



Higher National Unit specification

General information for centres

Unit title: Jewellery: Lost Wax Casting: Advanced

Unit code: F3Y5 35

Unit purpose: This Unit will enable candidates to produce designs suitable for repeat castings, fabricate a master pattern from these designs, make repeat castings from the master pattern and fabricate jewellery from the repeat castings.

On completion of the Unit, the candidate should be able to:

- 1 Produce a series of designs from a given brief suitable for multiple casting.
- 2 Fabricate a master pattern.
- 3 Make repeat castings from the master pattern.
- 4 Fabricate jewellery from repeat castings.

Credit points and level: 2 HN credits at SCQF level 8: (16 SCQF credit points at SCQF level 8*)

**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.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. However, it is recommended that candidates have first completed the HN Unit, *Jewellery: Lost Wax Casting: An Introduction* before undertaking this Unit.

Core Skills: There are opportunities to develop the Core Skills of *Working with Others*, *Problem Solving*, and the Core Skills component *Using Number* at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: All Outcomes are integrated, although candidates will produce individual practical work for each Outcome.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Produce a series of designs from a given brief suitable for multiple casting

Knowledge and/or Skills

- ◆ Design brief
- ◆ Technical constraints
- ◆ Multiple casting

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ produce a minimum of four different design solutions to a given design brief for multiple casting. These design solutions should be presented containing sketches, thumbnails and roughs.
- ◆ select one final solution suitable for multiple casting presented showing the development of the finished design, a clear understanding of the technical constraints in designing for multiple casting, and a clear response to the brief.

This Outcome is integrated with Outcome 2 in that candidates will use one final design solution to fabricate a master pattern in Outcome 2.

Assessment Guidelines

Design solutions could be presented on five pages of A4 with the final solution presented on two sheets of A4.

Higher National Unit specification: statement of standards (cont)

Unit title: Jewellery: Lost Wax Casting: Advanced

Outcome 2

Fabricate a master pattern

Knowledge and/or Skills

- ◆ Tools
- ◆ Techniques
- ◆ Weight and shrinkage factors
- ◆ Finishing
- ◆ Master pattern

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can produce a master pattern. In so doing, they will:

- ◆ use tools and techniques to complete the master pattern. These must be appropriate to the master pattern chosen.
- ◆ use finishing techniques appropriate to the master pattern.
- ◆ identify weight and shrinkage factors and modify the design in accordance. Candidates must keep a record identifying weight and shrinkage factors.

This Outcome is integrated with Outcome 1 in that candidates will fabricate a master pattern from the design solution chosen in Outcome 1, and will use the master pattern to make repeat castings in Outcome 3.

Assessment Guidelines

As per Evidence Requirements.

Outcome 3

Make repeat castings from the master pattern

Knowledge and/or Skills

- ◆ Rubber moulds
- ◆ Vulcanisation process
- ◆ Wax injection
- ◆ Invest in plaster
- ◆ Metal casting

Higher National Unit specification: statement of standards (cont)

Unit title: Jewellery: Lost Wax Casting: Advanced

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ produce a rubber mould of the master pattern using the vulcanisation process.
- ◆ produce a minimum of five wax models using a wax injector; the models must be free from defects.
- ◆ invest the five models in plaster.
- ◆ prepare the mould and the metal for casting.
- ◆ describe the metal casting process. This must include a description of the burn out cycle, calculated from the size of the flask.

Candidates must keep a logbook that includes a description of the metal casting process.

This Outcome is integrated with Outcome 2 in that candidates will use the master pattern from Outcome 2 to make repeat castings in this Outcome.

Assessment Guidelines

As per Evidence Requirements.

Outcome 4

Fabricate jewellery from repeat castings

Knowledge and/or Skills

- ◆ Fabrication
- ◆ Finish

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ produce one piece of jewellery using repeat castings. It must be assembled and finished to a professional standard and be suitable for its intended purpose.

This Outcome is integrated with Outcome 3 in that candidates will use the repeat castings from Outcome 3 to fabricate a piece of jewellery for this Outcome.

Assessment Guidelines

As per Evidence Requirements.

Administrative Information

Unit code: F3Y5 35

Unit title: Jewellery: Lost Wax Casting: Advanced

Superclass category: JH

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History of changes:

Version	Description of change	Date

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Higher National Unit specification: support notes

Unit title: Jewellery: Lost Wax Casting: Advanced

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

The Unit should enable candidates to achieve the level of competence of someone who would be expected to design and make a master pattern suitable for casting a series of multiple units from a single master pattern. The candidate should understand the techniques necessary to make a rubber mould from a master pattern, inject wax into the mould and complete the casting process. The piece of jewellery should then be assembled from the repeated multiple units.

Guidance on the delivery and assessment of this Unit

A candidate based project working from a detailed design brief is recommended. The design brief should require candidates to produce evidence in the form of a logbook along with the master pattern, rubber mould and finished piece of cast jewellery.

The assessment will be based on the successful completion of all Outcomes and class lecturer could use a checklist for practical activities.

Opportunities for developing Core Skills

There are opportunities to develop the Using Number component of the Core Skill of *Numeracy* at SCQF level 5 in this Unit, for example where candidates will have to calculate weight and shrinkage in Outcome 2; understand time and size factors in vulcanisation in Outcome 3; and understand the times and temperature in the burn out cycle in Outcome 3.

Problem Solving may also be developed, at SCQF level 5. Candidates are required to consider designs and select one design solution for further development. They then have to evaluate the suitability of designs for repeat casting and make appropriate adjustments. Producing the castings and finished piece of jewellery also involve candidates in carrying through practical tasks.

Working with Others may be developed at SCQF level 5 as candidates will have to work together to share resources and equipment and negotiate with class members and technicians on equipment use.

Higher National Unit specification: support notes (cont)

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Open learning

This Unit is not suitable for open learning as candidates would require access to specialised workshops and equipment.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

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This Unit will enable you to produce designs suitable for repeat castings, fabricate a master pattern from these designs, make repeat castings from the master pattern and fabricate jewellery from the repeat castings. It is recommended that you have completed the HN Unit, *Jewellery: An Introduction to Lost Wax Casting* before undertaking this Unit.

On completion of the Unit, you will be able to:

- 1 Produce a series of designs from a given brief suitable for multiple casting.
- 2 Fabricate a master pattern.
- 3 Make repeat castings from the master pattern.
- 4 Fabricate jewellery from repeat castings.

Your learning in this Unit will allow you to achieve the level of competence of someone who would be expected to design and make a master pattern suitable for casting a series of multiple units from a single master pattern. You will learn about the techniques necessary to make a rubber mould from a master pattern, inject wax into the mould and complete the casting process. You will then assemble the piece of jewellery from the repeated multiple units.

You may be assigned a project, in which you are provided with a detailed design brief to work from. The design brief may ask you to produce evidence in the form of a logbook along with the master pattern, rubber mould and finished piece of cast jewellery.

Assessment will be based on the successful completion of all Outcomes and your tutor may use a checklist to assess the practical activities in which you will be involved.

There are opportunities to develop the Using Number component of *Numeracy*, *Working with Others* and *Problem Solving* at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.