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If you have any questions about courses, applications or student life at Bristol, please contact the Enquiries Team.

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Neuroscience



Undergraduate study



Courses

Single Honours

BSc Neuroscience

three years B140

MSci Neuroscience

four years B141

MSci Neuroscience with Study in Industry

four years[†]

[†] Entry by transfer from B140.

* This course is subject to approval.

Joint Honours

MSci Psychology and Neuroscience*

four years CB81

Why study neuroscience at Bristol?

Neuroscience is the study of the nervous system and is a rapidly growing discipline. You will learn about discoveries that are transforming our understanding of the brain and contributing to the development of new treatments for disorders affecting millions of people.

Our neuroscience degrees are run by the School of Physiology, Pharmacology and Neuroscience. The quality of teaching within the school is excellent; we have been recognised as a Centre for Excellence in Teaching and Learning (CETL), and we continue to innovate in our teaching. We have developed an online dynamic lab manual to support our practical teaching and have pioneered the use of human patient simulators in practical teaching.

There is a wealth of research in neuroscience carried out at Bristol, and students studying neuroscience benefit enormously from being taught by staff who are leaders in their field of research. Our final-year BSc and MSci teaching is almost entirely research led.

Neuroscience research that contributes to our teaching includes studying the ways in which the brain and spinal cord control eye and limb movements, for example in patients with motor disorders such as Parkinson's disease; investigation of the neural circuitry and neurochemistry associated with the sensation of pain, and how the brain may modify our perception of pain; and how plasticity of synaptic transmission underpins the mechanisms of learning and memory.

'My time at the University of Bristol really was some of the best of my life so far. The course was interesting and stimulating, and I learned skills that I use now on a daily basis in my current role. The staff are very helpful, approachable and friendly... If I could go back, I would do it all again.'

Beth (BSc Neuroscience)

This leaflet contains information for students planning to start university in autumn 2020. We have made every effort to ensure all details are correct at the time of going to press (May 2019). However, since this information is subject to change, you are advised to check the University's website, bristol.ac.uk/ug-study, for the latest updates.

What will you study?

The aim of the course is to provide a broad base in the sciences that underpin investigations of the nervous system. You will start specialist neuroscience teaching from day one, and there will be an increasing emphasis on specialisation as the course progresses.

Teaching will include lectures, interactive sessions, tutorials and practical classes. Practicals are supported by an innovative dynamic online laboratory manual.

Year one

You will take units that introduce you to the basics of neuroscience, covering topics such as how neurones generate action potentials and how they form connections with other neurones or effector cells. You will spend time studying human brain specimens to understand how the structure of the nervous system relates to function. You will also start to consider how the brain performs higher cognitive functions and the mechanisms underlying the effects of diseases on the nervous system. These will be studied alongside units that cover the structure and function of mammalian body systems, including neuronal control mechanisms. A pharmacology unit will introduce you to how drugs interact with

receptors to alter cellular function. You will also choose an optional biomedical sciences unit in a topic such as biochemistry, pharmacology, anatomy or psychology.

Year two

You will take the Techniques in Neuroscience unit, which introduces some of the important methods that have enabled advances in understanding function and dysfunction of the nervous system. A neuropharmacology unit covers aspects of neuropharmacology and deals with drugs that interact with the central nervous system, and a neurophysiology unit covers the physiology of central and peripheral nervous systems, special senses, higher mental functions, control of movement, biophysics and synaptic mechanisms.

The Biomedical Sciences Skills unit covers topics including data interpretation, data analysis, presentation skills and an introduction to understanding scientific literature. You will also choose an optional unit. Recent optional units have included: integrative physiology, cellular physiology, pharmacology and cellular and molecular medicine. Alternatively, you can take an open unit, such as philosophy or a language.

In years one and two you will typically attend nine lectures a week supplemented by up to nine hours of practical work or workshops, depending on the units chosen. Ample opportunity is provided to discuss lecture material and to deal with individual problems. Tutorials that help to guide understanding are also provided.

Final year

In your final year, staff will lead seminars in selected areas of neuroscience related to their research. This allows you to study at the frontiers of knowledge in topics such as pain, sensory neuroscience, brain and movement, synaptic transmission and plasticity, learning and memory, and neuropsychiatric disorders.

You will carry out a final-year research project supervised by a member of academic staff. A wide variety of options is offered, and you may choose from a range of laboratory, literature, public engagement of science, or education-based projects.

Throughout your degree course you will receive training in transferable skills, including use of IT, communication and teamwork, and the ability to interpret and critically evaluate scientific data and manuscripts.

In the first two years, assessment depends on coursework and marks from unit examinations. Final-year assessment is based on library-based and research projects and your final examinations.

If you are taking the MSci you will follow the same programme of study as the BSc, and in your final year you will undertake an extended research project alongside units to enhance your skills in communicating science and developing ideas that could be used to solve specific scientific challenges.

If you are studying for MSci Neuroscience with Study in Industry, you will spend the third year on a placement with an industrial partner. In your fourth year, you will submit a dissertation and complete a research grant application project alongside final-year BSc units.



Careers and graduate destinations

Neuroscience graduates have a high rate of employment and progression to postgraduate study (master's degrees and PhDs). Of the students who enter employment after graduation the career paths are varied and include health and social work, education, finance, publishing, retail, the public sector, IT and media.

Other graduates take some time out to travel or pursue other interests before finding employment. Of those who continue to higher degrees, many then continue into scientific research, either in universities or in the pharmaceutical sector.

Bristol is the second most targeted university by top UK employers.

High Fliers Research 2019



Graduate employers

Max Planck Institute for Neurobiology
NHS
Clark Health Communications
University of Cambridge
Techmodal



Career destinations

Research Intern
Medical Secretary
Junior Account Executive
Research Assistant
Graduate Analyst

Source: Destinations of Leavers from Higher Education survey 2016/17. Find out more at bristol.ac.uk/careers/be-inspired.

Making your application

Visit bristol.ac.uk/ug20-neuroscience for more information about our courses.

Typical offer for BSc Neuroscience

A-levels AAA or A*AB (contextual ABB or A*BC) including AB in two of the following subjects: Biology or Human Biology, Chemistry, Physics, Mathematics or Further Mathematics, Psychology.

IB Diploma 36 points overall (contextual 32) with 18 at Higher Level (contextual 16), including 6, 5 at Higher Level in two of the following subjects: Biology, Chemistry, Physics, Mathematics, Psychology.

Our contextual offer is a grade reduction of up to two grades below the standard entry requirements, made to applicants from under-represented groups. Find out more at bristol.ac.uk/contextual-offers.

GCSEs No specific subjects required.

Selection process UCAS.

For other accepted qualifications, and for our English language requirements, visit bristol.ac.uk/ug20-neuroscience.

Application advice for neuroscience courses

You should demonstrate a clear desire to study neuroscience. This may take the form of wider reading in areas of interest that are not necessarily covered in school work. Neuroscience-related work experience is not necessary, but any involvement in science-based work experience or other science activity would be helpful. You will be invited to attend a visit day after an offer has been made.

Further information

Find out more about the School of Physiology, Pharmacology and Neuroscience: bristol.ac.uk/phys-pharm-neuro.

This information is correct at the time of printing (May 2019), but we recommend you check the University website for the latest information: bristol.ac.uk/ug20-neuroscience.



Read more about how we support you when you are here:

bristol.ac.uk/students