Physicist

Physicists do experimental and developmental work in areas such as electronics, medicine, engineering, the environment, energy, nuclear physics, manufacturing and information technology.

The Work

You could be:

- applying the principles of physics to practical problems in engineering, including nuclear energy and alternative energy, or manufacturing
- developing lighter, stronger and safer aircraft and satellites
- researching alternative sources of energy such as solar, wind and wave power
- working in medical diagnosis and treatment, using and developing equipment for x-rays, ultrasound and other scanning devices, or radiation, laser and other treatments
- working in electronics, computer science and communications, developing new technology in areas such as mobile technology and ICT networks
- identifying problems in discussion with colleagues, other professionals or business clients
- analysing the problem and selecting a suitable scientific way to solve it
- doing any necessary research and experiments using a range of instruments and equipment and computational modelling
- presenting results in a range of forms such as written or oral reports, charts, graphs or computer models.

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.

Physicists in the private sector can earn from around £25,000 a year to start, rising up to around £50,000 a year with a number of years' experience.

The starting salaries for physicists in postdoctoral research posts are normally in the range £30,000 to £45,000 a year. University lecturers including senior lecturers can earn up to £52,000 a year. More senior research and teaching staff can earn over £70,000 a year.

Trainee medical physics technician working in the NHS start on Band 6, £41,608 to £50,702 a year. As an HCPC registered medical physicist you would be on Band 7, £50,861 to £59,159 a year. With experience, in senior positions, this can rise to Band 9, £122,736 to £128,051 a year. The current pay scales are from April 2025.

Conditions

- Depending on the type of work you do, you would work in a laboratory, factory, hospital or office.

- Hours vary depending on the type of work, but are generally Monday to Friday. You may have to be flexible for some types of work including working shifts, and weekends.
- You may have to wear a lab coat or other protective clothing such as gloves or a face mask.
- You may have to work with potentially dangerous materials.
- You may need to attend scientific conferences and meetings, which might involve some travel.

Getting In

For most jobs you would require a degree.

- Degree courses in Physics (SCQF Level 10-11) last 4 or 5 years depending on whether you study for a BSc Hons, MPhys or MSci. For entry you usually need 4-5 good Highers, including Maths and Physics plus National 5 English.
- Related degree subjects may be acceptable, depending on your intended area or work – entry qualifications are similar.
- You might need a particular degree for some specialist areas of work – check the course content.
- Some entrants have a postgraduate qualification in a specialist physics subject.

You could work in a wide range of careers – in various branches of engineering, defence, ICT, medical industry, manufacturing, optics, power generation, satellite design, transport, construction, meteorology, patent agency work, business teaching and finance. There is also a considerable demand for teachers in this area.

What Does It Take

You should be:

- practical, logical and methodical
- able to process data accurately
- able to make sound judgements
- observant
- able to handle abstract ideas
- willing to use your initiative.

You should have:

- a scientific mind and aptitude for physics and maths
- a good eye for detail
- excellent problem solving skills
- good teamworking skills
- good written and spoken communication skills.

Training

- Training is normally on the job.
- For some work, you may have to do further postgraduate or professional study.

Getting On

- There is a wide range of career areas open to physics graduates.
- You would probably specialise in a particular area of work and you might work for a small or large organisation, a university or research institution.
- With experience and ability, you may be able to move on to senior or management jobs.
- You may need further postgraduate qualifications to get promotion.
- Many physicists progress to become Chartered Physicists (CPhys), accredited by the Institute of Physics (IoP), or Chartered Scientists (CSci), accredited by the Science Council.
- You have to keep up to date with developments in your specialist area throughout your career.

More Information

The Institute of Physics website has a careers section at www.iop.org/careers which shows you the wide range of career opportunities open to physics graduates.

Contacts

Institute of Physics (IOP)
Tel: 020 7470 4800
Website: www.iop.org/#gref
X: @PhysicsNews
Facebook: www.facebook.com/instituteofphysics

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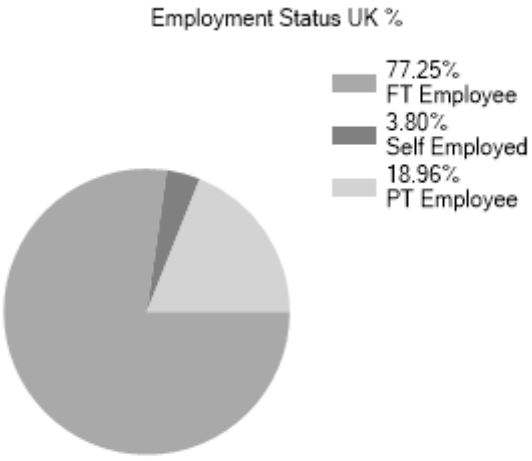
X: @ipemnews

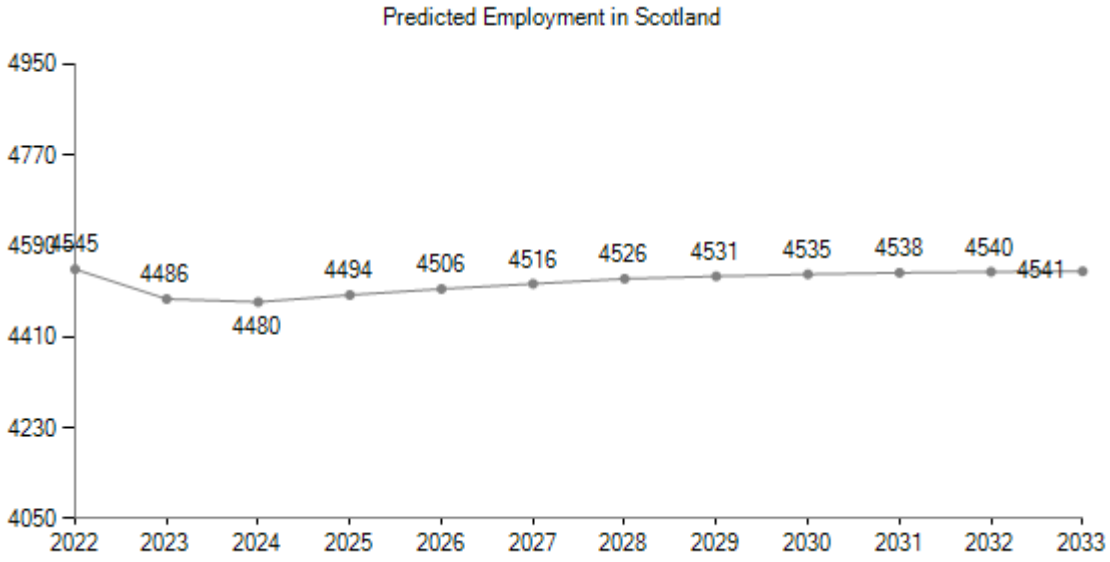
Statistics



Past Unemployment - Scotland

No Claimant statistics available for Scotland.

LMI data powered by LMI for All



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