ENERGY SYSTEMS AND DATA ANALYTICS MSc / 2019/20 ENTRY

www.ucl.ac.uk/graduate/
The Energy Systems and Data Analytics MSc provides an academically leading and industrially relevant study of energy systems through the lens of data analytics. Advanced analytics, fuelled by big data and massive computational power, has the potential to transform how energy systems are designed, operated and maintained. You will gain the skills and knowledge to unlock the transformative potential of big energy data, and understand how it can reshape the energy sector.

**Degree summary**

You will gain a broad understanding of energy systems as a whole, covering supply and demand, the interconnectedness and dependencies between different sectors and a multi-vector multi-sector approach to analysis. You will learn about the theory and practice of data analysis, deploying machine learning and statistics and will gain practical experience of the challenges of working with different data sets relating to energy throughout the programme and modules.

The MSc in Energy Systems and Data Analytics is the first programme in the UK to combine the study of energy systems with data science. The MSc is delivered by leading researchers in the UCL Energy Institute and UCL Institute for Sustainable Resources. You will benefit from their specific expertise, research communities and industry contacts (including guest lecturers drawn from the energy industry), as well as our multidisciplinary and cross-domain approach.

The UCL Energy Institute has consulted across industry to identify key skills gaps for the energy analysts that will be required by utilities, consultancies and small and medium enterprises. There is a growing need in industry for graduates who combine an understanding of energy systems with the skills and abilities to extract insights from data through the use of advanced analytics.

The programme is delivered through a combination of lectures, seminars, tutorials, problem-based learning and project work. Assessment is through a combination of methods including problem sets, individual assignments and coursework, group based design tasks with a report and presentation, unseen examinations and a dissertation.

**Degree structure**

Mode: Full-time: 1 year; Part-time: 2 years; Flexible: 2-5 years

Location: London, Bloomsbury

Full-time students study for 37.5 hours per week during term time. Typically, lectures and seminars occur on two days per week. Part-time and Flexible students normally attend half this amount.

The programme consists of five compulsory modules (75 credits), two optional modules (45 credits) and a dissertation (60 credits).

A Postgraduate Diploma, five compulsory modules (75 credits), three optional modules (45 credits), full-time nine months or flexible/modular up to five years is offered.

A Postgraduate Certificate, two compulsory modules (30 credits), two optional modules (30 credits), part-time nine months or flexible/modular up to five years is offered.

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.

**COMPULSORY MODULES**

- Energy Systems
- Energy Data Analytics
- Statistics for Energy Analysis
- Energy Analytics in the Built Environment
- Energy and Transport Analytics

**OPTIONAL MODULES**

- Spatial Analysis of Energy Data
- Introduction to Systems Dynamics Modelling in the Built Environment
- Econometrics for Energy and the Environment
- Energy, Technology and Innovation
- UK Energy and Environment Policy and Law
- Smart Energy Systems: Theory, Practice and Implementation
- Eco-innovation and Sustainable Entrepreneurship
- The list of optional modules is correct for the 2018/19 academic year. Enrolment on modules is subject to availability.

**DISSERTATION/REPORT**

- All students undertake an independent research project which culminates in a 10,000-word dissertation.
Your career

Graduates will be ideally placed to gain employment as energy analysts/data scientists in consultancies, utilities, innovative start-ups and government institutions which value expertise in energy systems and have a need for data literate analysts.

Employability

There is a strong emphasis placed on innovation throughout the programme. Students will also benefit from a skill set in data analytics that will be highly transferable and applicable across a range of industries and domains.

The programme has been developed with input from industry leaders. You will gain exposure to real life energy and sustainability challenges.
Entry requirements

A minimum of an upper second-class Bachelor's degree or an overseas qualification of an equivalent standard.

**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:

- how your academic and professional background meets the demands of this programme
- why you want to study this programme at graduate level
- what particularly attracts you to this programme
- where you would like to go professionally with your degree and how this programme might meet your goals.

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: £14,040 (FT), £6,960 (PT)
// EU: £14,040 (FT), £6,960 (PT)
// Overseas: £25,150 (FT), £12,510 (PT)

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.

Fees for flexible, modular study are charged pro-rata to the appropriate full-time Master's fee taken in an academic session.

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

APPLICATION DEADLINE

All applicants: 26 July 2019
Flexible/Modular: 30 August 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