

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 £22,000 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 £27,000 to £40,000 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.

A qualified medical physicist in the National Health Service (NHS) on Agenda for Change is usually on Band 7, £37,570 to £44,688 a year. A small number might rise to the post of Consultant or Head of Service, on Band 8d £76,083 to £88,132 a year. The current pay scales are from April 2019.

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 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 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. They also have a website dedicated to exploring the world of physics and related careers at www.physics.org.

The Future Morph website www.futuremorph.org shows you some of the amazing and unexpected places that studying science, technology, engineering and maths can take you.

Contacts

Institute of Physics (IOP)

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Email: membership@iop.org

Website: www.iop.org

Website (2): www.physics.org

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Twitter: @ipemnews

Science Council

Tel: 020 3434 2020

Email: enquiries@sciencecouncil.org

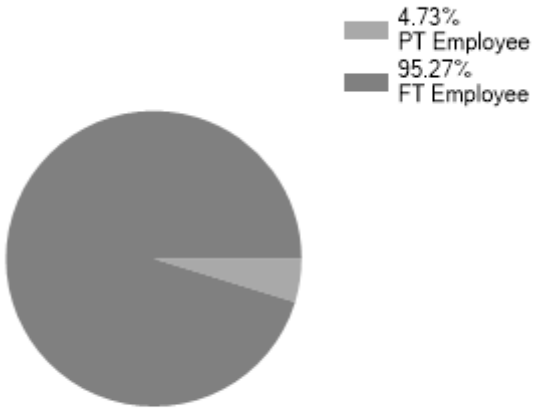
Website: www.sciencecouncil.org

Website (2): www.futuremorph.org

Twitter: @Science_Council

Statistics

Employment Status UK %



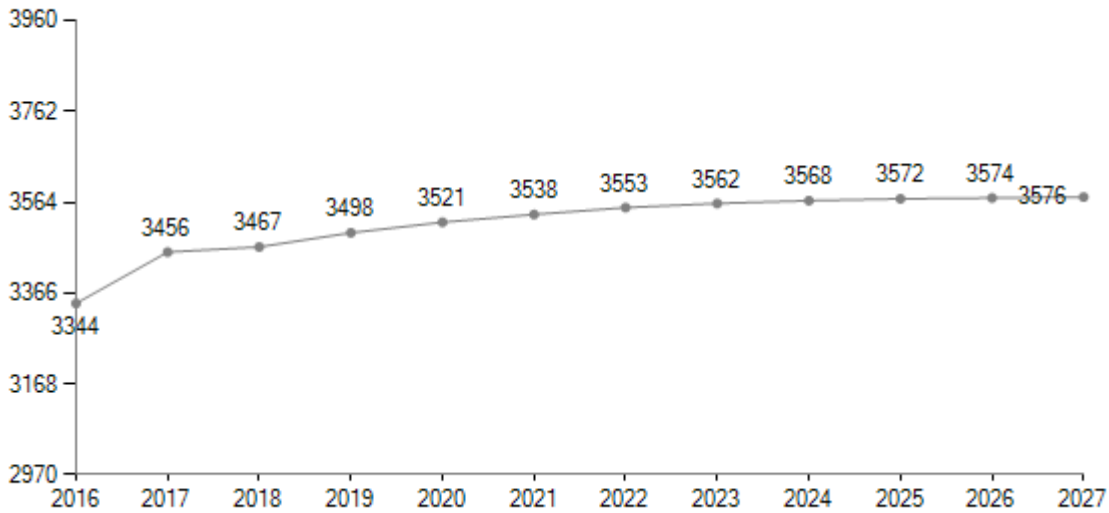
Past Unemployment - Scotland

Date	Unemployed
Dec 2016	0.15%

LMI data powered by [EMSI UK](#)

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

Predicted Employment in Scotland



LMI data powered by [EMSI UK](#)