

Automotive Engineer

Automotive engineers design, develop and manufacture all types of ground-based vehicles: cars (including racing cars), coaches, buses and trucks. They usually focus on design, production or research and development.

The Work

You could be:

- carrying out research to produce detailed designs for vehicles using computer-aided design (CAD) software
- using your knowledge of mechanical engineering, electronics, vehicle dynamics and aerodynamics to create new designs or modify existing ones
- developing environmentally-friendly 'hybrid' or electric vehicles
- deciding on the size and shape of each vehicle and the materials to be used to manufacture it
- building models or prototypes of the planned vehicle, or particular parts of it, testing and then modifying them
- checking the design for cost, performance, fuel efficiency and safety and ensuring that government regulations, such as emissions, are met
- negotiating with suppliers and managing budgets
- planning and organising the manufacturing process, taking account of developments in automatic and computer-controlled machinery
- working in quality assurance to make sure that the finished product meets all the standards set at the design stage.

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 salary for automotive engineers at graduate entry can be around £25,000 to £35,000 a year. With experience this can rise to £70,000 or more a year.

Conditions

- Some automotive engineers are based in a design laboratory and spend much of their time using design software on a computer.
- In many cases you would work normal hours, but in production you may have to work shifts.
- Jobs within the motorsport industry may involve shift work and weekends to support events and meet deadlines.
- Others work in production in factories or workshops where conditions can be noisy and where there can be the risk of accidents from equipment.

- In production work, you would normally wear protective footwear, headgear or safety glasses.

Getting In

- You would normally need a degree (SCQF Level 9-10) in a relevant engineering subject such as product design engineering, mechanical design engineering, mechanical engineering or electrical/electronic engineering.
- For entry to a degree course in engineering you would need 4 or 5 good Highers including English, Maths and Physics or a technological subject.
- You may be able to qualify by other training routes.

Automotive engineers work for vehicle manufacturers, but also for haulage operators, passenger transport companies and in the Armed Forces. Most work on the design or production of cars. Others work for the manufacturers of commercial vehicles and buses, specialist sports and racing cars or rail vehicles.

What Does It Take

You need to have:

- a strong interest in vehicle engineering and design
- an interest in solving scientific and technical problems
- a creative, adaptable and versatile approach to finding solutions
- excellent maths and IT skills
- a strong sense of responsibility
- good communication skills.

You need to be able to:

- handle complex information
- plan and organise programmes of work
- work within budget and to timetables and deadlines
- work on your own and also as part of a team
- keep up to date with technical developments.

Training

- Following your degree you would continue your training with an employer. This is usually done through an employer training scheme over 12 to 24 months.
- The Institution of Mechanical Engineers (IMechE) offers professional development courses. See website for details.
- You would continue to keep up to date with the latest developments throughout your career.

Getting On

- You can register with the Engineering Council as a professional engineer, either Incorporated Engineer (IEng) or Chartered Engineer (CEng). This can open up a wider range of opportunities.

- For IEng you need to have either a recognised Bachelor's degree or a recognised HNC (SCQF Level 7) or HND (SCQF Level 8) plus further study to Bachelor's degree level. With IEng status you may have more of an operations management role.
- 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) (SCQF Level 11) degree. As a CEng you could have more of a strategic role in planning and researching new ideas.
- Much of the research and development is done on a multinational basis and therefore you may be able to work in overseas design centres.
- You may also be able to move into teaching and academic research in colleges and universities.

More Information

The Engineering Council sets and maintains the standards of the engineering profession in the UK. It does so through 35 professional engineering institutions which are Licensed Members of the Engineering Council.

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

Contacts

Institution of Mechanical Engineers

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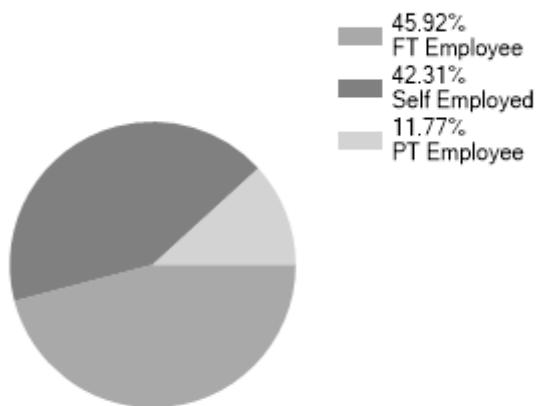
Website: www.imeche.org

X: [@IMechE](#)

Facebook: www.facebook.com/imeche

Statistics

Employment Status UK %

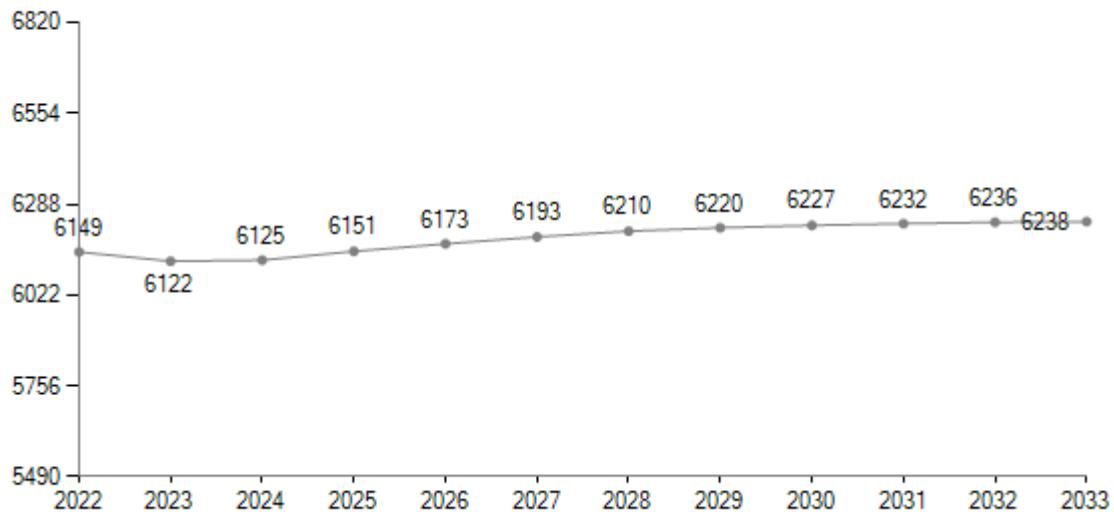


Past Unemployment - Scotland

No Claimant statistics available for Scotland.

LMI data powered by [LMI for All](#)

Predicted Employment in Scotland



LMI data powered by [Lightcast](#)