

**Crafts Council
Education
Craft Careers**

How to become a Casting Technician



What does a casting technician do?

Casting involves pouring molten metal into a mould and allowing it to solidify. Casting can be used to make a whole piece of jewellery or component parts.

This technique allows the same piece to be made over and over again exactly the same, but casting can also be used to make one-off pieces.

Casting technicians work with a variety of metals, including gold, silver, and platinum to produce jewellery pieces.

Casting can be used to:

- make jewellery in individual hand-made studio pieces
- make jewellery in batch production
- make jewellery in large-scale commercial volume production
- make jewellery parts for repairs

'Lost wax' is the most commonly-used method, particularly for bulk production. There are several stages:

- making a rubber mould from a master pattern
- injecting wax into the mould which, when cooled, makes a perfect copy of the original pattern
- repeating the wax injection to create multiple waxes
- joining several waxes round a central core to form a 'tree'
- embedding the waxes into the 'investment slurry' in a flask
- firing the flask in a kiln so the wax burns away, forming a cavity
- pouring molten metal into the cavity left by the wax After this the jewellery pieces are cut from the tree and finished by cleaning and polishing.

Alfonso Scopetta, Photo by Freya Lee-Williams



Casts can be made from CAD (computer-aided designs) or hand-drawn designs. Where CAD is used, 'rapid prototyping' technology can be used to make sample pieces.

Models for casting can also be made in resin, metal or clay. 3D scanning allows the use of almost any physical object as a model for casting.

Casting technicians often work for a jewellery manufacturing company. In a company, they may spend all their time on casting work. In a smaller jewellery company, someone who works as a casting technician may do other jewellery work. They might make or repair pieces of jewellery, using bench jewellery techniques and skills

Skills.

An employer may expect you to have other jewellery skills, such as stone setting. If you are involved in all stages of the casting process, from model making to finishing, you need to:

- be creative and good with your hands to produce hand-carved wax models
- have good IT skills to use CAD/CAM
- have some knowledge of metals
- work very accurately, as you are dealing with precious metals
- have high standards of workmanship



Alfonso Scopetta, Photo by Freya Lee-Williams

Qualifications.

There are [apprenticeships in casting](#), leading to a Level 2 qualification. It is possible to go onto an advanced apprenticeship, at Level 3 or 4. You will need good GCSEs, including maths and science subjects, for these apprenticeships.

There is also a Level 3 Diploma in casting technology. [Bradford College](#) offers courses in casting technology, including:

- a foundation degree, offered on a part-time, flexible basis with work-based projects
- a Bachelor of Engineering degree, which can be studied flexibly over four to six years.

These qualifications are not specifically related to the jewellery trade. They cover the engineering manufacturing skills, rather than jewellery design skills.

Short courses

There are a number of short courses available around the UK in casting techniques, for jewellery and other craft applications. Some courses lead to accredited qualifications, while others are for people interested in jewellery as a hobby.

[The Institute of Cast Metal Engineers \(ICME\)](#) offers short courses for technicians to add to or update their skills.

Many people go into casting after spending time in other parts of the jewellery industry. They may have trained in jewellery making or jewellery design. Providers of BA and MA Degree courses in Jewellery, Gold/Silversmithing and Jewellery Design, which may include chain making, include:

- [School of Jewellery, Birmingham City University](#)
- [Plymouth College of Art](#)
- [Central Saint Martins, London](#)
- [Glasgow School of Art](#)
- [Edinburgh College of Art](#)
- [Royal College of Art, London](#)

The finishing process



Featured maker.

[Just Castings](#) was founded in 1964 and is a family-run manufacturing business that specialises in casting & finishing in both base & precious metals.

Images used here feature Alfonso Scopetta and Jim Yiasouma and are © Freya Lee-Williams. The silver castings shown are by customer Jessie Han.

Craft Careers

Craft generates £3.4 billion for the UK economy each year, with the contribution of the wider creative industries now growing at twice the rate of the UK economy. British craft has never been so sought-after and craft skills are revolutionising industries from aerospace to architecture.

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