Biologist

Biologists study living things like plants and animals, in the laboratory or in their natural environment.

The Work

You could work in one of a number of specialist areas including botany, zoology, microbiology, immunology, biotechnology, genetics, molecular biology or ecology.

You could be:

- studying plant or animal life in the environment, to help with conservation
- assessing the effects of developments, such as roads or new buildings, on plant and animal life
- identifying agricultural pests and diseases and finding new biological or other ways to control them
- investigating causes of disease in plants, animals and humans
- helping develop medicines and vaccines for humans and animals
- producing man-made enzymes, hormones and other materials used for medical and other purposes
- setting up and carrying out experiments in the laboratory or in the environment — you may do experiments on animals
- collecting and analysing data, writing reports and making recommendations based on the results of experiments and observations
- working as part of a team of scientists and other staff, perhaps leading and planning projects.

Pay

The figures below are only a guide. Actual pay rates may vary depending on:

- where you work and your experience
- the size of the company or organisation you work for
- the demand for the job.

Salaries for biologists vary depending on the type of work done. Starting salaries for graduates tend to be in the range of £19,000 to £25,000 a year.

For research posts, pay can be up to around £38,000 a year. Well qualified and experienced biologists can earn more than £50,000 a year. There are opportunities in both the public and private sectors and pay rates will vary.

If you work for NHS Scotland as a registered clinical scientist in areas such as microbiology or immunology, you would be on Band 7, £37,570 to £44,688 a year. Starting salaries for pre-registration trainees are on Band 6, £30,401 to £38,046 a year. The current pay scales are from April 2019.

Conditions

- Depending on your job, you might work in a laboratory, factory, office, classroom or outdoors.
- You would normally work regular hours, but if you are doing experiments, fieldwork or attending

conferences, you may sometimes have to travel and work evenings or weekends.
- If you work in a laboratory you would usually wear a lab coat or other protective clothing.
- In some work there may be a risk of infection or allergic reaction but employers train staff to avoid this.
- You may have to work with unpleasant or hazardous samples.
- If you do field work, you would have to work in all kinds of weather at times.

Getting In

- You usually need a degree in biology, biological science or a related subject. There is a wide range of bioscience degree courses. It is important to check the course content to make sure the one you choose is suitable for the work you want to do.
- For entry to a degree, you usually need 4-5 Highers, normally including at least 2 from Maths, Biology, Chemistry and Physics. Biology and Chemistry are often preferred.
- A small number of Higher National Certificate (HNC) and Higher National Diploma (HND) courses ask for 1-3 Highers. Some of these may offer a progression route to a degree course. You must check this carefully with the universities and colleges involved.
- Many entrants have a postgraduate qualification in a specialist biological subject. This is usually essential for research posts.
- Entry to biology related jobs can be very competitive. Getting relevant work experience as part of your course or through an internship or work placement will greatly increase your chances of getting your first job.

Agricultural, pharmaceutical and food and drink industries, along with health and environmental organisations and charities employ researchers and technicians.

You can also work in a range of management and teaching posts at various levels. Smaller numbers of graduates opt for careers in IT, law, health care, finance, retail, marketing or administration.

What Does It Take

You need to be:

- practical
- logical and methodical
- observant, patient and willing to persevere
- flexible and adaptable
- accurate and careful in recording results in the laboratory or in the field.

You should have:

- excellent analytical skills
- good problem solving skills
- an enquiring mind
- excellent attention to detail
- good communication and team working skills
- initiative to develop new ideas and solve problems.

Training

- Training is on the job as you must keep up to date with developments in your specialist area.
- The Society of Biology offers a continuing professional development scheme. This can lead to the chartered status of membership.
- If you have an honours degree (2:1 or above) in a relevant subject you may be eligible to apply to train as a clinical scientist with the National Health Service (NHS). This three-year Scientist Training Programme (STP) combines various clinical placements with academic study in a specialist area and usually leads to an MSc or specialist postgraduate diploma and registration with the HCPC. Continuous assessment is recorded through the National School of Healthcare Science (NSHCS). Vacancies are usually advertised on the NHS Scotland Recruitment and NHS Education for Scotland websites.
- The majority of training opportunities for healthcare science disciplines (including microbiology, immunology and genomics) with NHS Scotland are advertised in the early new year.

Getting On

- You may have to take a postgraduate qualification (MSc or PhD) in a specialist biological subject and gain professional qualifications to progress in your career.
- Depending on your specialism you may move on to manage a laboratory, centre or department.
- You could move into quality control, become a sales or marketing manager or a general manager, possibly in a science based industry.
- You may move into education.

More Information

The Future Morph website shows you some of the amazing and unexpected places that studying science, technology, engineering and maths can take you.

The IntoBiology website is a good source of information on what you can do with a career in biology and includes videos, projects and study skills.

Contacts

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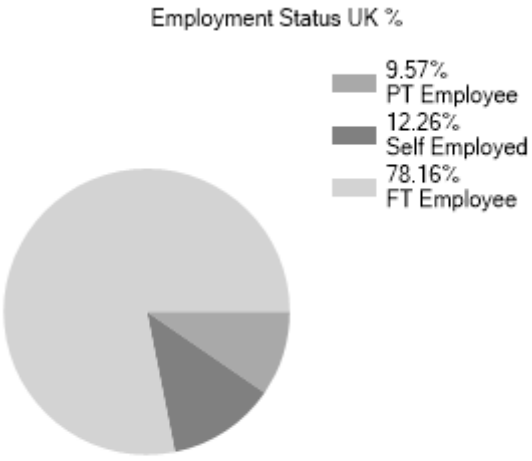
Statistics



Past Unemployment - Scotland

Date	Unemployed
Dec 2016	0.05%
Sep 2018	0.04%
Dec 2018	0.04%

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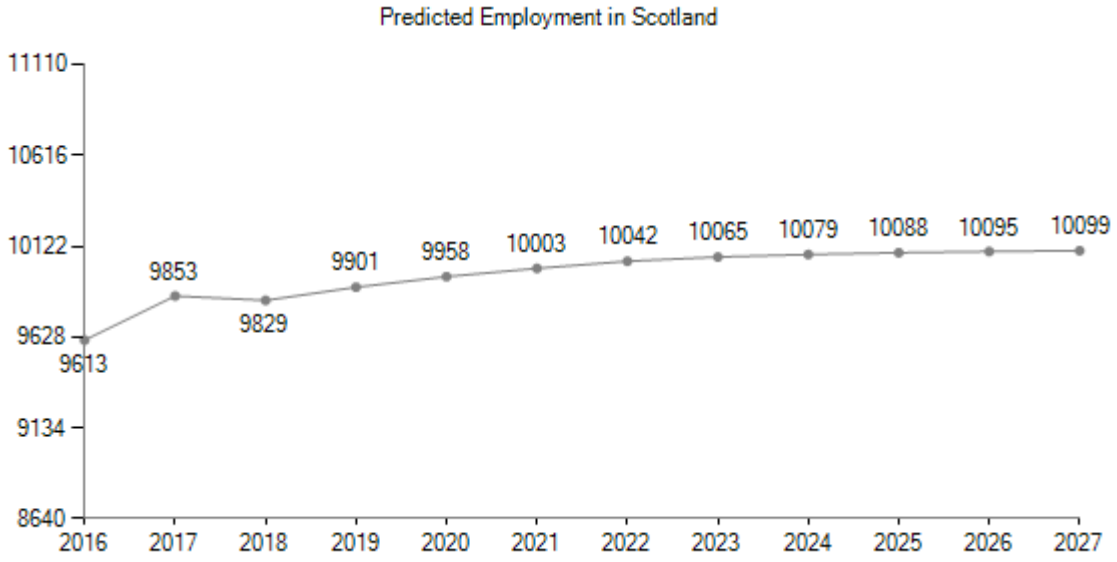

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