BIOCHEMISTRY BSc
UCAS CODE: C700
2018 ENTRY

www.ucl.ac.uk/prospectus/biochemtech
Since its emergence as a discipline, biochemistry has worked to illuminate many of the problems that have fascinated and perplexed molecular bioscientists for generations. The Biochemistry BSc aims to equip students with the essential knowledge of biochemistry and molecular biology that is at the heart of much of modern life sciences research. As such, it is a valuable entry point to a range of different careers.

**Key information**

**Programme starts**
September 2018

**Location**
London, Bloomsbury

**Degree benefits**

- UCL is one of the world’s largest academic centres for research in biochemistry, with three major research units based here: the Institute of Structural and Molecular Biology, the Laboratory for Molecular Cell Biology and the interdisciplinary Advanced Centre for Biochemical Engineering.
- Our strong links with the bioscience community in London (including the Francis Crick Institute, the Sainsbury Wellcome Centre, the UCL Cancer Institute and Cancer Research UK) enhance the range of research opportunities available to our students.
- You will have the opportunity to take out a one-year placement in industry before your final year of study (working in a suitable industrial or research laboratory), or to transfer to the research intensive MSci programme.
- Our excellent resources include the Darwin Research Facility, which provides state of the art centrifugation, cell culture, imaging and biomolecular structural analysis facilities and a drug discovery facility.

**Research Excellence Framework (REF) 2014**
The Research Excellence Framework, or REF, is the system for assessing the quality of research in UK higher education institutions. The 2014 REF was carried out by the UK’s higher education funding bodies, and the results used to allocate research funding from 2015/16.

- 82% rated 4* (‘world-leading’) or 3* (‘internationally excellent’)

Learn more about the scope of UCL’s research, and browse case studies, on our Research Impact website.

**Degree structure**

In each year of your degree you will take a number of individual modules, normally valued at 0.5 or 1.0 credits, adding up to a total of 4.0 credits for the year. Modules are assessed in the academic year in which they are taken. The balance of compulsory and optional modules varies from programme to programme and year to year. A 1.0 credit is considered equivalent to 15 credits in the European Credit Transfer System (ECTS).

In the first year of the programme you will take compulsory core modules that are similar to those taken in the first year of other biosciences programmes. In year two, you take a number of compulsory modules, but with some optional flexibility. This flexibility to select your own modules increases in year three.

You may also choose to transfer to the Molecular Biology BSc after your first year, which deals more specifically with the way genetic information is stored in nucleic acids and with the controlled expression of this information and its implications for health and disease. It is also possible after your first year to transfer to the Biotechnology BSc.

You may elect to spend an additional year (after year two) gaining invaluable experience in an industrial or research laboratory. Or, after year two, you may transfer to the research intensive MSci programme for a degree programme totalling four years. The final year of the BSc will focus principally on areas of the molecular biosciences selected by you and include the opportunity to carry out an investigative data-analysis project.

**YEAR ONE**

Core or compulsory module(s)
- Biochemistry and Molecular Biology
  - Cells and Development
  - Introduction to Genetics
  - Principles and Practice of Experimental Biochemistry

Optional modules
- All first year modules are compulsory.

**YEAR TWO**

Core or compulsory module(s)
- Biomolecular Structure and Function
  - Metabolism and its Regulation
  - Physical Chemistry for Life Science Students
  - Either The Principles of Cellular Control or The Chemistry of Biologically Important Molecules

Optional modules
- You will select 0.5 credits from a wide range of modules.

**FINAL YEAR**

Core or compulsory module(s)
- An investigative project including significant data analysis (1.0 credit) or an Advanced Research Techniques module to provide hands on experience of metagenomics, molecular biology, illumina sequencing and data analysis.

Optional modules
- You will select modules from a wide range of options to suit your interest (3.0 credits).
Data taken from the ‘Destinations of Leavers from Higher Education’ survey undertaken by HESA looking at the destinations of UK and EU students in the 2013-2015 graduating cohorts six months after graduation.

**Your learning**

Biochemistry is a practical science. You can expect to spend a significant portion of your time either in wet laboratories, where you will handle chemicals and biological materials, or in dry laboratories, where computer simulations and exercises are carried out.

You will also take part in seminars, presentations, lectures and group tutorials. You will use an online virtual learning environment (Moodle) to support your studies.

**Assessment**

Your assessment will include a combination of examinations, coursework, practical work, tutorial work and presentations. Many modules have in-course tests (web-based or written) and most modules have an unseen final examination.

**Your career**

Throughout your degree you will acquire a range of specific and transferable key skills, including time management and planning, technical laboratory competencies such as manual dexterity and analysis of data, and skills in teamwork, negotiation and decision-making.

Our graduates have found themselves roles in diverse fields such as toxicology, clinical biochemistry, drug and food research, industrial biotechnology, virus research and agricultural research. Some students have used their degrees to become school science teachers; others have entered other fields such as science journalism, business management, accountancy and business computing.

First career destinations of recent graduates (2013-2015) of this programme include:

- Laboratory Technician, Allergan
- MRes in Biochemical Engineering, UCL
- MSc in Management, LSE (The London School of Economics and Political Science)
- PhD in Genetics and Molecular Medicine, King’s College London
- Equity Trader, J.P. Morgan

**Your application**

Application for admission should be made through UCAS (the Universities and Colleges Admissions Service). Applicants currently at school or college will be provided with advice on the process; however, applicants who have left school or who are based outside the United Kingdom may obtain information directly from UCAS.

We use your predicted or achieved academic qualifications, your personal statement and reference to decide whether to offer you a place. Evidence of sustained interest in science, such as involvement in a science debating society, and of activities that demonstrate your self-motivation and organisational skills, will be considered favourably.

If you live in the UK and we have made you an offer, you will be invited to attend an offer-holder open day. This will involve talks from staff about the programme and the department, a research presentation, tours of UCL and the department and a visit to a laboratory facility.
Entry requirements

A LEVELS

Grades
AAA

Subjects
Chemistry required plus one from Biology, Mathematics or Physics.

GCSE

English Language and Mathematics at grade B or 6. For UK-based students, a grade C or 5 or equivalent in a foreign language (other than Ancient Greek, Biblical Hebrew or Latin) is required. UCL provides opportunities to meet the foreign language requirement following enrolment, further details at: www.ucl.ac.uk/ug-reqs

IB DIPLOMA

Points
36 overall.

Subjects
A total of 18 points in three higher level subjects including Chemistry at grade 6, and one subject from Biology, Mathematics or Physics, with no score below 5.

OTHER QUALIFICATIONS

UCL considers a wide range of UK and international qualifications for entry into its undergraduate programmes. Full details are given at: www.ucl.ac.uk/otherquals

UNDERGRADUATE PREPARATORY CERTIFICATES (International foundation courses)
The Undergraduate Preparatory Certificates (UPCs) are intensive one-year foundation courses for international students of high academic potential who are aiming to gain access to undergraduate degree programmes at UCL and other top UK universities.

Typical UPC students will be high achievers in a 12-year school system which does not meet the standard required for direct entry to UCL.

For more information see: www.ucl.ac.uk/upc.

TUITION FEES

The fees indicated are for undergraduate entry in the 2018/19 academic year. The UK/EU fees shown are for the first year of the programme at UCL only. The Overseas fees shown are the fees that will be charged to 2018/19 entrants for each year of study on the programme, unless otherwise indicated below.

// UK & EU: £9,250 (2018/19)
// Overseas: £24,040 (2018/19)

Full details of UCL’s tuition fees, tuition fee policy and potential increases to fees can be found on the UCL Students website.

FUNDING

Various funding options are available, including student loans, scholarships and bursaries. UK students whose household income falls below a certain level may also be eligible for a non-repayable bursary or for certain scholarships. Please see the Fees and funding pages for more details.

CONTACT

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EU referendum

For up-to-date information relating to specific key questions following the UK’s decision to leave the EU, please refer to: www.ucl.ac.uk/eu-referendum

Disclaimer

This information is for guidance only. It should not be construed as advice nor relied upon and does not form part of any contract. For more information on UCL’s degree programmes please see the UCL Undergraduate Prospectus at www.ucl.ac.uk/prospectus