Engineering (Mechanical) MEng /

This MEng equips you with the fundamental skills necessary for employment as a professional engineer in many sectors of industry and commerce. Applying for the MEng rather than the BEng allows students to fulfil the educational requirements for Chartered Engineer status, with a single qualification.

Key information

Programme starts
September 2018

Location
London, Bloomsbury

Degree benefits

// Our top-quality laboratory and testing facilities include materials testing equipment, wind tunnels, two large wave tanks and an array of engine test cells.

// You will benefit from our internationally renowned research expertise as this cutting-edge knowledge is passed on to you through our teaching.

// The flexible programme structure enables you to transfer between the BEng and MEng degree programmes up to the end of the second year.

// The programme is highly respected both within the UK and abroad.

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.

// 90% 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.

Accreditation

The programmes are accredited by the Institution of Mechanical Engineers (IMechE) as meeting the academic base requirements, in full, for registration as a Chartered Engineer for the 2014-2021 student cohort intakes.

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).

The MEng programme is similar to the BEng programme for the first two years and you can transfer between them at the end of the second year, depending on certain criteria. Applying for a MEng initially helps keep your options open, and it provides additional depth and breadth in design, engineering science, group project work and management.

You will undertake a substantial individual project in year three, and participate in a group design project in the final year.

This degree is part of the Integrated Engineering Programme (IEP), a teaching framework that engages students in specialist and interdisciplinary engineering activities designed to create well-rounded graduates with a strong grasp of the fundamentals of their discipline and a broad understanding of the complexity and context of engineering problems. Students register for a core discipline, but also engage in activities that span departments so the development of fundamental technical knowledge takes place alongside specialist and interdisciplinary research-based projects and professional skills. This creates degrees encouraging professional development, with an emphasis on design and challenging students to apply knowledge to complex problems.

Students may opt to take a year working in industry between the third and the fourth years of the programme. This posting needs UCL approval in advance, and students are required to write a comprehensive report on their work and what they have learnt during the year.

YEAR ONE

Core or compulsory module(s)

// Design and Professional Skills
// Engineering Dynamics
// Engineering Challenges
// Fundamentals of Materials
// Introduction to Mechanical Engineering
// Introduction to Thermodynamics and Fluid Mechanics
// Mathematical Modelling and Analysis I
// Mechanical Engineering Practical Skills

YEAR TWO

Core or compulsory module(s)

// Control and Instrumentation
// Design and Professional Skills II (for Mechanical Engineers)
// Engineering Materials: Failure and Design
// Intermediate Thermodynamics and Fluid Mechanics
// Manufacturing and Design
// Mathematical Modelling and Analysis II
// Mechanics of Solids and Structures

Optional modules

// Students must take one module in their chosen minor subject from the Integrated Engineering Programme. See
// www.engineering.ucl.ac.uk/integrated-engineering/minors/ for the available subjects.
YEAR THREE
Core or compulsory module(s)
- Advanced Thermodynamics and Fluid Mechanics
- Dynamics and Control
- Elasticity and Plasticity
- Individual Project
- Project Management
Optional modules
- You will study two modules in the minor subject chosen in year two.

FINAL YEAR
Core or compulsory module(s)
- Financial Aspects of Project Engineering and Contracting
- Group Design Project
Optional modules
- You will choose three optional modules from a list which may include:
  - Engineering in Extreme Environments
  - Health Assessment of Engineered Structures
  - Materials and Fatigue/Fracture Analysis
  - Applied Thermodynamics and Turbomachinery
  - Heat Transfer and Heat Systems
  - Electrical Machines and Power Electronic Systems
  - Electrical Power Systems and Electrical Propulsion
  - New and Renewable Energy Systems
  - Applications of Biomedical Engineering
  - Medical Imaging
  - Ship Dynamics
  - Marketing Communications
  - Organisational Change

Your learning
You will be taught in a variety of ways, including lectures, tutorials, laboratory classes, computer workshops and project work. Along with our computing facilities we have extensive equipment and apparatus, housed in our main laboratories, which are used for taught laboratory classes and for your project work.

Assessment
Most subjects are examined through a combination of end-of-year examinations and coursework, but some are solely examined through coursework, for example, computing, design and projects. To remain on the MEng programme you are required to maintain a standard equivalent to (at least) lower second-class Honours level throughout your studies.

Your career
The programme aims to equip you with the fundamental analytical and design skills necessary to become a professional mechanical engineer in your chosen field of employment, whether in industry or in a consulting/research organisation.

Your career options can be in a variety of fields including aerospace, railways, motor vehicle design, manufacturing and medical engineering. The programme also equips you with the skills to secure a job in commerce, banking, and management consultancy.

First career destinations of recent Mechanical Engineering MEng graduates (2013-2015) at UCL include:
- Drilling Engineer, BP
- Graduate Engineer, Transport for London (TfL)
- Mechanical Engineer, Arcola Energy
- Strategic Data Analyst, Amazon
- Full-time student, MPhil in Engineering for Sustainable Development at University of Cambridge

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 our essential academic requirements, we will expect your application to explain how you became interested in the subject, and what steps you have taken to discover more about studies and careers in engineering.

Successful UK-based applicants will be invited to a UCAS Day where they can tour the department and meet with academic staff and students. Successful applicants not based in the UK will be able to access a virtual open day.
Entry requirements

A LEVELS
Grades
A*AA-AAA

Subjects
Mathematics and Physics required. Further Mathematics, Economics or Design and Technology preferred as third subject, but not essential.

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
Points
38-39 overall.

Subjects
A total of 18-19 points in three higher level subjects including Mathematics and Physics at grade 6, with no score below 5. Economics and Further Mathematics preferred as third higher level subject, but not essential.

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: £25,960 (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.

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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