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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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University of BRISTOL

Biochemistry

Undergraduate study

Courses

Single Honours

BSc Biochemistry
three years C700

BSc Biochemistry with Medical Biochemistry
three years C720

BSc Biochemistry with Molecular Biology and Biotechnology
three years C790

BSc Biochemistry with Study in Industry*
four years

MSci Biochemistry
four years C701

MSci Biochemistry with Medical Biochemistry
four years C721

MSci Biochemistry with Molecular Biology and Biotechnology
four years C791

* Entry is by transfer from any of our BSc courses.

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.

Why study biochemistry at Bristol?

Studying a degree in biochemistry will give you a unique insight into life at a molecular level and will prepare you for a career in any of the major biosciences.

Biochemistry is the study of life at a molecular level. It spans all aspects of cellular biology and chemistry including: the forces controlling molecular 3D structure; the metabolic pathways that are essential for life; the molecular control of DNA replication, expression and repair; the signalling pathways acting between and within cells; and how the cytoskeleton governs the behaviour and function of organelles within cells, and of cells within living tissues.

The School of Biochemistry at Bristol has an excellent international reputation. We focus on several areas of major challenge in biochemical research: biomolecular structure and mechanism; dynamic cell biology; and synthetic biology. These themes include studies related to: biotechnology, neuroscience, cardiovascular disease, immunology, and cancer.

Research also covers the complex interactions between biological molecules, including computer-aided protein modelling and drug design. Our school hosts researchers active at the forefront of these areas, and their research directly informs teaching, ensuring the very latest biochemical discoveries are covered within our courses.

'The School of Biochemistry is one of the friendliest schools in the University. The breadth of the course allows you to engage with a range of aspects of science. Above all, you will be taught by passionate lecturers at the forefront of research in their field, who are always available to provide extra help and advice.'

Lavanya (BSc Biochemistry)

What will you study?

Year one
During your first year, two biochemistry units, Cellular Composition and Cellular Processes, provide a comprehensive introduction to the subject. Two biological chemistry units, Molecules of Life and Powering Biomolecular Interactions, provide a foundation for your future studies. You also have a choice of other units such as those listed below.

BSc/Msci Biochemistry (C700/C701)
Anatomy; Microbiology; Cellular Pathology; Pharmacology I or Physiology I.

BSc/MSci Biochemistry with Medical Biochemistry (C720/C721)
Pharmacology I or Physiology I.

BSc/MSci Biochemistry with Molecular Biology and Biotechnology (C790/C791)
Microbiology or Cellular Pathology.

In each unit you attend lectures and practicals, and most include small-group tutorials to discuss essays, practise numerical questions, share problems, give presentations and develop transferable skills. Practicals take place in our well-equipped teaching laboratories and are supported by our online dynamic laboratory manual, allowing you to engage fully with practical teaching and develop your experimental skills.

Year two
In your second year you study two biochemistry units – Macromolecular Structure, Dynamics and Function, and Molecular Cell Biology – and two molecular genetics units: Recombinant DNA Technology and Gene Expression and Rearrangement. You also study Biomedical Research, Employability and Enterprise Skills. You can also choose optional units such as those listed below.

BSc/MSci Biochemistry (C700/C701)
Cellular and Molecular Pathology; Infection and Immunity; Neurophysiology; Pharmacology I or II; Physiology I or II; Mathematics.

BSc/MSci Biochemistry with Medical Biochemistry (C720/C721)
Cellular and Molecular Pathology; Infection and Immunity; Pharmacology II; Neurophysiology.

BSc/MSci Biochemistry with Molecular Biology and Biotechnology (C790/C791)
Cellular and Molecular Pathology; Disease and Defence; Infection and Immunity; Pharmacology II; Neurophysiology; Mathematics.

In many cases you can choose other units (eg modern languages), the choice of which will depend on your first-year units. You will attend lectures, tutorials and practicals.

BSc final year
Core lectures in advanced biochemistry will comprise Advanced Cell Biology, Dynamic Proteome, and Cellular Information. You can also study specialist areas, currently including: Synthetic Biology, DNA-Protein Interactions, Protein Science in Neurobiochemistry, Cardiovascular Disease, and Cancer.

You will carry out a research project for about eight weeks, conducting original research with individual guidance from a research laboratory staff member and writing a report (other project types are available). You will also undertake a library-based literary project, writing an extended essay on a biochemical topic. A wide choice of topics is available for both projects.

Biochemistry MSci years three and four
For our MSci degrees, you will follow a very similar third year to the BSc final year (see above) but MSci students undertake a Research Training module in place of the research project. This prepares you for a fourth year, in which you carry out an extended, 16-week individual research project in the laboratory of one of our research groups. You will also take a Science and Society unit and two optional units. Current options include: Cell Biology of Development and Disease, Protein Assemblies and Molecular Machines, and Synthetic Biology. You will be taught through lectures, workshops and student-led assignments.

Year in industry (BSc courses only)
You may apply to spend a year on an industrial or research institute placement. You will typically spend one year as a paid employee of the host organisation and then submit an assessed report.

Throughout all our degrees, you will be assessed through both written exams and coursework.

You will have the opportunity to complete an original research project in your final year, giving you invaluable experience of applying your skills to real-life problems.

'The University is a vibrant and lively place. It's an amazing feeling when you have "eureka" moments, where all the work you have been putting in comes together and makes sense.'
Kaylan (BSc Biochemistry)

bristol.ac.uk/ug-study

Careers and graduate destinations

We aim to produce graduates with the best possible training in biochemical science and skills that can be marketed to a wide range of employers. You will develop analytical, problem-solving and teamwork skills and will be able to communicate effectively, both orally and in writing. Biochemistry is a research-based subject, and those students who achieve a good Honours degree have an excellent chance of following a career in bioscience research, with many of our graduates progressing on to a PhD or master's degree.

Biochemists are in demand in the biotechnology and pharmaceutical industries, and some go on to work in medical research establishments or in the scientific and medical publishing fields. Graduates may use their biochemistry knowledge by teaching science in schools, and some join graduate-entry medicine courses. Alternatively, some students find our degree a good preparation for a number of non-scientific careers in IT, management or finance.

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

High Fliers Research 2019

Graduate employers
LeoPharma
Civil Service
NHS
KPMG
Weatherall Institute

Career destinations
Business Analyst
Research Assistant
Healthcare Scientist
Assistant
Policy Advisor

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-biochem** for more information about our courses.

Typical offer for BSc/MSci Biochemistry

A-levels AAA (contextual AAC) including AA in Chemistry and another core science/mathematics subject **or** A*AB (contextual ABB) including A in Chemistry and B in another core science/mathematics subject.

IB Diploma 36 points overall (contextual 32) with 18 at Higher Level (contextual 16), including 6 at Higher Level in Chemistry and 5 at Higher Level in another core science/mathematics subject.

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, a list of core science/mathematics subjects and our English language requirements, visit **bristol.ac.uk/ug20-biochem**.

Application advice for biochemistry courses
You will need a strong background in chemistry and at least one other science (typically biology) or mathematics. You will need to be interested in and committed to the study of biochemistry, and your personal statement should demonstrate your intellectual curiosity by, for example, showing that you have read beyond your school syllabi or have undertaken relevant work experience.

Our degree courses require independent work, so your personal statement and reference should show that you are self-motivated and work hard. It should also show that you can communicate effectively and write clear and correct English.

Further information
Find out more about the School of Biochemistry: **bristol.ac.uk/biochemistry**.

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-biochem**.

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

bristol.ac.uk/students