

Mathematician

Mathematics underpins scientific research and development, as well as finance, engineering, economics and ICT. Graduates in either pure maths or applied maths use mathematical calculations in a wide range of work sectors to help describe, analyse and solve problems. Many jobs that require a high level of expertise in maths don't have the word 'mathematician' in the title. Terms such as analyst, modeller, programmer and even engineer may be used.

The Work

You could be:

- identifying problems in discussion with colleagues or business clients
- collecting data from statistical, experimental or other sources
- designing experiments and research projects to test mathematical theories
- making calculations, using the relevant information available, often using computer programs
- designing mathematical models to interpret data
- analysing results to provide information on different areas such as how materials behave in production, weather patterns, efficient aircraft design or future trends in economic development
- presenting the results using tables, graphs, diagrams, computer models or written reports.

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.

The starting salaries for mathematics graduates range from £30,000 to £35,000 a year. With postgraduate qualifications, salaries can rise to around £40,000 a year or more. Maths graduates earn some of the highest salaries.

After a few years' experience, applied mathematicians working in IT can earn up to around £55,000 a year. With more experience, and moving into a senior position, you could be earning £70,000 or more, especially in the financial sector.

Conditions

- You would work mostly in an office or a laboratory, using computers.
- Hours might vary depending on the type of work you do – you may have to be flexible to meet the needs of a particular type of work.
- In some jobs you may have to attend conferences and visit other institutions or companies, so some travel may be involved.

Getting In

- You would need a degree in mathematics (SCQF Level 9). For entry to a degree you need 4-5 Highers including Maths with English at least to National 5.
- For some jobs, you may need a specialist postgraduate qualification (SCQF Level 11).
- Experience in computing is helpful and may be necessary for entry.

With a mathematics degree you can work in a wide range of jobs including business, accountancy and finance, teaching, engineering, electronics, scientific work (including meteorology and oceanography), economics, ICT and operational research.

You might work in a research institution, a university, the Civil Service, in business, finance or industry. There are also opportunities in information technology.

What Does It Take

You should be able to:

- handle abstract ideas and complex information
- manipulate numbers
- process data clearly and accurately
- make sound judgements.

You should have:

- a logical and methodical approach to your work
- good written and spoken communication skills
- an analytical mind
- an interest in numbers and mathematical processes
- good reasoning skills
- excellent problem solving skills
- computing skills.

Training

- You do specific training on the job.
- You would keep up to date with research techniques and developments in your field by attending seminars and training events.

Getting On

- There is a wide range of jobs for mathematicians and you would probably specialise in one area of work.
- With experience and ability, you could move into senior and management positions.
- You can do further postgraduate study – it may be required for your job.
- If you do follow the higher education route and have significant experience you can gain chartered status as a Chartered Mathematician (CMath) or a Chartered Mathematics teacher (CMathTeach). See the

website for the [Institute of Mathematics and its Applications \(IMA\)](#) for more details.

Contacts

Civil Service Fast Stream

Website: www.faststream.gov.uk

X: @faststreamuk

Facebook: www.facebook.com/faststream

London Mathematical Society (LMS)

Website: www.lms.ac.uk

X: @LondMathSoc

Mathematical Association (MA)

Tel: 0116 221 0013

Email: office@m-a.org.uk

Website: www.m-a.org.uk

X: @Mathematical_A

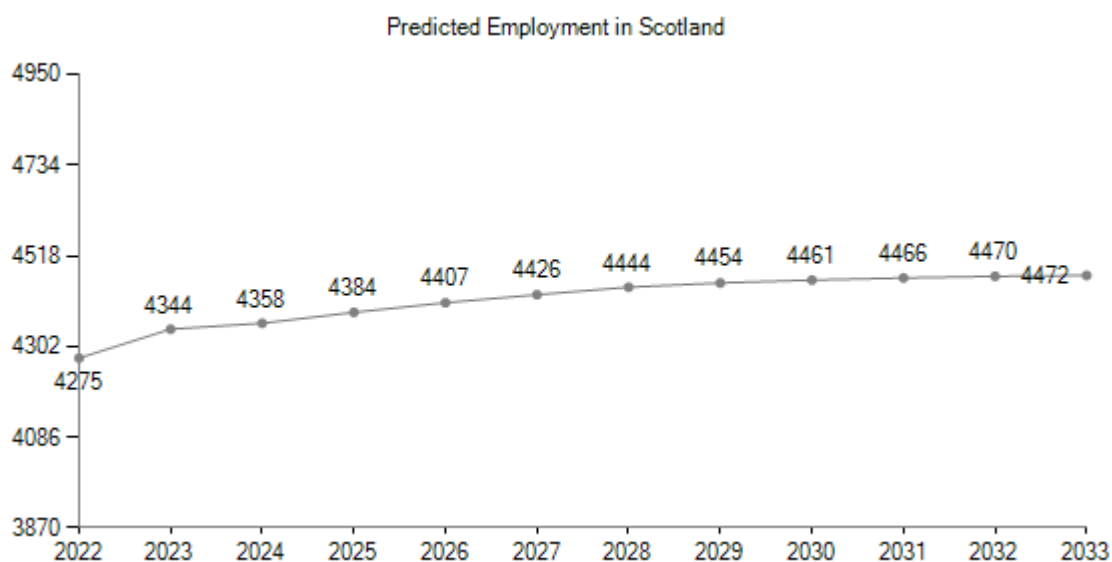
Facebook: www.facebook.com/groups/136275943093334

Statistics

Employment Status : Not available this career.

Past Unemployment - Scotland

No Claimant statistics available for Scotland.



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