

Health / Science Based Careers

This is simply a list of ideas. It excludes medicine and dentistry and it is not exhaustive. It is important to research the ECLIPS leaflets. Tuition fees tend to be paid on degrees linked to NHS careers. Means tested bursaries are also available. Also, research the careers on the excellent NHS website.

Pharmacy

Chemistry is required. Normally two other sciences or Maths are required. Often Biology is preferred. High grades i.e. AAB/ABB are needed. To become a pharmacist you need to take an accredited degree course leading to the MPharm (Master of Pharmacy.) There are 26 schools of pharmacy which offer courses accredited by the General Pharmaceutical Council (GPhC). All offer four-year, full-time courses, although the Universities of Bradford and Nottingham also offer a five-year sandwich course.

Physiotherapist

Science required at A level – Biology is preferred. High grades are needed in three A levels for entry to the degree course. A list of approved courses can be found on the HCPC (Health and Care Professions Council) website. Entry is very competitive. Work experience placements are essential before applying. See the NHS website www.nhscareers.nhs.uk

Nursing

From 2013, everyone entering nurse training will be required to study for a degree. The degree requires 2-3 A levels, one of which should be a science. Most institutions will require 3 A levels (or equivalent.) . The degree is 3 years long. The four areas are adult nursing, children's nursing, learning disability nursing and mental health nursing. The course is 50% theory and 50% practice. See the NHS Careers website www.nhscareers.nhs.uk. If you are offered an NHS-funded place on a nursing **degree course**, you would currently be eligible to have your tuition fees paid and you would be able to apply for a means-tested bursary.

Midwifery

Midwives can qualify through a full-time, three-year degree course in midwifery. You will gain both a degree and an RM qualification. Three A levels are required of which one should be a science. Biology is preferred. Grades required are very high because entry is very competitive. Check individual degree requirements. They do vary. See the NHS website www.nhscareers.nhs.uk. If you are offered an NHS-funded place on a nursing degree course, you would currently be eligible to have your tuition fees paid and you would be able to apply for a means-tested bursary.

Speech and Language Therapy

A 3 or 4 year degree course is required. It has to be accredited by the Health and Care Professions Council (HCPC.) The minimum entry requirement for a degree is normally three A levels at good grades or the equivalent and at least five GCSEs at grades A*-C. Preferred subjects at A level often include biology, psychology or another science/social science, English language or a modern foreign language. Some courses do not specify particular subjects. Check entry requirements with individual universities. See the NHS website www.nhscareers.nhs.uk.

Radiography

For entry to a radiography degree course, you need A levels, or equivalent qualifications – usually including at least one science subject. You need to follow an HCPC (Health and Care Professions Council) approved degree course in diagnostic or therapeutic radiography, which normally takes three years, full time. A list of HCPC approved courses can be found on the NHS website www.nhscareers.nhs.uk. You need to decide which aspect of radiography interests you before you start training. There are clear differences in the work. Diagnostic radiographers normally meet their patients only once whereas therapeutic radiographers will often build up a relationship with a patient over time. See also www.radiographycareers.co.uk.

Occupational Therapy

A 3 or 4 year degree course is required which is approved by the HCPC (Health and Care Professions Council.) Applicants require 3 A levels or equivalent qualifications. At least 1 science or social science A level subject (biology, sociology or psychology) may be required. It is important to check entry qualifications with individual institutions. Occupational therapists are employed by health and social services, in private practice and by charities and voluntary organisations. See the NHS website www.nhscareers.nhs.uk and www.cot.org.uk.

Optometry

To become an optometrist you need to complete a full-time optometry degree course, approved by the General Optical Council. Courses are offered at Anglia Ruskin, Aston, Bradford, Cardiff, City, Glasgow Caledonian, Manchester and Ulster universities, and demand for places is high.

For entry, you are likely to need three A levels at high grades; at least two from maths, physics, biology or chemistry. Some universities specify certain A level subjects, such as biology. Check entry requirements carefully. GO to www.nhscareers.nhs.uk

Orthoptics

There are three approved degree courses in orthoptics – at the Universities of Liverpool, Sheffield and Glasgow Caledonian. Courses need to be approved by the HCPC (Health and Care Professions Council.) Three A levels required. Biology A level is required. Other useful subjects are maths, physics and chemistry. High grades are needed. Entry requirements vary.

Dietetics

Dietitians need to be interested in science, but also able to communicate with and motivate people, without being judgmental. Dietitians need to be aware of the way people live and work and how this affects the way they eat. Most dietitians work in the NHS, with both hospital in-patients and out-patient services.

Three A levels tend to be required. A level, Chemistry and Biology are often required, or preferred, subjects.

Alternative qualifications, such as a relevant BTEC National, may be acceptable. The degree course needs to be approved by the HCPC (Health and Care | professions Council.) **Check carefully with individual institutions, as subject requirements vary.**

Paramedic

There are two routes which allow you to qualify.

- Student paramedic entry – you are taken on as a student paramedic by an ambulance service trust and take an HCPC approved course on a part-time basis. Entry requirements are good GCSEs but most successful applicants offer higher qualifications. Experience of care work is essential.
- Take a higher education qualification i.e. Degree / Foundation Degree in Paramedic Science or Paramedic Practice (approved by the HCPC.) Courses include work placements with the ambulance service. A level Science (especially Biology) is required. Entry requirements vary.

A list of ambulance trusts can be found at www.nhs.uk

Healthcare Sciences

This is a very fast growing career area in the NHS. Healthcare science staff specialise in the area of physiological science in the health service, using equipment to measure and analyse how well various parts of patients' bodies are functioning. Areas of work are cardiac science, respiratory physiology and sleep science, audiology, neurophysiology, gastrointestinal physiology, clinical perfusion.

Major changes to the career structure, education, training and registration of all healthcare science staff are being rolled out under the Modernising Scientific Careers programme (MSC.) There is a clear career structure and 4 levels:

- Associate and assistant level
- NHS Practitioner Training Programme (undergraduate level)
- NHS Scientist Training Programme (postgraduate level)
- NHS Higher Specialist Scientific Training (doctoral level).

NHS Practitioner Training Programme (PTP) – This is for people with A levels wanting to take an approved and accredited BSc (honours) degree in healthcare science.

NHS Scientist Training Programme (STP) – This is for graduates with a degree in a relevant science. They can train as a healthcare scientist through the STP. For more details, see the Eclips leaflet and www.nhscareers.nhs.uk.

Biomedical Sciences

A degree in biomedical sciences allows you to specialise in e.g. clinical chemistry, haematology, histopathology, medical microbiology, immunology. Two sciences A levels (or equivalent) are required for entry to the degree. Chemistry and/or Biology are normally required. In order to use the title 'biomedical scientist', you must be registered with the Health and Care Professions Council (HCPC). To gain registration you have to complete a

biomedical science degree that has been approved by the HPC and gain the award of certificate of competence (based on a portfolio of evidence built up in the workplace).

See the website of the Institute of Biomedical Science www.ibms.org.uk for full details. See also www.nhscareers.nhs.uk

Biochemistry

The work of biochemists makes a huge contribution to medicine, veterinary science, agriculture, horticulture, fisheries, forestry, the environment, nutrition and the brewing and pharmaceutical industries. They work in laboratories in industry, in research and in education. Biochemistry degrees require chemistry A level and often another science (biology) or maths. Alternative qualifications may be acceptable. See the website of the Biochemical Society www.biochemistry.org and www.nhscareers.nhs.uk.

Microbiology

This is the study of micro-organisms; bacteria, fungi, viruses and single-celled animals and plants. It is vital to understand the biochemical activity of micro-organisms e.g. in the decay of food and organic matter. They play a part in food and drink production, in the treatment of infections and, in the environment, they play an important role in recycling.

Opportunities available are in pure research in universities, research institutes and pharmaceutical companies, as well as in medical microbiology, agricultural microbiology, industrial microbiology, pollution control and in the food industry. Biology and Chemistry would be required at A level for degrees. More information at www.sgm-microbiologycareers.org.uk and www.nhscareers.nhs.uk.

Biotechnology

Biotechnology is used in healthcare, the food and drink industries, agriculture and the environment. It is not essential to take a specialist biotechnology degree to start a biotechnology career. For example, degrees in chemical engineering, biochemistry, genetics, microbiology, immunology or molecular biology can be just as suitable. Chemistry and biology A level normally required.

Work in pharmaceutical companies

The pharmaceutical industry conducts research into new medicines, trials them and then, if the trials are successful, it manufactures them. There are opportunities in research, development, production, quality assurance, registration and sales and marketing. Degrees required include Biology, Biochemistry, Chemistry, Molecular Biology, Microbiology. See the website of the Association of the British Pharmaceutical Industry www.abpi.org.uk.

Forensic Science

This is a small sector. For direct entry to train as a forensic scientist, you would need a scientific degree (Chemistry or Biology based.) There has been a proliferation of courses in Forensic Science and not all are appropriate. Many applicants are post graduates.

The Forensic Science Society (FSSoc) accredits degree and postgraduate courses in forensic science. For a list of accredited courses, see the FSSoc website www.forensic-science-society.org.uk. For general information on careers in forensic science, go to www.headacademy.ac.uk/forensic_careers.

Science Writer

A science writer researches, writes and edits scientific news articles and features for business, trade and professional publications, specialist scientific and technical journals and the general media. Many science writers have a science degree and often a postgraduate qualification. A scientist can either enter science writing directly after graduation or move into the industry after several years of scientific research. See Prospects.

- **See Eclips on the Connexions Berkshire website**
- **See the Prospects website www.prospects.ac.uk for excellent information on career options with a wide range of degrees.**