Earthquake Engineering with Disaster Management MSc /

The Earthquake Engineering with Disaster Management (EEDM) MSc combines specialist structural and earthquake engineering knowledge with an advanced understanding of resilience and risk modelling for natural hazards in order to produce engineers who can deliver design holistic solutions and are able to work in engineering, catastrophe modelling and disaster management roles.

**Degree summary**

Graduates will be able to: Apply both current seismic codes and novel unconventional methodologies of seismic design and retrofitting. Determine vulnerability of ordinary and special structures to seismic actions. Assess the adequacy, economic viability and life-saving effectiveness of pre-event risk mitigation and post-event risk management solutions.

- UCL Civil, Environmental & Geomatic Engineering hosts EPICentre, a leading research centre in earthquake engineering, and provides an exciting environment in which to explore this new, multidisciplinary and constantly evolving science.

- Set in a Strong Research Environment through linking with the UK’s leading natural hazard research centre, EPICentre, the MSc programme has extensive links to the Industry and non-governmental organisations (NGOs) through professional engineers, catastrophe modellers and disaster managers, who deliver lectures and seminars and support students on their research projects as industrial supervisors. This provides students cutting-edge research, while exposing them to real-world challenges. In addition, students will benefit from a week-long field trip to an area recently suffered from a damaging earthquake to observe the extent of the destruction and the latest structural strengthening techniques.

- Students benefit from a field trip to the closest location of a recent major earthquake to study disaster management and the effects of the earthquake on the built environment, structural strengthening techniques and disaster management.

Taught modules have been developed and are delivered in collaboration with experts from industry and non-governmental organisations. In addition a field trip is organised every year to an earthquake affected region.

**Accreditation**

The MSc is accredited by the UK Joint Board of Moderators (JBM), and is recognised by the Institute of Civil Engineering (ICE) and the Institute of Structural Engineers (IStructE), meeting the requirements for Further Learning for a Chartered Engineer (CEng).

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**Degree structure**

Mode: Full-time: 1 year; Part-time: 2 years; Flexible: up to 5 years
Location: London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of six core modules (90 credits), two optional modules (30 credits) and a research project (60 credits).

A Postgraduate Diploma (120 credits) consisting of seven core modules (105 credits) and one optional module (15 credits) 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**

- Introduction to Seismic Design of Structures (T1)
- Seismic Risk Assessment (T1)
- Structural Dynamics (T1)
- Geotechnical Earthquake Engineering (T2)
- Structural Vulnerability & Resilience (T2)
- Advanced Seismic Design of Structures (T2)
- Terms (T1, T2) are indicated in brackets.

**OPTIONAL MODULES**

- Advanced Structures (T1)
- Integrating Science Into Disaster Risk Reduction (T1)
- Natural and Environmental Disasters (T2)
- Finite Element Modelling and Numerical Methods (T2)
- Design & Analysis of Structural Systems (T2)
- Catastrophe Risk Modelling (T2)
- Project Management A or B (T2)
- Terms (T1, T2) are indicated in brackets.

**DISSERTATION/REPORT**

- All students undertake an independent research project which culminates in a dissertation of approximately 12,000 words.
Your career

Students graduate with strong technical engineering skills and rarely taught knowledge of risk evaluation. They are also able to understand the wider implications of disasters and are exposed to both industry and non-governmental organisations (NGOs). Graduates have gone on to successful careers in the civil engineering industry, in international NGOs, in the financial sector, and in academia.

Employability

The programme will improve your employability in the construction industry (e.g. Civil, Structural or Geotechnical Engineer), as well as the insurance and finance sectors, while providing essential skills to those foreseeing careers in improving structural resilience.

You will be a new type of global Engineer able to tackle challenges in other areas that require knowledge and understanding of earthquake engineering, risk assessment, as well as risk management and mitigation principles such as Insurance Industry, Disaster Management & Relief and Non-Governmental Organisations (NGOs).
Entry requirements

A minimum of a second-class UK Bachelor's degree in a relevant discipline (such as engineering or architecture), or an overseas qualification of an equivalent standard. Extensive work experience covering related areas will be considered in addition to academic qualifications.

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 want to study Earthquake Engineering with Disaster Management at graduate level
- why you want to study Earthquake Engineering with Disaster Management at UCL
- what particularly attracts you to this programme
- how your personal, academic and 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

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<th>UK: £12,750 (FT), £6,375 (PT)</th>
<th>EU: £12,750 (FT), £6,375 (PT)</th>
<th>Overseas: £26,660 (FT), £13,340 (PT)</th>
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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.

This programme qualifies for the Commonwealth Shared Scholarship Scheme, suitable for nationals residing in Commonwealth developing countries who wish to study a one-year taught UK Masters programme.

The scholarship covers tuition fees and air fares to and from the UK.

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

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