produce craft projects.

### 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 completed most of the Units within the PDA before undertaking this Unit.

### CREDIT VALUE

2 credits at SCQF level 6 (12 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.*

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#### Administrative Information

**Superclass:** TF

**Publication date:** August 2009

**Source:** Scottish Qualifications Authority

**Version:** 01

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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 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
- ◆ *Working with Others* at SCQF level 4

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

### **UNIT      Woodmachining: Craft Projects (SCQF level 6)**

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**

Plan craft projects.

##### **Performance Criteria**

- (a) Correctly interpret technical information used in planning craft projects.
- (b) Propose a feasible sequence of operations.
- (c) Select tools which are appropriate and sufficient to complete the work.
- (d) Select equipment that is appropriate and sufficient to complete the work.
- (e) Clearly describe necessary organisational efficiency and safety preparatory work.

#### **OUTCOME 2**

Demonstrate knowledge and understanding of governing legislation requirements for specific craft operations.

##### **Performance Criteria**

- (a) Correctly state the statutory instruments governing specific operations.
- (b) Correctly state employers' responsibilities regarding specific operations.
- (c) Correctly state employees' responsibilities regarding specific operations.
- (d) Correctly list regulations extracted from statutory instruments affecting the manner in which work should be carried out for specific operations.

#### **OUTCOME 3**

Requisition components and materials for specific works.

##### **Performance Criteria**

- (a) Calculate sufficient quantities of materials for the completion of the specific works.
- (b) Correctly apply recognised wastage allowance.
- (c) Correctly list materials on a prepared materials requisition form using appropriate terminology.

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

### UNIT Woodmachining: Craft Projects (SCQF level 6)

#### OUTCOME 4

Calculate material costs for projects.

##### Performance Criteria

- (a) Accurately extract quantities of materials from given specifications.
- (b) Apply recognised allowance for cutting and waste in material calculations.
- (c) Accurately cost materials.

#### OUTCOME 5

Operate machinery and ancillary equipment safely to produce craft projects.

##### Performance Criteria

- (a) Carry out preparatory work essential to operational efficiency in accordance with the projects.
- (b) Complete projects in accordance with given specification and within stipulated time.
- (c) Comply with current health and safety regulations in all work methods and throughout all practical activities.

### 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 for Outcomes 1 and 2 which demonstrates the candidates' knowledge and understanding of technical terminology and current health and safety requirements relating to planning projects, selecting the correct machinery and tooling, sourcing materials, calculating costs and wastage. Evidence for these Outcomes will be in the form of open-book project based exercises and also a series of short answer question papers.

Written and/or oral evidence is needed for Outcomes 3 and 4 to show the candidate can on **three** occasions source technical information to prepare material requisition forms and cutting lists. The candidate must show they can source and state market cost of timber. All working practices must be in line with current and relevant health and safety legislation and regulations. The candidate must also, on **three** occasions, calculate materials needed to complete projects and accurately allow for wastage. Candidates must clearly show intermediate steps in reaching their final calculations and the gross figure on the cost of materials must be within an accepted range.

Performance and product evidence is needed for Outcome 5 to show the candidate can on **three** occasions, produce craft projects to meet the requirements of the Performance Criteria, including producing time sheets of actual time taken to manufacture individual components to complete projects to given specification within a time scale. All working practices must be in line with current and relevant health and safety legislation and regulations.

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

### UNIT Woodmachining: Craft Projects (SCQF level 6)

#### Summary of standards and tolerances

Craft project 1: Framed ledged and braced door

◆ Rod component positioning	Tol $\pm 1$ mm on all dimensions
◆ Overall finished size	Tol $\pm 1$ mm on all dimensions
◆ Joints	Tol $\pm 1$ mm on all dimensions
◆ Component sizes	Tol $\pm 1$ mm on all dimensions
◆ Square (diagonal check)	Tol $\pm 2$ mm on all dimensions
◆ Out of wind	Tol $\pm 4$ mm on all dimensions
◆ Completion time	18 hours

Craft project 2: Eight panel glazed door (quarter)

◆ Rod component positioning	Tol $\pm 1$ mm on all dimensions
◆ Overall finished size	Tol $\pm 1$ mm on all dimensions
◆ Joints	Tol $\pm 1$ mm on all dimensions
◆ Component accuracy	Tol $\pm 0.5$ mm on all dimensions
◆ Square (diagonal check)	Tol $\pm 2$ mm on all dimensions
◆ Out of wind	Tol $\pm 2$ mm on all dimensions
◆ Completion time	18 hours

Craft project 3: Frame raised panel

◆ Rod component positioning	Tol $\pm 1$ mm on all dimensions
◆ Overall finished size	Tol $\pm 2$ mm on all dimensions
◆ Joints	Tol $\pm 1$ mm on all dimensions
◆ Component accuracy	Tol $\pm 0.5$ mm on all dimensions
◆ Square (diagonal check)	Tol $\pm 2$ mm on all dimensions
◆ Out of wind	Tol $\pm 3$ mm on all dimensions
◆ Completion time	18 hours

## **National Unit Specification: support notes**

### **UNIT      Woodmachining: Craft Projects (SCQF level 6)**

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 80 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 successful completion of this Unit will provide candidates with the required underpinning knowledge of the planning for specific purposes and manufacturing processes, including pricing and sourcing materials, the correct sequencing of operations, time management, cutting lists, workshop calculations, safe working practices and current health and safety legislation.

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 the theory and practice, associated planning, and component production to manufacture specific craft projects using a wide range of machinery and equipment and is complemented by Units dealing with related work in machine woodworking. Candidates should have completed or be working towards most Units within the Professional Development Award for Woodmachining at SCQF level 6. 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**

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

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

### **UNIT      Woodmachining: Craft Projects (SCQF level 6)**

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, sketches; drawings, schedules, specifications, technical literature, manufacture' data, codes of practice, building standards, statutory regulations, computer software, classroom exercises and group discussions.

The function of each component should be thoroughly demonstrated. Safe working practice methods should be demonstrated by candidates showing good technique in the measuring, marking out of materials, setting and safe operation of machinery. The teaching approach should help ensure the candidate is acquiring the underpinning knowledge required for the Unit.

#### **Outcome 1**

The candidate should be introduced to the benefits to be gained from carefully planning operational activities to promote operational efficiency. Group discussion could be used to outline in broad terms the necessity to ensure: correct sequencing of operations, sufficient resources are available, safe working practices are fully considered and technical information is correctly interpreted and implemented. The discussion could lead to the group highlighting possible repercussions, should any of the above factors be of a negative nature.

#### **Outcome 2**

The candidate should further their knowledge and understanding of the legislation affecting the craft operative, confined to operations within the specific craft projects. ICT exercises guiding the candidates to Health and Safety Executive Website would provide useful information for further discussion.

#### **Outcome 3**

The tutor/trainer could recap on the need for accuracy in, extracting information from technical data, allowing for cutting and/or waste of materials and in correct specification of materials in terms of quantity, quality, type and terminology. It should be stressed that the information on a materials requisition order form is to be interpreted and implemented by another person and therefore should be clear, and technically correct.

#### **Outcome 4**

The tutor/trainer should recap on the systematic approach to calculations, stress the need for accuracy and provide the candidate with a simple approach to the subject. It may be useful to further confidence in the candidate by illustrating simple methods of using a number everyday calculations such as using the net figure and multiplying by determine the gross figure after VAT (eg multiply by 1.175 if VAT is currently 17.5%) or multiplying the net quantity of materials by 1.08 to determine the gross quantity after applying 8% for cutting and/or waste.

## National Unit Specification: support notes (cont)

### UNIT Woodmachining: Craft Projects (SCQF level 6)

#### Outcome 5

The candidate should be presented with a clear brief for each project. The projects should be designed to integrate the learning and competences gained in a number of previously completed Units. The candidate should be presented with a clear brief for each project, the brief should contain, a specification, an outline of preparatory work, methods and the time allowed and a summary of standards and tolerances for which they shall be assessed. This Outcome should be allocated 80% of the notional time specified for this Unit.

#### OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

The Core Skill of *Information and Communication Technology* could be developed at SCQF level 3 by the use of the internet to source and price materials, creating time sheets, spreadsheets for cutting lists and risk assessment, e-learning and e-assessment.

*Numeracy* at SCQF level 4 could be developed through the interpretation of information from 3 dimensional working drawings and workshop calculations and pricing within Outcome 4.

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

Outcome 2 provides an opportunity for candidates to develop the Core Skill *Working with Others* at SCQF level 4 through discussions within group activities.

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

The Woodmachining Training and Assessment Programme (TAP) section 8 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 practice as possible, prior to being set the assessment tasks.

A suitable method of assessing the candidates' knowledge and understanding of planning craft projects, health and safety legislation, material requisition and costing would be through a series of written response question papers.

Outcome 5 will be evidenced by the planning and production of three projects produced within a set time. Candidate time sheets and assessor observation checklists may be used.



## **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](http://www.sqa.org.uk/assessmentarrangements)