Chemistry MSci

This four-year programme offers an additional year on top of the Chemistry BSc, in which you may specialise further and deepen your knowledge by undertaking advanced modules and research projects.

Key information

Programme starts
September 2018

Location
London, Bloomsbury

Degree benefits

// Consistently regarded as one of the best chemistry departments in the UK, we offer you an excellent education with high standards of teaching.

// You will benefit from our outstanding research profile as you are taught by lecturers who are experts in a wide range of chemistry-related fields.

// The MSci allows you to study more advanced topics and to work on an extended research project within one of our internationally renowned research groups.

// We offer access to state-of-the-art facilities, enhanced by our strong affiliation to other centres of excellence such as the London Centre for Nanotechnology.

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.

// 94% 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).

Chemistry is offered either as a three-year BSc or as a four-year MSci. The first two years of study are identical, so you can defer which to opt for until the end of your second year. We advise you to select the four-year MSci programme initially as this keeps more options open.

In the first year, all students take the module ‘Introduction to Chemical Principles’. This serves to consolidate A level (or equivalent) Chemistry and generate an awareness of modern chemistry as an integrated whole. In the second term the fundamentals of organic, inorganic and physical chemistry are introduced separately. Along with your optional modules, you’ll also take a module in mathematics that’s appropriate to your ability.

In the second year, the three main themes of chemistry are again developed in individual modules, leaving you free to choose two options, which can be either chemical or non-chemical.

In the third year you will have considerable scope to develop your own portfolio of interests, through a range of optional modules. The core unit, ‘An Introduction to Research Methods’ is a sound preparation for extended personal research projects in the fourth year, and you will also complete a literature project.

In the final year you will undertake a chemical research project and optional modules, allowing you to specialise in the field of chemistry of your choice.

YEAR ONE

Core or compulsory module(s)

// Basic Inorganic Chemistry
// Basic Organic Chemistry
// Basic Physical Chemistry
// Introduction to Chemical Principles

Optional modules

// You will select a Mathematics module appropriate to your level of qualification to the value of either 1.0 or 0.5 credits, and will select either 0.5 or 1.0 credits from a wide range of options. Options typically taken by chemistry students include:

// Biology
// Human Physiology
// Introduction to Earth Sciences
// Introduction to Management
// Languages
// Mathematics (further calculus)
// Physics of the Universe
YEAR TWO

Core or compulsory module(s)
- Principles of Inorganic Chemistry
- Principles of Organic Chemistry
- Principles of Physical Chemistry

Optional modules
- You will select either one or two of the following modules:
  - Chemical Dynamics
  - Chemistry of Materials
  - Concepts in Chemical and Biological Systems
- Plus further modules from a wide range. Options typically taken by chemistry students include:
  - Biology
  - Human Physiology
  - Introduction to Earth Sciences
  - Introduction to Management Languages
  - Mathematics (further calculus)
  - Physics of the Universe

YEAR THREE

Core or compulsory module(s)
- Advanced Topics in Inorganic Chemistry
- Advanced Topics in Physical Chemistry
- An Introduction to Research Methods
- Literature Project
- Principles and Methods of Organic Synthesis

Optional modules
- You will select 1.0 credit from a wide range of advanced chemistry options and other approved undergraduate options. Chemistry options may include:
  - Biological Chemistry/Biological Macromolecules
  - Concepts in Computational and Experimental Chemistry
  - Inorganic Rings, Chains and Clusters
  - Numerical and Analytical Methods
  - New Directions in Materials Chemistry
  - Organometallic Chemistry
  - Pathways, Intermediates and Function in Organic Chemistry
  - Principles of Drug Design
  - Structural Methods in Modern Chemistry

FINAL YEAR

Core or compulsory module(s)
- Advanced Chemical Research Project

Optional modules
- You will select 2.0 credits from a wide range of advanced chemistry options and other approved undergraduate options. Chemistry options may include:
  - Frontiers in Experimental Physical Chemistry
  - Inorganic Rings, Chains and Clusters
  - Intense Radiation Sources for Chemistry
  - Microstructural Control in Materials Science
  - New Directions in Materials Chemistry
  - Organometallic Chemistry
  - Numerical and Analytical Methods
  - Stereochemical Control in Asymmetric Total Synthesis
  - Structural Methods in Modern Chemistry
  - Synthesis and Biosynthesis of Natural Products
  - Topics in Quantum Mechanics

Your career

As a UCL Chemistry graduate you will have developed both discipline-based and highly sought after analytical skills, for example in logical thought and numeracy.

On completion of your degree you will have the obvious option of pursuing a career within the chemical industry. This is recognised as one of the most exciting and successful contributors to the UK economy, for example in the pharmaceutical, biotechnology and nanotechnology sectors.

First career destinations of recent graduates (2013-2015) of UCL Chemistry programmes include:
- Analytic Executive, MEC Global
- DPhil in Physical and Theoretical Chemistry, University of Oxford
- Chemical Research Analyst, IHS
- Management Consulting Analyst, Accenture
- Associate Scientist, Argenta Discovery

Your learning

Your learning will combine lectures, practical classes and group workshops. In addition you will attend tutorials in groups of four to six students which provide specialised support for the core modules.

Assessment

Modules usually involve at least two methods of assessment; coursework (problem sheets, essays or poster presentations), an examination, or lab classes. Feedback, such as face-to-face marking in laboratories, is always provided. Your final-year project will be assessed through a written report, a presentation and an oral examination.
Entry requirements

**A LEVELS**

**Grades**
AAA-AAB

**Subjects**
Chemistry and either one science subject or Mathematics required.

**GCSE**

English Language at grade C plus Mathematics at grade B. For UK-based students, a grade C 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**
36-38 overall.

**Subjects**
A score of 17-18 points in three higher level subjects including Chemistry and either a science subject or Mathematics, with no score lower than 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).

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**TUITION FEES**

The fees indicated are for undergraduate entry in the 2017/18 academic year and are for the first year of the programme at UCL only. Fees for 2018 entry will appear here as soon as they are available.

- UK & EU: £9,250 (2017/18 - see below)
- Overseas: £23,710 (2017/18)

The UK/EU fee quoted above may be subject to increase for the 2018/19 academic year and for each year of study thereafter and UCL reserves the right to increase its fees in line with UK government policy (including on an annual basis for each year of study during a programme). Fees for overseas students may be subject to an annual increase in subsequent years of study by up to 5%.

Please see the full details of UCL’s fees and possible changes on the UCL Current Students website.

**FUNDING**

UCL Chemistry offers a number of scholarships, including the Bader Bursaries, GSK Bursary, UCL Chemistry Entrance Scholarships and the Kathleen Lonsdale Bursary.

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