



## **National Unit specification: general information**

**Unit title:** Stringed Instruments: Woodworking Machinery  
(SCQF level 5)

**Unit code:** FX39 11

**Superclass:** LJ

**Publication date:** November 2011

**Source:** Scottish Qualifications Authority

**Version:** 02

### **Summary**

This Unit is an introduction to woodworking machinery and enables candidates to set up, operate and maintain a range of machines commonly found in the production of stringed musical instruments in a small workshop. Candidates will identify the instrument making tasks that each machine is used for and then make a product or perform a task on each machine. They will become familiar with the safe operation of the machines and observe workshop health and safety requirements at all times.

This is a mandatory Unit within the National Certificate in Stringed Musical Instrument Making and Repair (SCQF level 5) but could be taken as a freestanding Unit.

This Unit is suitable for candidates who have no prior machining or woodworking experience.

### **Outcomes**

- 1 Identify and describe machines used in the manufacture of stringed musical instruments
- 2 Set up, operate and maintain machines which are used in the manufacture of stringed musical instruments
- 3 Use machines to manufacture simple tools or jigs as appropriate to specific stringed instruments

### **Recommended entry**

There are no specific entry requirements. Entry is at the discretion of the centre.

### **Credit points and level**

1 National Unit credit at SCQF level 5: (6 SCQF credit points at SCQF level 5\*)

## **General information (cont)**

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*\*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.*

## **Core Skills**

Achievement of this Unit gives automatic certification of the following Core Skills component:

- ◆ Critical Thinking at SCQF level 4

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

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

**Unit title:** Stringed Instruments: Woodworking Machinery  
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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**

Identify and describe machines used in the manufacture of stringed musical instruments.

#### **Performance Criteria**

- (a) Identify machines used in the manufacture of stringed musical instruments.
- (b) Describe accurately the health and safety requirements relating to machines used in the manufacture of musical instruments.
- (c) Describe accurately the task(s) for which machines are commonly employed by stringed instrument makers.

### **Outcome 2**

Set up, operate and maintain machines which are used in the manufacture of stringed musical instruments.

#### **Performance Criteria**

- (a) Set up machines correctly.
- (b) Operate machines correctly.
- (c) Carry out routine maintenance of machines correctly.
- (d) Adhere to workshop health and safety requirements.

### **Outcome 3**

Use machines to manufacture simple tools or jigs as appropriate to specific stringed instruments.

#### **Performance Criteria**

- (a) Correctly interpret drawings for simple tools or jigs.
- (b) Mark out the work in accordance with the drawing specifications.
- (c) Use machines correctly as part or all of the process to produce tools or jigs.
- (d) Adhere to workshop health and safety requirements.

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

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### Evidence Requirements for this Unit

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria. A combination of product and performance evidence is required.

Additional written and/or oral recorded evidence is also required to demonstrate the candidate's understanding of woodworking machinery.

Product Evidence:

- ◆ Three simple tools and/or jigs will be produced from simple dimensional drawings. The accuracy for all dimensions will be plus or minus 2mm tolerance. Squared timber must not be out of square more than 1mm over a length of 100mm. There should be no gaps bigger than 1mm.

Performance evidence which demonstrates that:

- ◆ The candidate uses the appropriate tools and machinery in the correct manner to suit each task.
- ◆ The candidate can set up, operate and carry out the routine maintenance of three machines.
- ◆ The candidate adheres to the health and safety regulations and guidelines with regard to the workshop environment and use of hand tools and machinery.

Additional written and/or recorded oral evidence, produced under supervised closed-book conditions, is required to demonstrate:

- ◆ knowledge and understanding of the operation, set-up and health and safety issues relating to a minimum of three machines.
- ◆ that a candidate can accurately identify three machines used by instrument makers and the tasks for which they are used.

## National Unit specification: support notes

**Unit title:** Stringed Instruments: Woodworking Machinery  
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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 is a mandatory Unit within the National Certificate in Stringed Musical Instrument Making and Repair (SCQF level 5). It can also be taken as a freestanding Unit.

This Unit focuses on the use of the machinery used in musical instrument making in a small workshop situation. It complements the Unit 'Stringed Instruments: Woodworking Hand Tool Skills'. Prior woodworking or machining experience is not required.

Machinery could include:

- ◆ band-saw
- ◆ pillar drill
- ◆ router
- ◆ bench grinder

The Unit will enable candidates to set up and adjust machine blades, tools, guides, dust extractors and machine speeds. Candidates will operate and set up each machine in accordance with accepted health and safety workshop practise in the musical instrument making industry. Machine operation will include the additional use of guides or jigs where appropriate.

The knowledge and skills gained are transferable to other areas requiring the operation and maintenance of basic woodworking machinery in a small workshop. The Unit has been designed to prepare candidates for progression to 'Manufacture of Musical Instrument Body Components' (SCQF level 5).

Candidates completing this Unit will be working towards aspects of the following Creative and Cultural Skills National Occupational Standards.

Craft: CR13 Select and use techniques, materials, tools and equipment for craft

Craft: CR14 Prepare and maintain materials, tools and equipment for craft

Craft: CR15 Use safe working practices and spaces for craft

Craft: CR16 Complete the craft making process

## **National Unit specification: support notes**

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Craft: CR17 Document and record craft work and work practice

Craft: CR51 Maintain and repair craft work

Craft: CR52 Restore, conserve and reconstruct work in craft

Craft: CR56 Make sure your own actions reduce risks to health and safety

### **Guidance on learning and teaching approaches for this Unit**

Tutor input will be required to identify machines and describe and demonstrate the operation, maintenance and health and safety relating to each. The bench grinder should be taught first where the Unit is run in conjunction with 'Stringed Instruments: Woodworking Hand Tool Skills' as this knowledge will be required by candidates at the initial stages of edge-tool sharpening.

Methods of interpreting written and diagrammatic information should be explained and demonstrated.

Candidates can work in pairs or small groups to set-up machines and can then undertake a number of practical tasks to demonstrate machine operation and maintenance.

## National Unit specification: support notes (cont'd)

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### Opportunities for developing Core Skills

In this Unit candidates will use and maintain machines and manufacture three simple tools and/or jigs.

Candidates will:

- ◆ read and interpret diagrams
- ◆ read instruction material relating to machine operation and maintenance
- ◆ measure, mark and lay out
- ◆ select and use machines
- ◆ identify health and safety issues
- ◆ answer questions relating to machine operation, maintenance and health and safety.
- ◆ work in groups to set up machines.

This means that as candidates are doing this Unit they will be developing aspects of the Core Skills of Communication, Numeracy, Problem Solving and Working with Others.

This Unit has the Problem Solving component of Critical Thinking embedded in it. This means that when candidates achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 4.

### Guidance on approaches to assessment for this Unit

Evidence of practical work could be recorded on an observation checklist supported by product evidence as detailed in the Performance Criteria. Additional written and/or recorded oral evidence detailing machine operation, maintenance and health and safety will be used to ensure candidates' understanding. This could be in the form of a written and/or oral question paper.

The question paper could be short answer or restricted response.

The articles produced could be chosen from a range of tools and jigs eg violin bridge holder violin peg holder, guitar burnisher, guitar fret stoning block etc.

Product and Performance Evidence may be recorded on a checklist.

### 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)*.

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

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### **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)



## History of changes to Unit

Version	Description of change	Date
02	Core Skills Component Critical Thinking at SCQF level 4 embedded.	28/11/2011

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