

Options with biomedical sciences

Your skills

Over the course of your degree you develop a good mix of subject specific and technical skills as well as transferable core skills. Consider these alongside other achievements, such as paid work, volunteering, family responsibilities, sport, membership of societies, leadership roles, etc. Think about how these can be used as evidence of your skills and personal attributes. Then you can start to market and sell who you really are, identify what you may be lacking and consider how to improve your profile.

Through studying biomedical sciences you develop skills which are at the forefront of advances in medical research, including clinical biochemistry, biotechnology, the pharmaceutical industry, forensic science, veterinary science, health and safety, and food science.

The practical work you undertake equips you with the skills associated with good biomedical laboratory practice. You will be aware of the need for compliance with health and safety policies and understand the importance of risk and COSHH (Control of Substances Hazardous to Health) assessments. You will have knowledge and an appreciation of issues relating to quality control and quality assurance.

In addition to your subject-specific knowledge and skills, you develop a range of transferable skills during your studies, including:

- research;
- data analysis, evaluation and interpretation;
- analytical and problem solving skills;
- IT;
- teamwork;
- numeracy;
- project management;
- decision making;
- written and oral communication.

The mix of skills that you acquire through studying biomedical sciences makes you ideally placed to undertake employment that requires you to exercise professionalism and independence of thought, to make difficult decisions in a fast-moving and pressurised environment and to take responsibility for your actions. Your ability to work methodically, efficiently and accurately will be highly valued by employers.

Employment prospects

Every year, statistics are collected to show what HE students do immediately after graduation. These can be a useful guide but, in reality, with the data being collected within just six months of graduation, many graduates are travelling, waiting to start a course, paying off debts, getting work experience or still deciding what they want to do. For further information about some of the areas of employment commonly entered by graduates of any degree discipline, check out 'What Do Graduates Do?' and the AGCAS Special Interest booklet 'Your Degree... What Next?'

A degree in biomedical science is useful for a wide range of careers both in the public and private sectors. These include roles in health care; scientific research and development; financial professions such as accountancy; technical support; teaching; and scientific writing and journalism.

In 2006, six months after graduation, 62% of biomedical science graduates were in full-time employment. The majority of those in full-time employment six months after graduation are working as health professionals and associate professionals, suggesting

that many graduates are successful in securing work directly related to their field of study. Many others are working in professional roles in a variety of sectors from scientific research to social welfare, demonstrating that biomedical sciences graduates are highly sought after by a wide range of graduate recruiters.

Job options

Bear in mind that it's not just your degree discipline that determines your options. Get hold of the AGCAS Special Interest booklet 'Your Degree... What Next?' from your careers service. This looks more generally at the options for today's graduates and offers informed advice on career planning. Or try 'What jobs would suit me?', an online career planning tool, at www.prospects.ac.uk/links/ppanner.

You can choose between jobs that are degree-related or those that appeal because they use other interests or elements of your degree.

Jobs directly related to your degree

The majority of the roles listed will require you to undertake further training following your first degree. A higher degree may also be a requirement in some cases.

- [Biomedical scientist \(MLSO\)](#) - carries out laboratory tests on human samples to help clinicians diagnose illness and evaluate the effectiveness of the necessary treatment. Following basic training, biomedical scientists specialise in one of the following main areas: medical microbiology; clinical chemistry; transfusion science; haematology; histology; cytology; immunology; and virology.
- [Immunologist](#) - investigates the functions of the body's immune system and uses this knowledge to work towards treating and controlling a range of diseases and disorders. Immunologists work within clinical and academic settings, as well as in industrial research.
- [Microbiologist](#) - observes, identifies and monitors microbes, and develops new techniques, products and processes. Areas of specialism include: basic research; medicine; healthcare; food; industry, such as pharmaceuticals, toiletries and biotechnology; agriculture; and the environment.
- [Research scientist \(medical\)](#) - plans and conducts experiments to increase the body of scientific knowledge on topics related to medicine. They may also aim to develop new, or improve existing, drugs or other medically-related products.
- [Forensic scientist](#) - examines contact trace material associated with crimes. They provide impartial scientific evidence for use in courts of law to support the prosecution or defence in criminal and civil investigations.
- [Scientist, industrial research](#) - plans, organises and performs systematic investigations to develop or synthesise new products and improve the performance of existing components or products.
- [Toxicologist](#) - plans and carries out laboratory and field studies to identify, monitor and evaluate the impact of toxic materials and radiation on human and animal health, and on the health and status of the environment.
- [Higher education lecturer](#) - facilitates learning and carries out research activities in universities and some colleges of further education (FE).

Jobs where your degree would be useful

- [Medical sales representative](#) - increases the awareness and usage of a company's pharmaceutical and medical products, through working on a one-to-one basis with contacts and making presentations in settings such as general practices, primary care trusts and hospitals.
- [Scientific journalist](#) - researches, writes and edits scientific news articles and features for business, trade and professional publications, specialist scientific and technical journals, and the general media.
- [Chartered certified accountant](#) - ensures the financial integrity of an organisation or service, including the control of funds and salaries and may also manage and develop financial systems and produce reports and budget plans.

Although for many graduates the jobs listed here might not be their first, they are among the many realistic possibilities with your degree, provided you can demonstrate you have the attributes employers are looking for. It's worth noting that many graduate vacancies don't specify particular degree disciplines.

To find out more about the above options and other jobs, see AGCAS Occupational Profiles and other sources of occupational information available in careers services. Occupational Profiles are also available on www.prospects.ac.uk/links/occupations.

Where are the jobs?

Biomedical scientists have a well-defined career in the health service. To work as a state-registered biomedical scientist in the health service, you will first need to obtain the Institute of Biomedical Science (IBMS) Certificate of Competence. This can be achieved through undertaking accredited work experience either after graduation or during a sandwich placement year.

Other common employers of biomedical science graduates include academic departments in universities, forensic laboratories and private pathology laboratories. The food and drink and pharmaceutical industries employ graduates in areas such as research and development and quality assurance. Pharmaceutical and healthcare companies also recruit graduates as medical sales representatives.

See the following sectors for further information:

- [Education](#);
- [Health](#);
- [Science](#).

Career management is an ongoing process, one that you'll no doubt develop all your working life. For further information on all the above employment areas, visit www.prospects.ac.uk/links/sectorbs or ask to see the AGCAS Sector Briefings at your careers service.

Further study

Of those who graduated in biomedical sciences in 2005, 12% went on to undertake further study, with an additional 9% combining further study with work. Most took postgraduate qualifications in science subjects such as biomedical science, biochemistry, biotechnology, haematology, immunology and microbiology.

Further study is undertaken by many biomedical science graduates because an increasing number of careers in the science sector require entrants to have a specific postgraduate qualification. By studying at postgraduate level, you will further develop your specialist knowledge, research skills and communication skills. This can enhance your employability by enabling you to apply for a wider variety of jobs and in some cases may also enable you to enter a profession at a higher level.

It is possible for a graduate with a good degree in biomedical sciences to obtain a place on a four-year fast-track graduate entry course to study medicine.

These trends show only what previous graduates in your subject did immediately upon graduating. Over the course of their career

- the first few years in particular - many others will opt for some form of further study, either part-time or full-time. If further study interests you, start by taking a look at the AGCAS Special Interest booklet 'Postgraduate Study and Research' or the 'Further study' section of www.prospects.ac.uk. For a comprehensive list of courses, see 'Prospects Postgraduate Directory'.

Refer too to the 'Prospects Postgraduate Funding Guide', the AGCAS Special Interest booklet 'Postgraduate Study and Research' and AGCAS Vocational Course Surveys for further details relating to finance and the application process.

Other options

Don't forget there are alternatives to entering employment or postgraduate study, such as taking time out, volunteering or travelling. Longer term, you may want to consider starting your own business. Check out the AGCAS Special Interest booklets 'Beyond Nine to Five: Flexible Working', 'Self-employment' and 'Working Abroad', all available from your careers service.

Biomedical scientists who have gained enough relevant experience can have the opportunity of volunteering overseas with organisations such as Medecins Sans Frontieres (MSF) (<http://www.uk2.msf.org>), Voluntary Services Overseas (VSO) (<http://www.vso.org.uk>) and the World Health Organisation (WHO) (<http://www.who.int>). It is possible for biomedical scientists who have experience in clinical chemistry, haematology/transfusion or microbiology to join the Territorial Army Medical Services whilst working full-time in the health service.

What next?

This should have started you thinking about your future. Whatever stage you are at, your careers service will be able to help you. A huge number of resources, including most of those mentioned here, plus a wide range of other services, including individual careers guidance, employer presentations and workshops on topics such as successful applications and interview techniques, are likely to be on offer.

A full list of useful resources plus case studies of graduates in this subject can also be found on www.prospects.ac.uk/links/options.

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