The Power Systems Engineering MSc is designed to provide students with the necessary knowledge and skills to work at a professional level in industries involved in the production, distribution and consumption of energy and power. This wide range of industries includes transport, conventional and renewable power generation.

Degree summary

Students study analysis and design of conventional and renewable machinery systems and the use of computers in their advanced engineering analysis. Students gain knowledge of electrical and mechanical engineering principles, quantitative methods, and mathematical and computer modelling alongside an awareness of the codes of practice, standards and quality issues within the modern industrial world. They also take modules in project management.

The department has an international reputation for the excellence of its research which is funded by numerous bodies including: EPSRC, EU, Wellcome Trust, the Royal Society, the Leverhulme Trust, UK Ministry of Defence, BAe Systems, Cosworth Technology, Ebara, Jaguar Cars, Shell, and BP.

The Power Systems Engineering MSc is accredited under UK-SPEC by the Institution of Mechanical Engineers (IMechE), Institute of Engineering and Technology (IET), and the Institute of Marine Engineering Science and Technology (IMarEST). This programme also constitutes in part the requirement to obtain Chartered Engineering status.

UCL Mechanical Engineering has seen, in recent years, unprecedented activity in refurbishing and re-equipping our laboratories. Highlights include an extensive workshop, four engine test cells of the highest specification, a fuel cell laboratory, an electrical power laboratory and a new fluid mechanics laboratory.

This dynamic programme is delivered through lectures, tutorials, individual and group projects, practical laboratory work and coursework assignments, (including computational analysis). Assessment is through written, oral and viva voce examinations and coursework (including the evaluation of laboratory reports, technical and project reports, problem-solving exercises, computational and modelling skills and oral presentations).

Degree structure

Mode: Full-time: 1 year
Location: London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of six core modules (90 credits), one optional module (15 credits) and a research project (75 credits).

Please note that the list of modules given here is indicative. This information is published a long time in advance of enrolment and module content and availability is subject to change.

**CORE MODULES**

- Power Transmission and Auxiliary Machinery Systems
- Electrical Machines and Power Electronic Drives
- Electrical Power Systems and Electrical Propulsion
- New and Renewable Energy Systems
- Project Management
- Group Project

**OPTIONAL MODULES**

- Applied Thermodynamics and Turbomachinery
- Vibrations, Acoustics and Control
- Advanced Computer Applications in Engineering

**DISSERTATION/REPORT**

- All students undertake an independent research project which culminates in a project report and oral presentation. In many cases the work has some input from industry.
Your career

The Power Systems Engineering MSc has been accredited by the Engineering Council as meeting the further learning requirements, in full, for registration as a Chartered Engineer for a period of five years, from the 2012 student cohort intake onwards.

Employability

Delivered by leading research and academic staff from across UCL, you will definitely have plenty of opportunities to network and keep abreast of emerging ideas through cross-fertilisation with collaborating companies and governmental bodies such as BAE Systems, Rolls Royce, Lloyds Register and TfL who provide specialised lectures and are key to our research success. We will encourage you to develop networks through the programme itself and via the department’s careers programme which includes employer-led events and individual coaching. We equip our graduates with the skills and confidence needed to play a creative and leading role in the professional and research community.
Entry requirements

A minimum of an upper second-class Bachelor's degree from a UK university in a suitable engineering subject such as electrical, mechanical or mechatronics, or an overseas qualification of an equivalent standard. Some basic knowledge of applied electricity is essential.

English language proficiency level

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The level of English language proficiency for this programme is: Standard.

Information about the evidence required, acceptable qualifications and test providers is provided at: www.ucl.ac.uk/graduate/english-requirements

Your application

Students are advised to apply as early as possible due to competition for places. Those applying for scholarship funding (particularly overseas applicants) should take note of application deadlines.

When we assess your application we would like to learn:

- why you think you have the skills to study Power Systems Engineering
- why you want to study Power Systems Engineering at graduate level
- why you want to study Power Systems Engineering at UCL
- what particularly attracts you to this programme
- how your academic and/or professional background meets the demands of a challenging programme
- where you would like to go professionally with your degree

Together with essential academic requirements, the personal statement is your opportunity to illustrate whether your reasons for applying to this programme match what the programme will deliver.

There is an application processing fee for this programme of £75 for online applications and £100 for paper applications. Further information can be found at: www.ucl.ac.uk/prospective-students/graduate/taught/application.

FEES AND FUNDING 2019/20 ENTRY

// UK: £12,750 (FT)
// EU: £12,750 (FT)
// Overseas: £26,660 (FT)

The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information on fee status, fee increases and the fee schedule can be viewed on the UCL Students website.

Full details of funding opportunities can be found on the UCL Scholarships website: www.ucl.ac.uk/scholarships

APPLICATION DEADLINE

All applicants: 3 May 2019

Details on how to apply are available on the website at: www.ucl.ac.uk/graduate/apply

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/brexit