

Clinical Scientists in Nuclear Medicine

What are clinical scientists in nuclear medicine?

Clinical scientists in nuclear medicine are scientists, usually physicists, who use their scientific expertise in a variety of ways to benefit patients. They are responsible for the scientific and technical aspects of the work of a nuclear medicine department.

Clinical scientists in nuclear medicine must be able to work as part of a multidisciplinary team that is likely to include doctors, radiographers, technicians and nurses. They must also have excellent communication skills and the ability to explain complex physics in everyday language as much of their workload will involve direct contact with patients.

Their roles will vary widely from department to department but will include some or all of the following activities:

- Managing new and existing equipment, including regular testing to ensure the safety, accuracy and appropriateness of equipment being used to test and treat patients.
- Designing new ways of acquiring data from the gamma cameras and processing the data, using computers, to produce the best possible images. This may also involve developing specific computer software for the purpose.
- Researching and developing new techniques, often as part of a closely-working multidisciplinary team.
- Teaching and training a wide variety of healthcare professionals within the multidisciplinary team
- Quality assurance work including developing systems that help staff to organise, record and monitor their work to ensure both safety and best practice.
- Radiation protection work, to ensure the safety of patients, staff and the public.
- Radiopharmaceutical work, contributing to the work involved with producing, distributing and handling the radioactive substances that are used in nuclear medicine departments.

What training is needed?

Before training as a clinical scientist, you will need an honours degree in a physical science such as physics. This will enable you to apply for a training post that has been approved by the Institute of Physics and Engineering in Medicine (IPEM). Please refer to the IPEM website for details of current training schemes. Part I training will include an MSc (a postgraduate degree) in Medical Physics and practical work based training in a wide variety of medical physics specialities, of which nuclear medicine is just one. Successful

completion of Part I training will result in the award of an IPEM Postgraduate (DipIPEM).

To specialise as a clinical scientist in nuclear medicine you must then complete Part II nuclear medicine training whilst in post. Registration with the Health Professions Council is normally obtained upon completion of Part II training and corporate membership of IPEM is awarded.

Further information

- The British Nuclear Medicine Society is the specialist society for all professions working in the nuclear medicine field in the UK. Further information can be found on their website at www.bnms.org.uk
- The Institute of Physics and Engineering in Medicine is the organisation dedicated to a wide variety of scientific careers within the healthcare sector. Useful careers and training information about clinical science can be found on their website at www.ipem.ac.uk
- The Institute of Physics is a scientific organisation devoted to the understanding and application of physics. Information about careers in physics, including clinical science can be found on its website at www.iop.org
- The Health Professions Council is the regulatory body for health professions, including clinical science in the UK. Its website can be found at www.hpc-uk.org/
- Information about NHS careers, including clinical science can be found on the NHS Careers website at www.nhscareers.nhs.uk/ while an interesting overview of one individual's work as a clinical scientist in nuclear medicine, can be found on the NHS Careers website at www.nhscareers.nhs.uk/hcsci_stories02.shtml