Biomedical Sciences
Undergraduate study
Courses

Single Honours
BSc Biomedical Sciences
three years B900

Why study biomedical sciences at Bristol?

The BSc Biomedical Sciences is an exciting course at Bristol, which will provide you with a firm foundation in biochemistry, cell and cancer biology, genetics, immunology, microbiology, molecular biology, neuroscience, pharmacology, physiology and virology.

You will learn what it is like to be involved in biomedical research and how to think like a scientist, developing critical and analytical skills highly valued by employers in the field.

We offer:
• a range of stimulating first-year units that will introduce the various subject areas and provide practical laboratory training;
• teaching by internationally recognised experts and research scientists, as well as clinicians;
• the flexibility to choose optional units that will lead to more specialist units in the final year;
• an excellent foundation for careers in biomedical sciences in academia, industry or health services, or for medicine;
• innovative educational resources and facilities such as the dynamic laboratory manual eBiolabs (bristol.ac.uk/ebiolabs), designed to prepare you for practical classes by demonstrating concepts and experiments through animations, videos and pre-lab quizzes, and a human patient simulator and online histology virtual microscope;
• excellent teaching labs where you will receive hands-on experience in advanced techniques throughout your degree;
• £5 million Centre for Excellence in Teaching and Learning (CETL) in Applied and Integrated Medical Sciences;
• a real taste of applying research skills in your final-year project, in the laboratory or on the computer, working on a bioinformatics project or perhaps researching the scientific literature.

‘The research facilities provided by my faculty are amazing, and allow you to benefit from knowledge of current biochemical research and gain valuable practical experience. Being a biomedical student from University of Bristol certainly helped me to gain recognition from employers and supervisors when I was searching for internships’.

Rachel (BSc Cancer Biology and Immunology 2017)
All students on the BSc Biomedical Sciences will take a broad, common first year.

**Year one**
Your first year units will introduce you to the following subject areas:
- biochemistry: cellular composition and cellular processes;
- cell biology of normal and tumour cells;
- medical microbiology and infectious diseases;
- pharmacology;
- physiology of body systems.

**Year two**
Building on the broad foundation of year one, in the second year you will take two core units: Recombinant DNA Technology and Biomedical Research, Employability and Enterprise Skills. You will have a guided choice from the following list of optional units:
- Molecular Cell Biology
- Gene Expression and Rearrangement
- Infection and Immunity
- Cellular and Molecular Pathology
- Integrative Physiology
- Neurophysiology
- Pharmacology of the Nervous System and of Body Systems.

Other optional units may include:
- Human Anatomy
- foreign language units including Arabic, Chinese, French, German, Italian, Brazilian Portuguese, Russian and Spanish.

*Options can vary according to current subject developments, staff expertise and viability.

In years one and two you will learn in lectures, tutorials, workshops and practical sessions, and will have time for independent study. Assessment is via coursework and written examinations.

You will develop skills in bioinformatics, statistics, scientific writing and oral presentation, as well as an awareness of the ethical implications of studies in biomedical sciences. You will also gain an awareness of the importance of innovation and enterprise, and will work in a group to prepare a research proposal.

**Year three**
In the final year you will have guided choice of four lecture units (subject to timetabling constraints and having taken appropriate second-year units) and will pursue a research project in a related discipline. We currently offer the following units in these subject areas.

**Biochemistry units**
- Advanced Cell Biology
- Cellular Information.

**Cancer units**
- Cancer Mechanisms and Therapeutics
- Developmental Genetics and Embryonal Cancer.

**Stem cell units**
- Haemopoietic Stem Cell Transplantation
- Regenerative Medicine.

**Immunology units**
- Advanced Immunology
- Immunopathology and Applied Immunology.

**Infection units**
- Medical Microbiology
- Frontiers in Infectious Diseases
- Medical Virology.

**Physiology units**
- The Heart in Health and Disease
- Physiology of the urinary tract
- Cardiovascular System in Health and Disease.

**Neuroscience units**
- Brain and Behaviour
- New Horizons in Medicine
- Synaptic Plasticity
- Neurological and Psychiatric Disorders
- Neuroscience of Pain
- Sensational Neuroscience
- Synthetic Cell Biology.

**Pharmacology units**
- Pharmacology of Ion Channels and Synaptic Transmission
- Receptor Signalling and Non-drug Therapy
- Pharmacology of the Nervous System.

Students in the Faculty of Biomedical Sciences really enjoy their studies; they find that the staff are supportive and are good at explaining things and that the lectures are inspiring and intellectually stimulating. Graduates of the faculty are well prepared to present their work to others, including future employers. They have the confidence to tackle unfamiliar problems and many become confident scientists ready to move on to the next stage in their careers.
The QAA Biomedical Sciences Benchmark Statement (November 2015) states: ‘The employment market for graduates in the biomedical sciences is buoyant.’ This degree will provide access to a wide variety of graduate-entry career paths, including further study.

A significant number of graduates from the Faculty of Biomedical Sciences go on to study for a PhD as the first step in a research career. Others go on to postgraduate degrees in a wide range of subjects, including applied neuropsychology, cancer biology, clinical neuroscience, epidemiology, exercise physiology, genetic counselling, human and applied physiology, immunology, nutrition, science communication, transfusion and transplantation sciences and virology, as well as areas such as management. Others have gone on to study medicine, dentistry, veterinary science, or have taken a Postgraduate Certificate in Education (PGCE) or joined Teach First and gone into teaching.

Other graduates go straight into employment using their practical research skills in industrial or academic biomedical research posts. Our courses provide a broad subject knowledge appropriate for careers in biotechnology, the pharmaceutical and food industries, NHS laboratories, and forensic science and patent examination. Alternatively, our graduates go into education, finance, law, health and social work, management, manufacturing and journalism.

You can read student stories and further graduate destinations information on the faculty website:
- [bristol.ac.uk/biochemistry/study/undergraduate/careers](bristol.ac.uk/biochemistry/study/undergraduate/careers)
- [bristol.ac.uk/cellmolmed/study/undergraduate/stories](bristol.ac.uk/cellmolmed/study/undergraduate/stories)
- [bristol.ac.uk/phys-pharm-neuro/study/undergraduate/student-views](bristol.ac.uk/phys-pharm-neuro/study/undergraduate/student-views)

Each year we invite several alumni back for a careers evening, held in the Richmond Building (home of Bristol SU). This provides an excellent opportunity for current students to hear from our graduates about their career pathways. [http://bristol.ac.uk/alumni/news/2016/biomedical-sciences-careers.html](http://bristol.ac.uk/alumni/news/2016/biomedical-sciences-careers.html)

We are interested to know about you, why you are interested in a degree in biomedical sciences and your aspirations for your future career. We also welcome applications from those who are also applying to medicine. 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 biomedical sciences, and your personal statement should demonstrate your intellectual curiosity by, for example, showing that you have read beyond your school syllabi.

Applicants who receive an offer will be invited to a visit day. This will involve lunch, a talk about the new programme and a chance to meet current students and staff. It will provide an opportunity for you to get a feel for the Faculty of Biomedical Sciences, its activities and the opportunities on offer.

Typical offer for BSc Biomedical Sciences*

Visit [bristol.ac.uk/ug18-biomedical](bristol.ac.uk/ug18-biomedical) for other qualifications.

A-levels AAA (contextual AAC†) including AA in Chemistry and another science/mathematics subject. A pass in the practical element of all English examination board science A-levels is expected.

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

English Language profile E††

GCSEs Grade B in Mathematics and Science and grade C in English Language.

†For information on contextual offers, visit [bristol.ac.uk/ug-apply/#typical-contextual-offers](bristol.ac.uk/ug-apply/#typical-contextual-offers).

††For details of English language profiles, visit [bristol.ac.uk/ug-language-requirements](bristol.ac.uk/ug-language-requirements).

Selection UCAS or Common Application.

Deferred entry Considered.

*The typical offer is indicative only and the University accepts a wide range of qualifications. The information is correct at the time of printing (June 2017); however, we recommend you check the University’s website for the most up-to-date information: [bristol.ac.uk/ug-study](bristol.ac.uk/ug-study).

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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University guide to the city of Bristol  
[bristol.ac.uk/citybristol](http://bristol.ac.uk/citybristol)

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