

Clinical engineers

use physical and materials sciences and manufacturing skills to make significant contributions to the diagnosis and treatment of disease, and to the rehabilitation of patients with disabilities.

Some clinical engineers design and develop instruments for patient monitoring, diagnosis, treatment or research. New joint replacements, active implants and tools for minimally-invasive ('keyhole') or precision ('robotic') surgery are built and tested in clinical engineering laboratories. Clinical engineers may be responsible for quality assurance of patient-connected equipment in hospitals.

Rehabilitation engineering spans: basic research into the mechanics of the human body (including tissue mechanics, soft tissue damage and muscle stimulation; biomechanical diagnosis and monitoring or patient recovery; and custom design and manufacture of aids such as wheelchairs and speech synthesisers for individual patients.

As a clinical engineer you must be able to work with patients, with technical, medical and administrative staff, and with equipment manufacturers. You will need to keep abreast of scientific and medical research in your field and to develop your own laboratory, design, workshop and management skills.

Some clinical engineers work in large departments that also cover a range of medical physics activities. Others may form the scientific nucleus of a rehabilitation unit that includes doctors, nurses and therapists. All are encouraged to extend and share their specialist knowledge by participating in professional meetings at national and international level.

Pay

Grade A Clinical engineers begin on £16,302-£20,622 per annum.

Students normally start at or near the bottom and progress up the scale by annual increment. By grade C they could earn up to £60,000



Further Information

Institute of Physics and
Engineering in Medicine
Fairmount House
230 Tadcaster Road
York
YO24 1ES

Entry Qualifications and progression

The minimum qualification is normally an honours degree in a physical or engineering science.

A higher degree or industrial experience may be valuable.

Routes into this degree programme would usually be three A levels including physics and maths or AVCE science or Btec National diploma in engineering. These vocational qualifications could lead directly to a degree programme or you could study first for an HND and then top up to degree level.

Training is in the form of a 2 year postgraduate qualification based at an accredited centre eg medical school or university.

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