Computer Science MEng /

Through world-class teaching, this MEng develops the engineering expertise for creating cutting-edge software systems, along with the skills and intellectual rigour required for innovation and research. A strong focus on solving real-world problems is combined with building a deep understanding of computer science theory.

Key information

Programme starts
September 2019

Location
London, Bloomsbury

Degree benefits

// Located in purpose-built accommodation, the department offers excellent laboratory and experiment facilities in a friendly and personal learning environment.

// Cutting-edge knowledge derived from our extensive research feeds into your lecture programmes.

// Our location in the centre of London strengthens our close associations with industry and the financial sector, and offers you extensive opportunities for developing contacts with potential employers.

// The degree is part of an integrated programme which stretches across engineering. This allows you to broaden your horizons through interactions with other disciplines.

Accreditation

This programme is CEng accredited and fulfils the educational requirement for registration as a Chartered Engineer. This programme is accredited by the BCS for the purpose of fully meeting academic requirement for registration as Chartered IT Professional and accredited by the BCS on behalf of the Science Council for the purpose of partially meeting the academic requirement for registration as Chartered Scientist.

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).

The structure of years one and two of this four-year programme is based around a set of core modules, the aim of which is to cover the essential material required of all computer scientists, whatever their particular interest or specialisation. These modules address all the main strands of computer science: architecture, programming, theory, design, and mathematics.

In the third year, you take a further four core advanced level modules, two of which are focused on computer science research, where you work with one of the department’s research groups. You also have two advanced level options from a range of subject areas.

Alternatively, the International Programme route of the MEng enables you to take your third year at a partner university outside the UK, including universities in Europe, North America, Japan and Australia. You are invited to apply to study abroad whilst in your second year of the programme.

The final year is at Master’s level, where you take six options from the range of modules offered to the specialised MSc programmes run by the department. You also undertake an individual supervised project, allowing you to work in depth on a challenging problem, providing another opportunity to engage with the research activities in the department.

In the second and third years alongside the main Computer Science content you take an Integrated Engineering Programme (IEP) minor, comprising one module in the second year and two modules in the third year. There are a number of minor subjects offered by UCL Engineering departments including: Entrepreneurship, Nanotechnology, Biomechanics, Management, Sustainable Building Design and Connected Systems. Alternatively, you can take the Intelligent Systems minor taught by Computer Science or you can learn a modern foreign language to an advanced level.

YEAR ONE

Compulsory subjects

// Algorithms
Compilers
Design and Professional Practice
Discrete Mathematics for Computer Scientists
Integrated Engineering
Object Oriented Programming
Principles of Programming
Theory of Computation

Optional modules

// All first-year modules are compulsory.
YEAR TWO
Core or compulsory module(s)
/// Logic and Database Theory
Mathematics and Statistics
Networking and Concurrency
Security
Software Engineering
Systems Engineering

Optional modules
/// IEP Minor module I

YEAR THREE
Core or compulsory module(s)
/// Computational Complexity
Computer Systems
Research Methods
Research Project

Optional modules
/// IEP Minor module II
IEP Minor module III
/// You will also select credits from a wide range of optional modules. Options may include
the following:
/// Artificial Intelligence and Neural Computing
Computer Graphics
Database and Information Management Systems
Functional Programming
Image Processing
Interaction Design
Networked Systems
/// Year Abroad
Students who choose a year abroad and are accepted at one of our partner institutions undertakes an approved course of study overseas.

FINAL YEAR
Core or compulsory module(s)
/// Individual Project (Master’s Level)

Optional modules
/// You will select credits from a wide range of optional modules. Options may include:
/// Affective Computing and Human-Robot Interaction
Bioinformatics
Cryptanalysis
Financial Institutions and Markets
Financial Information Systems
Graphical Models
Information Retrieval and Data-Mining
Introduction to Cryptography
Machine Vision
Malware
Mobile and Cloud Computing
People and Security
Validation and Verification
Virtual Environments
Web Economics

Your learning
Modules usually last for one term and include a mixture of lectures, tutorials and laboratory classes. There is a focus on practical problem-based learning and group work. From the very first week of teaching you will find yourself applying theory and working with others on solving real and challenging problems. Individual support is offered to all students through a personal tutorial system.

Assessment
All modules are assessed by individual or group coursework assignments and an unseen written examination at the end of the academic year. Student performance is continually monitored, and to progress on the MEng programmes you must have demonstrated excellent academic performance by the end of the second year.

Your career
The strong practical and analytical skills developed during your studies will leave you well placed to meet the growing global demand for graduates in this fast-moving industry.

Our graduates have previously secured careers with global IT consultancies, as IT analysts with City of London banks, and as IT specialists with manufacturing industries. As well as these pathways, the UCL Computer Science MEng will provide you with an excellent foundation for a broad spectrum of different careers.

First career destinations of recent graduates (2014-2015) of this programme include:
/// DPhil in Cybersecurity, University of Oxford
/// Software Engineer, Google
/// Technology Analyst, Goldman Sachs
/// Software Engineer, IBM
/// Software Development Engineer, Amazon

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.

In addition to academic requirements, we are looking for you to demonstrate a proven interest in computing and a clear understanding of what studying computer science entails. We are keen to admit students with an interest in subjects that relate to applications of computer technology.

Applications are firstly assessed by UCL Admissions officers against the published entry criteria. Applicants with non-standard qualifications or applications from mature applicants are referred onto the Computer Science Admissions Tutor for review.

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.
Entry requirements

**A LEVELS**


**GCSE**
English Language and Mathematics at grade C or 5. 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**
*Standard Offer:* 40. A total of 20 points in three higher level subjects including grade 7 in Mathematics, with no score below 5.

*Contextual Offer:* 38. A total of 18 points in three higher level subjects including grade 7 in Mathematics, with no score below 5.

**CONTEXTUAL OFFERS – ACCESS UCL SCHEME**
As part of our commitment to increasing participation from underrepresented groups, students may be eligible for a contextual offer as part of the Access UCL scheme. For more information see www.ucl.ac.uk/prospectus

**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)**
UCL 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.

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**TUITION FEES**
The fees indicated are for undergraduate entry in the 2019/20 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 2019/20 entrants for each year of study on the programme, unless otherwise indicated below.

// UK & EU: £9,250 (2019/20)
// Overseas: £29,220 (2019/20)

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:** Computer Science

**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

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