

Medical Physicist

Medical physicists use science and engineering technology to develop, design and evaluate medical equipment and procedures, including radiotherapy, laser technology and imaging techniques such as x-rays. Medical staff use the equipment to identify problems or treat patients.

The Work

As a medical physicist you would work in areas such as:

- imaging – monitoring organs to make sure they are functioning as they should
- radiation and radiotherapy – calculating how much radiation should be administered for an individual's cancer treatment
- electronics – designing instruments used for taking measurements
- laser technology – using techniques that prevent the need for invasive surgery such as laser eye surgery, or breaking down kidney stones.

You could be:

- training medical staff how to use equipment to treat patients
- explaining treatment and possible side effects to patients
- supervising medical staff while they are carrying out treatment on patients, such as monitoring radiation dosage
- advising staff on using equipment safely and how to protect themselves from radiation, x-rays, gamma rays, ultrasound and lasers
- developing ways of taking good images which help in diagnosis but do not put the patient at risk
- analysing results from nuclear medicine tests
- ensuring equipment is monitored and maintained, so that it is safe and achieves correct and consistent results
- researching and developing new equipment for treating patients
- keeping up to date with the latest scientific and medical research.

Pay

Trainee medical physics technicians working in the NHS start on Band 6, £39,912 to £48,635 a year.

As an HCPC registered medical physicist you would be on Band 7, £48,788 to £56,747 a year. The current pay scales are from April 2024.

With experience, in senior positions, this can rise to Band 9, £117,732 to £122,831 a year.

Conditions

- You would work in a laboratory, usually in a hospital.
- You might have to be on call some evenings and weekends.

- You might work with dangerous materials and you could be exposed to radiation, but you would follow health and safety procedures.
- You would wear protective clothing at certain times, such as when supervising radiation treatment.

Getting In

- To enter as a trainee medical physicist, you should have an Honours degree (SCQF Level 10) in physics, engineering or biomedical engineering.
- Entry requirements for a degree are normally 4-5 Highers including Maths and Physics plus some subjects at National 5, including English.
- Courses accredited by the Institute of Physics or one of the engineering bodies (such as the Engineering Council or Institution of Engineering and Technology) lead to membership of professional bodies, which may help further your career.

Most medical physicists work for the National Health Service (NHS), but there are also jobs in universities and with research organisations.

What Does It Take

You should be:

- accurate with excellent attention to detail
- able to concentrate for long periods
- willing to persevere
- good at solving problems
- logical
- able to work under pressure
- safety-conscious
- willing to take a high level of responsibility.

You should have:

- excellent scientific ability
- an interest in applying science and technology to health care
- IT skills
- good research skills
- good communication skills.

Training

- To become fully qualified and able to register with the Health and Care Professions Council (HCPC), you complete three years of training.
- For your training, you would apply to the Scottish Medical Physics and Clinical Engineering Training Scheme (SMPCETS). In Year 1, you complete a relevant MSc degree from a Scottish university, and in Year 2, you rotate around specialisms in either medical physics or clinical engineering. In Year 3, you will choose your specialism to focus on.

- Completion of the 3-year training scheme leads to registration with the HCPC.
- Vacancies are usually advertised on the [NHS Scotland Recruitment](#) website and there is more information on the [SMPCETS](#) website..
- You can also become a member of the Institute of Physics and Engineering in Medicine (IPEM).

Getting On

- You would be expected to undertake continuing professional development (CPD) to keep up to date with the latest developments and technology and maintain HCPC registration.
- With IPEM membership and experience you can apply for posts in specialist areas.
- With further training you might move into management.
- You could move into teaching and research work.
- It can help if you are able to move around the country.

More Information

NHS Scotland generally advertise training posts early in January and recruit up to the September start. There are usually around 20 posts in various clinical science disciplines available.

Contacts

Health and Care Professions Council (HCPC)

Tel: 0300 500 6184

Email: education@hcpc-uk.org

Website: www.hcpc-uk.org

Twitter: [@The_HCPC](#)

Facebook: www.facebook.com/hcpcuk

Institute of Physics and Engineering in Medicine (IPEM)

Tel: 01904 610821

Email: office@ipem.org.uk

Website: www.ipem.ac.uk

Twitter: [@ipemnews](#)

NHS Scotland Careers

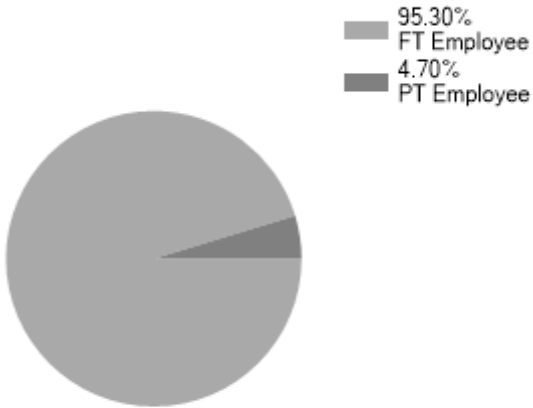
Website: www.careers.nhs.scot

Website (2): jobs.scot.nhs.uk

Twitter: [@NHSScotCareers](#)

Statistics

Employment Status UK %

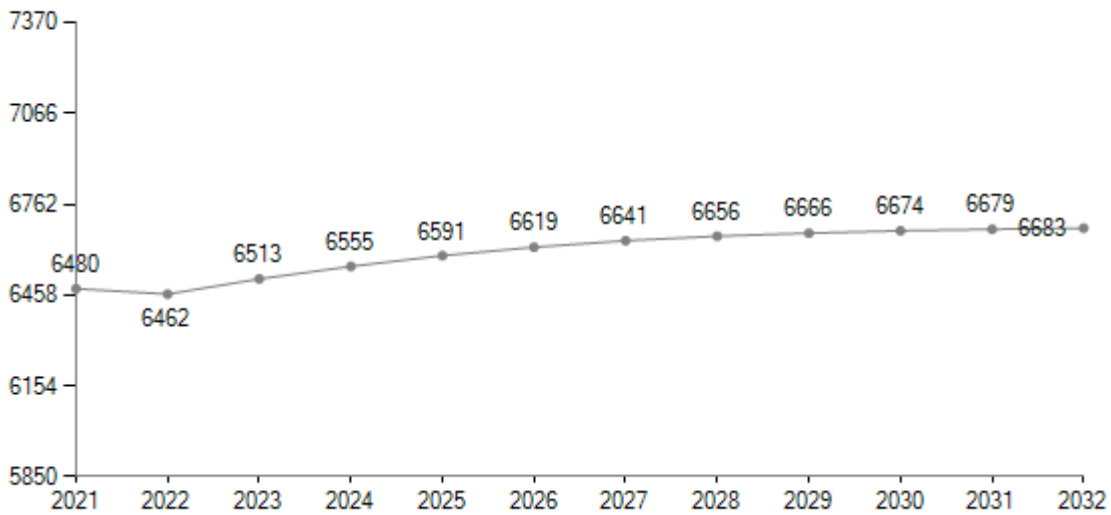


Past Unemployment - Scotland

No Claimant statistics available for Scotland.

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

Predicted Employment in Scotland



LMI data powered by [Lightcast](#)