

Options with genetics

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.

In addition to the subject knowledge gained during your course, you gain a range of practical and technical skills utilised during laboratory sessions. These are worth identifying to employers and may include particular techniques and the use of highly technical equipment; you can make mention of particular equipment and/or techniques used. The work you do on your degree course develops your skills in handling a mass of diverse data and drawing conclusions.

You also develop a number of transferable skills that are highly regarded by employers. These include: written and oral communication skills; numeracy; research; analytical and problem-solving skills; and IT skills. Your degree course may include an extended research project, possibly based in an existing research group, enabling you to develop project management, team working and organisational skills, and to demonstrate the ability to understand complex scientific data and information. If you have a relevant work placement, you gain an appreciation of how businesses operate. You also develop the ability to work independently and to manage your own time.

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?'

Many genetics graduates are keen to use their degree knowledge directly in science-related careers, in particular in industry (especially the areas of pharmaceuticals, agriculture and biotechnology), the health service and academia.

Many also use their skills in unrelated fields such as business, finance and retail.

In 2006, six months after graduation, just over 43% of new genetics graduates had entered full-time employment and 7% part-time employment. Nearly 15% of those with jobs were working in scientific research and analysis. A further 13% entered the professional and technical occupations, such as laboratory technician, while over 5% found work in business and finance professions, such as accountancy and general business management and a further 4% in health and associated professions, including clinical science.

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/pplanner.

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

- [Research scientist \(medical\)/Research scientist \(life science\)](#) - working in universities and hospitals, geneticists conduct research in a wide range of areas. Academic research, often in short, fixed-term posts, is usually only available to those with a good first degree and a postgraduate qualification (usually a PhD).
- [Scientific laboratory technician](#) - has a 'hands on' role, applying genetic technology to fields such as agriculture, forensic science, pharmaceutical development and clinical medicine, using their skills in gene cloning, manipulation and expression of genes.
- [Counsellor](#) (National Health Service (NHS)/private practice) - provides information and support to families whose members have genetic disorders or to people at risk from inherited conditions. The job involves counselling, education and administration.
- [Clinical cytogeneticist](#) - recognises genetic disorders and birth defects. The NHS provides training for two areas: clinical cytogeneticists, who study chromosomes from patient's blood, tissue or fluid samples and assist clinicians in their diagnosis of genetic disease; and clinical molecular geneticists who examine DNA for single or other gene abnormalities and confirm diagnosis of genetic disorders.
- [Scientist, industrial research](#) - an intellectually challenging role that can involve teamwork with other professionals, including those from other disciplines. Development may involve finding new products, e.g. drugs or new processes.
- [Clinical molecular geneticist](#) - uses biochemical and molecular biology techniques to identify genetic abnormalities associated with disease. They screen individuals both before and after the appearance of symptoms.
- [Clinical scientist, tissue typing](#) - matches tissue for transplantation and other medical operations. Several tests are required to ensure optimum matching between donors and patients, and clinical scientists are responsible for advising clinicians as to which donor is the best match.
- [Clinical research associate](#) - sets up, monitors and completes clinical trials.

Jobs where your degree would be useful

- [Medical sales representative](#) - a key link between pharmaceutical companies and medical and healthcare professionals. They work strategically to increase the awareness and usage of a company's pharmaceutical and medical products in settings such as general practices, primary care trusts and hospitals.
- [Medical technical officer](#) - a healthcare scientist, usually based in a hospital. Operates and is responsible for the maintenance of a range of highly complex equipment used to diagnose disease and treat patients.

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?

Most careers relating to genetics are based in, or relate to, the health services, so employers tend to be hospitals, pharmaceutical companies and universities. As genetic-based technology develops, opportunities have arisen in food and drink companies (including brewing), health and beauty care, biotechnology, and research and consultancy companies - organisations which carry out specific and sometimes specialised research, development and consultancy projects for industrial and other customers. The government-sponsored Research Councils have laboratories which recruit scientists, but usually following a higher degree.

Genetics graduates may also consider opportunities related to biological sciences, e.g. biotechnology companies, agricultural and horticultural companies, etc.

For further information on some of these employers, see the [health](#) and [science](#) sectors.

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

A large proportion of genetics graduates (32%) go on to further study. You can choose to specialise in an area within a subject that has interested you during your degree.

Many employers who would seek to recruit genetics graduates to use their subject directly really value postgraduate study. This is because they value the technical skills being developed to a higher level, particularly useful in research, as well as other transferable skills e.g. analytical and report writing. There are many options to enhance technical knowledge already gained in your first degree. Many graduates choose subjects directly related to their discipline, such as medical genetics and molecular genetics.

They may alternatively choose subjects derived from genetics, such as immunology and pharmacology.

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.

Some genetics graduates consider building up a specialist knowledge in a technical area and then moving into consultancy or freelance work

Sometimes your first job is not one that is related to your chosen career, but you can still use your time effectively in order to gain experience for your longer-term career aims. Think about part-time and evening courses, learn a new IT package, learn a new language, arrange some work shadowing or work experience and voluntary work - employers will really value the commitment and initiative you have shown to move your career forward.

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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