Robotics Engineer

A robotics engineer designs, builds and tests machines to do automated jobs. These machines could be used in a wide range of industries such as the military (drones), aerospace (robots like the Mars Rovers) and medicine (robotic surgical equipment).

The Work

You could be:

- identifying areas in which robotic automation could be used
- using engineering and computing knowledge to design automated machines in specialist software
- building and testing prototype machines
- programming artificial intelligence for integration into robotic systems
- testing robotic systems and machines, identifying any issues
- analysing data from testing and fixing faults
- working in a team to complete projects on time and to budget
- maintaining and improving robotic machines
- writing reports and technical manuals.

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.

Starting salaries could be around £25,000 - £35,000 a year. With some experience and professional registration, this could rise to around £60,000 a year. With several years' experience, a senior position salary could be up to £85,000 a year.

Conditions

- You might be based in an office, laboratory or manufacturing plant.
- You would usually work up to 40 hours a week, Monday to Friday, but it may vary depending on the demands of different projects.
- You might have to travel to different sites if you are installing machines and systems.

Getting In

- You would normally need an HNC (SCQF Level 7), HND (SCQF Level 8) or degree (SCQF Level 9-10) in a subject such as artificial intelligence (AI), computing science, electrical engineering, mechanical engineering or robotics and mechatronics.
- For entry on an HNC or HND course you normally need 1-2 Highers plus some subjects at National 5. For a

degree course you need 4-5 Highers including Maths and Physics or a technological subject.
- Studying for a Foundation Apprenticeship (SCQF Level 6) while in fifth and sixth year at school could count towards entry to an HND or degree in a relevant engineering discipline.
- The Universities of Aberdeen, Glasgow and Heriot-Watt offer BEng and MEng degrees in robotics, AI and autonomous systems.
- You might be able to get in through a Graduate Apprenticeship in Engineering: Design and Manufacture at SCQF Level 10. Entry requirements vary depending on the employer and the university studied at. Check the apprenticeship.scot website for details.
- You might go on to do a specialised postgraduate qualification.

What Does It Take

You need to have:

- excellent maths, science and technology skills
- technical and practical ability
- a creative approach to solving problems
- IT and computer-aided design skills
- computer programming skills
- good communication skills
- business awareness.

You need to be able to:

- handle and explain complex information
- plan and organise projects
- work under pressure
- meet deadlines and keep within budget
- work in a team and motivate others.

Training

- You will learn new knowledge and skills on the job specific to the industry you work in.
- You might undertake further training for continuing professional development, especially if registered as an Incorporated Engineer or Chartered Engineer.

Getting On

- After gaining your degree and some further training with an employer, you can register with the Engineering Council as a professional engineer - either Incorporated Engineer (IEng) or Chartered Engineer (CEng).
- For IEng you need to have either a recognised Bachelor's degree or a recognised HNC or HND plus further study to Bachelor's degree level.
- For CEng you need to have a recognised Bachelor's degree with Honours plus a recognised Masters degree (or equivalent), or a recognised integrated Master of Engineering (MEng) degree.
- If you do not have any of the above qualifications, you may still be able to achieve IEng or CEng by other

approved routes. You can check these alternative routes with the Engineering Council or with the appropriate professional engineering institution.

- You could become a lead engineer, managing projects and teams.

More Information

The Tomorrow's Engineer's website has a section with Careers Inspiration Resources that you can explore.

Contacts

Engineering Construction Industry Training Board (ECITB)
Website: www.ecitb.org.uk
X: @ECITB_Skills
Facebook: www.facebook.com/ECITB

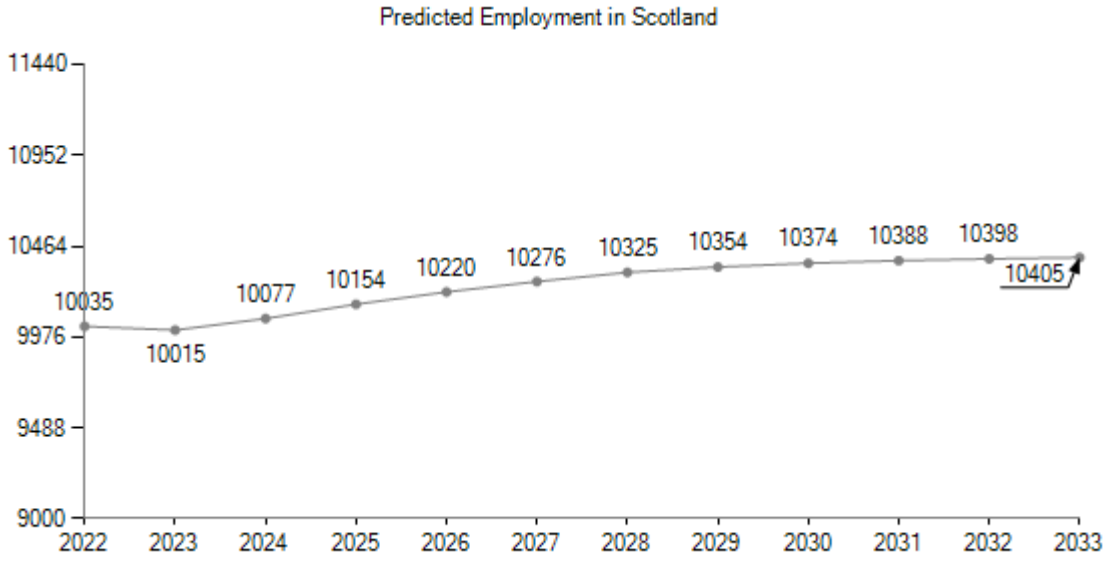
Institution of Engineering and Technology
Tel: 01438 313311
Email: postmaster@theiet.org
Website: www.theiet.org
Facebook: www.facebook.com/TheInstitutionofEngineeringandTechnology

Statistics

Past Unemployment - Scotland

No Claimant statistics available for Scotland.

LMI data powered by LMI for All



LMI data powered by Lightcast