

## CNC Machinist

CNC (computer numerically controlled) machinists set up and operate the machine tools which cut, shape, drill and finish metal and other materials to make precision engineering parts. You use a CNC machine for precision cutting. This involves inputting instructions into a computer panel.

### The Work

You could be:

- choosing the correct tools needed to make each part
- following instructions and technical drawings to set up and programme computer numerically controlled (CNC) machines
- setting up hand-controlled machines
- making sure the tolerances (ranges allowed) set on the machines are correct and accurate
- checking the standard of the work and adjusting the controls if necessary
- specialising in boring, drilling, milling, planning, shaping or turning
- working out the cutting speeds
- quality checking finished items
- ensuring machines are cleaned and maintained.

### Pay

The figures below are only a guide. Actual pay rates may vary, depending on:

- where you work
- the size of the company or organisation you work for
- the demand for the job.

A Modern Apprentice may start on the National Minimum Wage (NMW). At present the apprentice rate, for those aged under 19 or aged 19 or over and in the first year of their apprenticeship, is £3.90 an hour (1 April 2019). Some employers may pay their apprentices more.

The starting salary for CNC machinists is normally around £17,000 a year. With experience this can rise to £21,000 to £25,000 a year. Senior machinists may earn up to over £40,000 a year. Bonuses and extra pay for shift work are common.

### Conditions

- You would work in a factory or workshop.
- Working conditions can vary from clean and quiet to dirty and noisy depending on what you are making.
- You have to stand for long periods of time and you have to take care to avoid accidents with the machines.
- You would normally wear overalls and protective glasses, gloves, ear defenders and safety shoes.
- You would usually work around 39 hours a week though you may have to work shifts, and perhaps

overtime.

## Getting In

- You could complete the Engineering Foundation Apprenticeship (FA), which you can start in S5 and study at school and college. Entry requirements vary between colleges, but you usually need 3 subjects at National 5 including English and Maths. Some colleges also ask for Physics.
- You could enter through a Modern Apprenticeship.
- You usually need 3-4 subjects at National 4 or 5, including English, Maths and a science or technological subject.
- Some employers look for an HNC or HND. For entry to an HNC or HND course you need 1-3 Highers.
- You may have to sit an entry test to see if you are suitable for the work.
- You need general fitness for this job.

There are opportunities for CNC machinists in a range of industries, such as aerospace, ship building, manufacturing engineering, motor vehicles, office machinery and agricultural machinery. There are also opportunities in the Armed Forces.

## What Does It Take

You need to be:

- accurate, methodical and well organised
- patient, with good concentration
- practical, with technical ability and good hand skills
- aware of health and safety issues.

You need to be able to:

- understand engineering drawings
- visualise the finished item
- understand the strengths of metals
- do calculations, take measurements and make adjustments
- use a computer, to work with computer-controlled machines
- concentrate for long periods and do repetitive tasks
- work on your own at times.

## Training

- Training through a Modern Apprenticeship combines on the job and off the job training and usually leads to SVQ Mechanical Manufacturing Engineering at SCQF Level 6.
- If you enter direct and train through an employer's scheme you may gain the above qualifications or you may gain an SVQ in Performing Engineering Operations at SCQF Level 5.
- You may take short courses to update your skills and learn to use new machines.

## Getting On

- With experience you may be promoted to a supervisory job.
- With more advanced training, you could move up to technician level.
- In some industries there may be opportunities to work abroad.

## More Information

The Engineering Council sets and maintains the standards of the engineering profession in the UK.

The [Tomorrow's Engineers](#) website has more information on careers in engineering.

SEMTA is the Sector Skills Council for science, engineering and manufacturing technologies. The website includes a chart showing possible progression routes in engineering work.

## Contacts

### **SEMTA (Science, Engineering and Manufacturing Technologies Alliance)**

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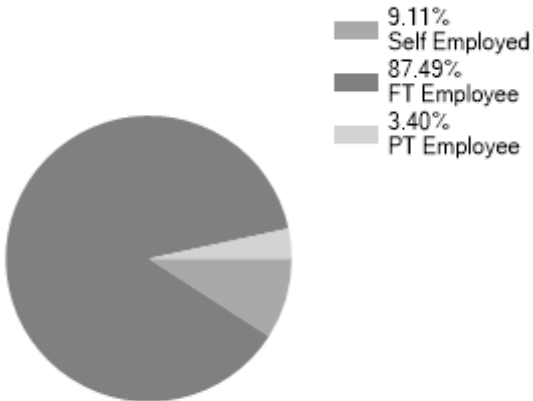
Website: [www.semta.org.uk](http://www.semta.org.uk)

Twitter: @SemtaSkills

Facebook: [www.facebook.com/SemtaSkills?ref=hl](https://www.facebook.com/SemtaSkills?ref=hl)

Statistics

Employment Status UK %



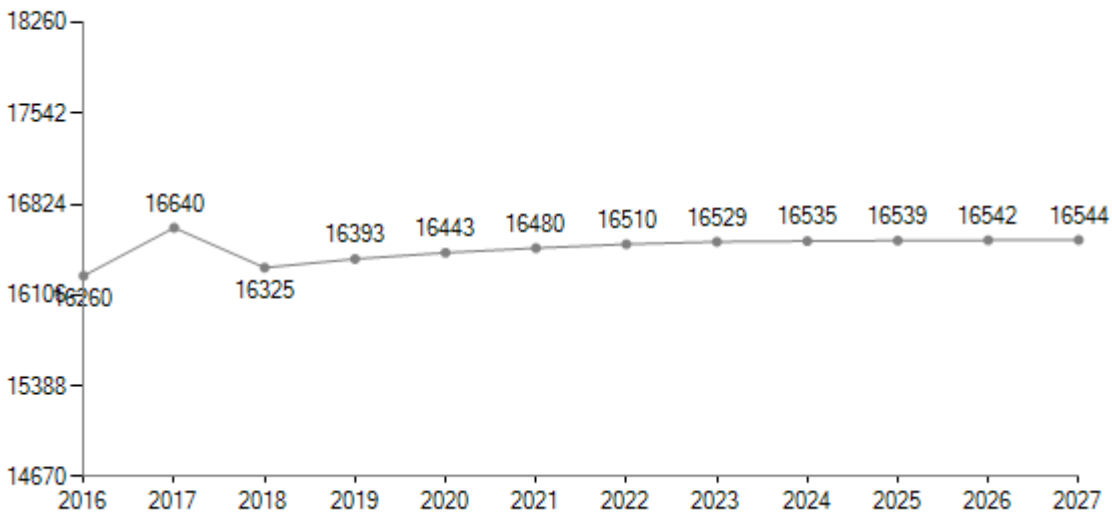
Past Unemployment - Scotland

Date	Unemployed
Dec 2018	0.16%
Mar 2019	0.13%

LMI data powered by [EMSI UK](#)

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Predicted Employment in Scotland



LMI data powered by [EMSI UK](#)