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 develop and innovate in our teaching. We have developed an online dynamic lab manual, eBiolabs (www.bristol.ac.uk/ebiolabs) 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.

‘Though it sounds like a cliché, my time at the University of Bristol really was some of the best of my life so far. It was in Bristol that I met some of my best friends, learnt how to be independent and ultimately got a qualification that I am proud of. The course was interesting, stimulating and I learnt 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)
The objective 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, such as biochemistry, pharmacology 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. Another unit covers aspects of neuropharmacology and deals with drugs that interact with the central nervous system. The 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 also choose an optional unit. Recent optional units have included: integrative physiology, biochemistry, pharmacology, cellular and molecular medicine, or an open unit, such as philosophy or a language.

In years one and two you will 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 projects is offered and may be in a research laboratory, a literature-based project or an education-based project that may be in collaboration with local schools.

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 studying towards the MSci, you will submit a dissertation following your industrial placement and will complete a research grant application project in your final year.
Neuroscience graduates have a high rate of employment or go on to postgraduate study (master’s 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, public sector, IT and media.

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

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. We have places for up to 70 students each year across the two courses. You will be invited to attend a visit day after an offer has been made.

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The University of Bristol has one of the best employment records in the UK. We are rated sixth in the UK in the QS Graduate Employability Rankings 2016/17 and are the third most targeted university by top UK employers (High Fliers Research, 2017).
Contact us

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If you have any questions about courses, applications or any aspect of being a UK or international student at Bristol please contact the Enquiries Team.

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