



THE SCIENCE OF LIFE

Launch your career with a physiology degree

Graduate careers with physiology

A degree in physiology can open up opportunities to a wide range of careers, including those outside physiology research. Physiology is an experimental science course that helps to develop many transferable skills. Physiology graduates also have an excellent grounding to study further qualifications such as medicine or teaching.

Careers using physiology

- Audiologist
- Biologist
- Biomedical scientist
- Cardiac physiologist
- Clinical physiologist
- Clinical research associate
- Clinical scientist
- Cytologist
- Dentist
- Dietician
- Doctor
- Epidemiologist
- Exercise physiologist
- Forensic scientist
- Haematologist
- Histologist
- Immunologist
- *In vivo* scientist
- Integrated healthcare specialist
- Laboratory technician
- Lecturer
- Pharmacist
- Pharmacologist
- **Physiologist**
- Physiotherapist
- Postdoctoral researcher
- Research associate
- Surgeon
- Teacher
- Toxicologist
- Veterinary surgeon
- Virologist

Associated careers

- Bioinformatician
- Biostatistics manager
- Clinical data manager
- Clinical quality assurance auditor
- Clinical trials coordinator
- Drug safety associate
- Manufacturing production manager
- Medical information officer
- Medical sales representative
- Medical writer
- Patent lawyer/examiner
- Regional medical affairs executive
- Regulatory affairs officer
- Science editor
- Science festival director
- Science journalist
- Science writer/communicator
- Statistician

Alternative careers

- Accountant
- Actuary
- Advertising account executive
- Armed forces officer
- Barrister
- Careers advisor
- Civil service fast streamer
- European Union official
- Health service manager
- HR advisor/consultant
- Intelligence officer (MI5)
- IT consultant
- Management consultant
- Marketing executive
- Operational officer (SIS)
- Political researcher
- Procurement manager
- Project manager
- Public relations officer
- Recruitment consultant
- Sales executive
- Solicitor

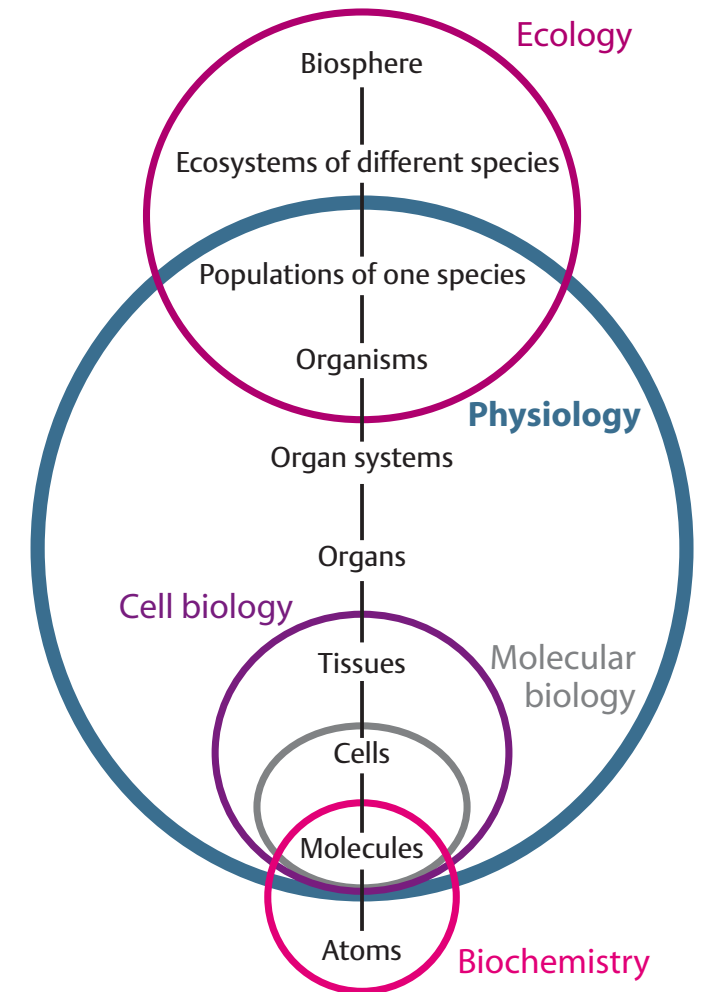
These are just examples of possible careers; with a degree in physiology, the decision is yours!

What does a physiology degree involve?

Physiology is the science of how the body works. It emphasises the interaction of cells, tissues and organs, and how these parts make up the whole body.

You may be surprised to know that you are already learning about physiology in school! At GCSE, for example, you are studying physiology when you learn about how the body moves, and the structure and function of the heart and lungs. Post-16 (e.g. A Level), you are studying physiology when you look at homeostasis, excretion and how neurones work.

A degree in physiology will develop your knowledge and understanding of these areas and many more. You will learn more about how cells work and communicate with each other, how organs (e.g. heart, brain) and organ systems (e.g. cardiovascular or respiratory systems) function, and how different parts of the body adjust to changes such as exercise. The emphasis on integrating molecular, cellular, systems and whole body function distinguishes physiology from other life science degree courses (see right), and makes it very relevant for postgraduate study in medicine.



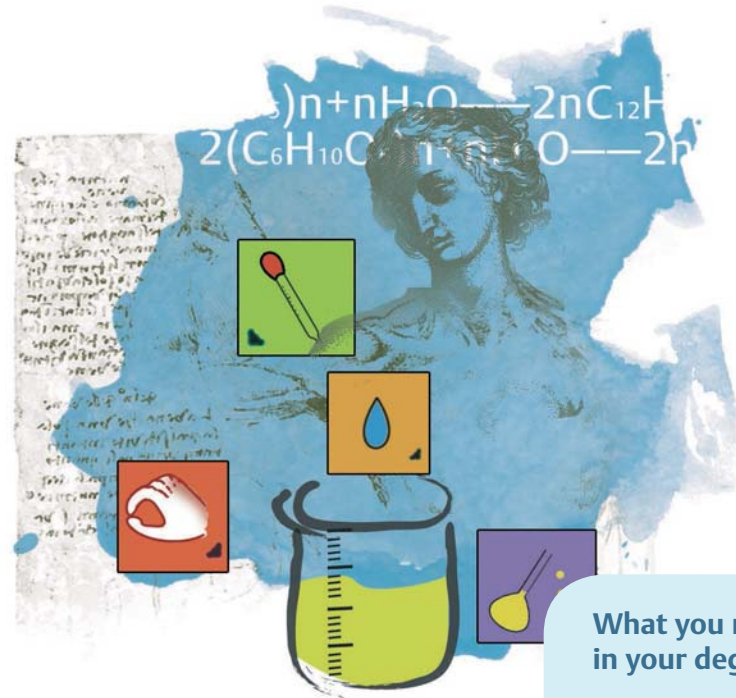
What subjects do you need to study to do a physiology degree?

Entry requirements vary between universities and may change from year to year. All universities require at least three good A Levels (or equivalent). Most require qualifications in at least two of the following subjects: chemistry, biology, physics or mathematics, although chemistry and/or biology are usually preferred.

If you are unsure about the eligibility of your qualifications, it is best to check with individual universities for details. Visit the university's website or contact their admissions tutor for more information (see back page for details).

Some of the skills you can gain with a physiology degree

A physiology degree is a rigorous hands-on course, involving a wide range of different activities that allow you to develop specific **scientific skills**. These skills are highly sought after by graduate employers and valued in many professions.



What you might be doing in your degree course:

- Practical laboratory work
- Planning experiments
- Collecting and analysing data
- Interpreting results
- Using spreadsheets and databases
- Placements in science/industry
- Attending scientific meetings
- Membership of learned societies e.g. The Physiological Society.

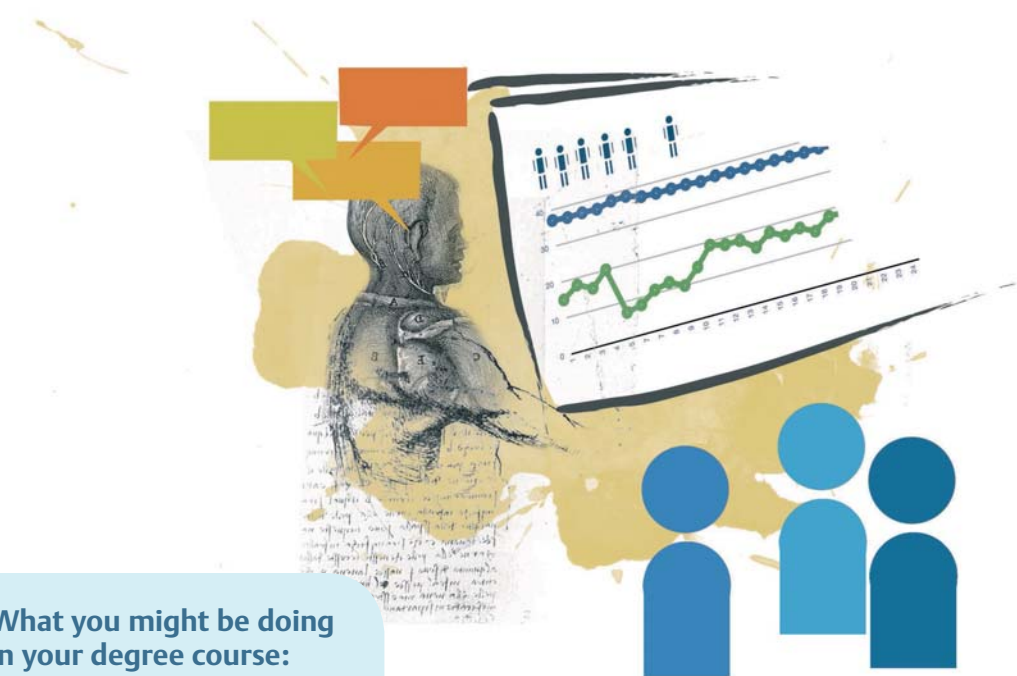
The skills you will develop:

- Research skills
- Technical skills
- Critical thinking skills
- Innovative thinking skills
- Creative skills
- Attention to detail
- Ability to plan activities
- Ability to deliver results
- Ability to assess and evaluate your own work
- Ability to develop reasonable explanations
- Ability to work methodically/logically
- Problem solving skills
- Numerical/analytical skills
- IT skills
- Record keeping skills
- Networking skills
- Commercial awareness
- Business acumen

The skills you will develop:

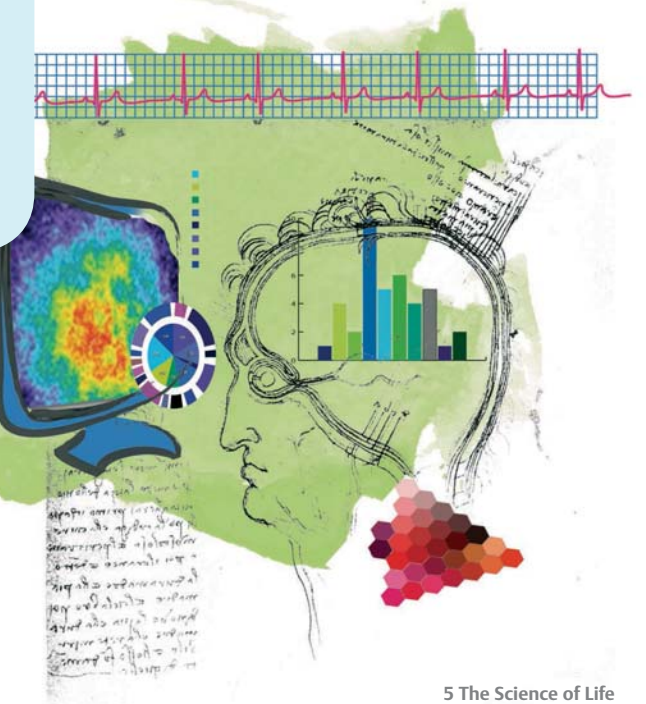
- IT skills
- Time management and organisation skills
- Leadership/management skills
- Diplomatic skills
- Oral/written communication skills
- Ability to express/sell ideas
- Ability to support and motivate others
- Ability to manage and prioritise your own workload
- Ability to work under pressure and to deadlines
- Ability to work alone and as part of a team
- Multi-tasking skills
- Ability to represent others
- Decision-making skills
- Ability to take on responsibility
- Ability to set goals
- Self-confidence

There is a great demand for graduates who have a wide variety of **transferable skills**, in addition to the subject-specific knowledge and expertise gained during their degree. Studying physiology boosts the development of transferable skills that are essential in any graduate career.



What you might be doing in your degree course:

- Independent and group work
- Writing reports
- Delivering presentations
- Meeting deadlines
- Student representative
- Participating in clubs/societies
- Part-time/voluntary work



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Using physiology in your career



I studied physiology at university because I was fascinated by how living things work (and sometimes don't work, as in disease). I had no idea of my career path until my final year research project. It was hard work and there were many failures, but the sheer joy of discovering something for the very first time that no-one else in the world knew got me totally hooked. Now, many years later, I can't imagine a better career.

Professor Dame Nancy Rothwell
MRC Research Professor and Vice Chancellor, University of Manchester

I chose to work in the pharmaceutical industry because I wanted my research to be used directly in developing drugs to treat diseases. There are a wide range of opportunities if you are prepared to take them. You will almost certainly not work in the same disease area for the whole of your career. **You also get to work with colleagues from a broad range of scientific disciplines who share your goal of developing a medicine.**

Dr Simon Poucher
Principal Scientist, AstraZeneca



I wanted to use the physiology I had studied but I didn't have the patience for lab research. **In medical writing, you get to interpret the results of huge clinical studies without having to do the routine experiments.** You get to work on a range of drugs across different therapy areas so you are always learning something new.

Dr Linda Donnini
Senior Medical Writer

I love the challenge of working at the Science Museum. **Taking complex scientific information and finding the best way to communicate it to a general audience can be demanding but fun.** I particularly like the variety that a museum offers – when you work on an exhibition you need to think about the objects, images, text, video and interactives that will form the display. It was the perfect career choice for me as I get to constantly learn about new science and communicate it to others.

Dominique Driver
Contemporary Science Exhibitions Manager, Science Museum London



When I qualified as a doctor, I had no idea that I would end up as an anaesthetist. However, as soon as I started, I was hooked! **Anaesthesia involves the use of physiology in a very immediate fashion.** Every action we take and every drug we give is immediately apparent in the way that the body responds. Anaesthetists make lots of interventions interspersed with long periods of stability - it's the ultimate career for a control freak! Anaesthesia is the largest hospital speciality and I love the team spirit and working environment of the operating theatre.

Dr Naomi Goodwin
Consultant Anaesthetist, University Hospital of Wales

I work with world class coaches and athletes in Olympic sports to help them improve their performance. Every day is a new challenge. **I share my scientific knowledge and apply scientific principles to the preparation of athletes.** My science background also helps me to interact with engineers and computer scientists to design equipment and tools that improve the quality of training and athletes' competitive edge.

Dr Marco Cardinale
Head of Sports Science and Research, British Olympic Association



I am a freelance Assistant Producer for a documentary production company. During my degree, I realised that an academic career was not for me so I started out in science documentaries. My scientific knowledge has been useful in programmes on subjects as varied as foetal development, the extinction of the dinosaurs and childhood obesity. **Being able to talk to scientists, distil complex information and establish the key scientific aspects of a story are definitely skills that I had honed during my degree.**

Sofia Ismail
Assistant Producer, Television

I graduated with a degree in physiology and then decided to start a PhD, which enabled me to develop my understanding of a particular branch of physiology. I became skilled in lots of new experimental techniques and recently spent a month in a laboratory in Germany where I learnt about gene manipulation. **Visiting an international research group was a fantastic opportunity and helped me develop as a scientist as well as expand my horizons.** When things don't quite go the way I planned, this is what makes science such a fantastic career.

Stuart Hanmer
PhD student



My job is excellent because I get to do research that makes a difference to patients and their families. I am currently working with scientists and doctors to test treatments for older people who have difficulty in breathing at night. This study was designed as a result of research on age-related changes in the physiology of breathing during sleep. Studies with patients overnight can be challenging but the data we collect on their breathing and heart function is fascinating.

Dr Mary Morrell
Reader in Respiratory Physiology, Imperial College London

After my physiology degree, I left to become a chartered accountant, specialising early on as a forensic accountant. **I think the discipline of taking a scientific approach to an issue has been directly relevant to the work I do e.g. taking the reader through my thought processes, analysing information, and explaining why I have reached the conclusions I have.** In addition, some of the work I do relates to personal injury cases and my physiology degree helps me to understand the medical reports!

Catherine Rawlin
Partner, RGL Forensics



What next?

For information about undergraduate degree courses, visit:
www.ucas.ac.uk
www.whatuni.com
and search using “physiology” or “biomedical science.”

For information about postgraduate study, visit:
www.postgrad.com

For information about graduate career opportunities:
www.prospects.ac.uk

You can browse different careers by job sector.

For physiology related careers:
www.physoc.org

STEM careers:
www.futuremorph.org

Pharmaceutical industry:
www.careers.abpi.org.uk

Health and medicine:
www.stepintothenhs.nhs.uk

Sport and exercise:
www.bases.org.uk/careers

Teaching:
www.tda.gov.uk

For general careers information and more useful links:
www.connexions-direct.com

The Science of Life provides an introduction to studying physiology, the skills you can gain through a physiology degree and the wide range of career options that a degree in physiology can open up to you. If you are interested in learning more about the subject of physiology, read our accompanying booklet **Understanding Life**.

The Physiological Society is a learned society, which aims to promote and develop the science of physiology.

For more information about The Society, please visit the website www.physoc.org

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Advancing the science of life