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 2019

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.

Degree structure

In each year of your degree you will take a number of individual modules, normally valued at 15 or 30 credits, adding up to a total of 120 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 30-credit module 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 an advanced techniques module and a compulsory literature-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)

// Literature project which involves writing a review based on a specific subject area.
// 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.
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.

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.

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.
**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. Fees for future years may be subject to an inflationary increase. 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)

Overseas fees for the 2019/20 academic year are expected to be available in July 2018. Undergraduate UK/EU fees are capped by the UK Government and are expected to be available in October 2018. Full details of UCL’s tuition fees, tuition fee policy and potential increases to fees can be found on the UCL Students website.

**Additional costs**

If you are concerned by potential additional costs for books, equipment, etc. on this programme, please get in touch with the relevant departmental contact (details given on this page).

**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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Department: Division of Biosciences

**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/ucl-and-europe

**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.