BIOCHEMISTRY MSci / UCAS CODE: CC70 2018 ENTRY

www.ucl.ac.uk/prospectus/biochemtech
Biochemistry MSci

Biochemical research underpins a great deal of the core knowledge in life sciences. In particular, the discipline has helped illuminate many of the problems that have fascinated and perplexed molecular bioscientists. The Biochemistry MSci - premised on research - provides an invaluable foundation for postgraduate study or a dynamic career within this area.

Key information

Programme starts
September 2018

Location
London, Bloomsbury

Degree benefits

// You will learn in a research-intensive environment and receive research-based teaching, preparing you for postgraduate research or a career at the cutting-edge of advances in molecular biosciences and health and disease research.

// UCL is one of the world’s largest centres for academic 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 members of the bioscience community in London (such as 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.

// 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 degree you will take compulsory core modules similar to those taken in the first year of other biosciences programmes. This will provide a firm interdisciplinary foundation for your studies. In year two you will take a number of compulsory modules, with some optional module flexibility. This flexibility will increase in year three.

Year three starts to build an integrated, research-based platform for the discovery of research skills and advanced molecular biosciences. It involves advanced techniques modules and a compulsory investigative data-analysis project. It will prepare you for your final year, which is research intensive.

The final year of your degree will focus principally on an extended (3.0 course unit) research project. It will be supplemented by a research techniques module and a dissertation.

YEAR ONE

Core or compulsory module(s)

// Biochemistry and Molecular Biology
Cells and Development
Chemistry for Biologists
Introduction to Genetics
Introduction to Microbiology
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
Molecular Biology
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.

YEAR THREE

Core or compulsory module(s)

// Investigative project involving data analysis
// Advanced techniques module (to gain experience of metagenomics, molecular biology, Illumina sequencing and data analysis)
// Choice of two advanced modules from: Mechanisms of Molecular Machines, Cellular Regulation in Biotechnology, Health and Disease or Advanced Molecular Biology of Protein Regulatory Networks,
// Choice of one module from: Cancer Biology, Genes to Disease or Cellular and Molecular Aspects of Cardiovascular Disease

Optional modules

// Any from a range to make up to 4.0 course units.
**FINAL YEAR**

Core or compulsory module(s)

- Extended research project
- Dissertation
- Research Techniques in Biochemistry and Molecular Biology

Optional modules

- All final-year modules are compulsory.

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**Your learning**

This programme is research-focused and as such you can expect to spend much 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 small-group tutorials, and you will use an online learning environment (Moodle) to support your studies.

**Assessment**

Your assessment will include a combination of examinations, coursework, practical work, tutorial work and presentations. You will also produce laboratory and research reports, posters and dissertations. Many modules have in-course tests (web-based or written) and most (but not all) modules have an unseen final examination.

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**Your career**

Throughout your degree you will acquire a range of specific and transferable 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. Research skills are highlighted in years three and four.

Our graduates have found themselves in fields as diverse as toxicology, clinical biochemistry, drug and food research, industrial biotechnology, virus research, cancer research and agricultural research.

The first cohort of students admitted to this programme will graduate in 2020. Please see first destinations of recent graduates (2013-2015) of Biochemistry BSc for a selection of representative careers.

- Charity Director, Together in Development and Education
- Audit Associate, PwC
- Associate Data Developer, dunnhumby
- Bank Associate, J.P. Morgan
- Full-time student, PhD in Molecular Biology at Harvard University, USA

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**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](http://www.ucl.ac.uk/ug-reqs)

**IB DIPLOMA**

**Points**
38 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](http://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](http://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](http://www.ucl.ac.uk/students).

**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](http://www.ucl.ac.uk/fees) 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](http://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](http://www.ucl.ac.uk/prospectus)