



National Unit specification: general information

Unit title: Stringed Instruments: Design Project (SCQF level 6)

Unit code: H1Y5 12

Superclass: LJ

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Summary

This Unit enables candidates to design components of a stringed musical instrument. Candidates will write a design brief, undertake research and produce a project plan assessing manufacturing requirements.

Sketches and specifications of designs will be produced prior to drawing a full size workshop plan containing all the information required to construct stringed musical instrument components. Candidates will gain knowledge and understanding of research, project planning, assessing manufacturing requirements, designing components and drawing a workshop plan.

This is an optional Unit within the National Certificate in Stringed Musical Instrument Making and Repair (SCQF level 6), but can also be taken as a freestanding Unit.

This Unit is suitable for candidates who are making or designing musical instrument components or both.

Outcomes

- 1 Produce a design brief for musical instrument components.
- 2 Produce a project plan for musical instrument components.
- 3 Produce a full scale workshop plan for musical instrument components.

Recommended entry

Entry is at the discretion of the centre.

General information (cont)

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Credit points and level

1 National Unit 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.*

Core Skills

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

Complete Core Skill None

Core Skill component Critical Thinking at SCQF level 5

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

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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

Produce a design brief for musical instrument components.

Performance Criteria

- (a) Create a design brief based on client requirements.
- (b) Investigate appropriate designs based on client requirements.
- (c) Select a design specification based on the design brief.

Outcome 2

Produce a project plan for musical instrument components.

Performance Criteria

- (a) Identify the correct materials required for manufacturing.
- (b) Record the costing of materials accurately.
- (c) Record the list of suppliers accurately.
- (d) Record the details of manufacturing requirements which include a sequence of operation and a timetable accurately.

Outcome 3

Produce a full scale workshop plan for musical instrument components.

Performance Criteria

- (a) Preliminary sketches are appropriate to producing a workshop plan for the intended instrument components.
- (b) A full scale plan is drawn in accordance with accepted workshop practice.
- (c) All measurements required to produce the instrument components are accurately recorded on the plan.

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.

The following written and/or oral evidence and product evidence is required:

- ◆ A design brief which outlines the following:
 - purpose/background/customer requirements
 - project objective
 - constraints
 - budget
- ◆ A collection of appropriate source material from at least four instrument makers including appropriate instrument specifications and a list of research sources.
- ◆ A project plan to include the following:
 - materials required
 - cost of materials
 - list of suppliers
 - a list detailing the sequence of construction
 - a proposed timescale and timetable of manufacturing.
- ◆ A series of simple preliminary sketches and final drawings of at least two of the following items:
 - headstock
 - rosette
 - soundhole
 - instrument body
 - inlays
 - bridge
- ◆ A full scale plan of instrument components including all specifications necessary to facilitate building the components. The plan will include a minimum of two components.

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 is an optional Unit within the National Certificate in Stringed Musical Instrument Making and Repair (SCQF level 6), but can also be taken as a freestanding Unit.

This Unit is an introduction to instrument design. Through research candidates will explore options regarding the type, style and model of instrument for which they will be designing components. The research will also provide the initial design inspiration and a range of specifications to aid in the design process.

Candidates might choose to design two or more of the following:

- ◆ Headstock/peg-head/neck
- ◆ Rosette
- ◆ Soundhole
- ◆ Instrument body
- ◆ Inlays
- ◆ Bridge

Initial, simple sketches can be made from which final accurate drawings will be produced. These components will then be assembled into a full scale workshop drawing. Candidates might design all of the components of an instrument or combine newly designed components with components of an existing design.

Stringed instruments differ widely in design and manufacturing complexity, therefore the Unit leaves open the possibility to design a minimum of two or more components or the whole instrument. Some candidates will prefer to add to an existing body design by producing components such as a new headstock, rosette, soundhole or inlays. Others might prefer to design the complete instrument.

This Unit could be integrated with the following:

Stringed Instruments: Manufacture of an Instrument Neck (SCQF level 6)

Stringed Instruments: Manufacture Instrument Body Components (SCQF level 6)

Stringed Instruments: Instrument Inlay and Soundhole Cutting Techniques (SCQF level 6)

National Unit specification: support notes (cont)

Unit title: Stringed Instruments: Design Project (SCQF level 6)

Candidates completing this Unit will be working towards aspects of the following National Occupational Standards (NOS) from Creative and Cultural Skills:

- ◆ Design: DES5 Follow a design process
- ◆ Design: DES10 Create visual designs
- ◆ Design: DES11 Provide written information in relation to your design work
- ◆ Design: DES37 Originate and develop concepts for products or services
- ◆ Craft: CR5 Create a design brief for craft
- ◆ Craft: CR9 Produce a drawing or sketch, working stages or roughs, sample, model or prototype of craft
- ◆ Craft: CR16 Complete the craft making process
- ◆ Craft: CR17 Document and record craft work and work practice
- ◆ Craft: CR56 Make sure your own actions reduce risks to health and safety

Guidance on learning and teaching approaches for this Unit

The tutor should ensure that each project is achievable and within the capabilities of the individual candidate and the timescale available.

Small group exercises can be used to identify the following:

- ◆ Where to research: eg library, internet, shops, friends' instruments, museums, magazines and journals and purchased plans.
- ◆ Customer requirements
- ◆ Specifications required to build an instrument
- ◆ Materials required
- ◆ Suppliers

Tutor-led input should present examples of good design which includes detailed examples of the different components such as rosette, headstock, etc. It may be necessary to describe particular methods of component manufacture in order to better understand issues relating to design and project planning. There should also be a discussion regarding function and aesthetics in instrument design.

Exemplars of past design briefs, project plans and workshop drawings should be available.

There could be a demonstration regarding how to draw a full scale instrument plan and the level of detail required. It may be useful to draw the plan using component templates made from plastic or aeroply. This will ensure that the plan is symmetrical and conforms more closely to the finished article.

Candidates will also benefit by visits to instrument collections.

National Unit specification: support notes (cont)

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Guidance on approaches to assessment for this Unit

Assessment could be via the production of a folio or logbook.

The collection of source material for assessment could include photographs, articles from the web, articles or pictures from books or magazines/journals, purchased plans and information gathered from access to real instruments, eg through visits to music shops or access to friends' instruments. These can be presented in a folio or logbook with a short explanation of why candidates found them relevant.

When candidates compile a list of materials and calculate material costs they should include the instrument timber and hardware, plus an estimate for sundries such as glue, sandpaper and finishing materials. This will help to give a more professional idea of manufacturing costs. They should also compile a comprehensive list of suppliers for all materials, hardware and sundries to enable them to source these in the future.

The timetable for construction should include specific dates for the proposed timescale. (It may be useful for candidates to produce this on a six weekly basis to help facilitate time management).

All sketches should be included to demonstrate the design process and exploration of ideas.

The plan may include some or all of the following:

- ◆ Body outline
- ◆ Headstock/peg-head outline
- ◆ Bridge outline
- ◆ Bracing pattern for front and back
- ◆ Neck outline

Specifications could include:

- ◆ Fingerboard width at the nut and 12th fret
- ◆ Body depth at the top block, bottom block and waist
- ◆ Scale length
- ◆ Brace sizes
- ◆ Headstock measurements including tuner positions
- ◆ Soundhole size and position
- ◆ Bridge measurements

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 social software. 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)*.

Opportunities for developing Core Skills

In this Unit candidates will produce a design brief and research a design. They will produce a project plan and design instrument components, and draw an instrument plan. Candidates will:

- ◆ research instrument designs
- ◆ read and interpret research
- ◆ write a design brief
- ◆ write a project plan
- ◆ sketch design ideas
- ◆ draw a plan

This means that as candidates are doing this Unit, they may develop aspects of the Core Skills of *Communication, Numeracy and Problem Solving*.

In addition, candidates may develop aspects of the Core Skill of *Information and Communication Technology (ICT)* through using computers for any research and/or design aspects.

This Unit has the Critical Thinking component of Problem Solving 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 5.

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

History of changes to Unit

Version	Description of change	Date
02	Core Skills Component Critical Thinking at SCQF level 5 embedded.	09/10/2012

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