



Seismic Risk Assessment (CEGE0033)

Description

Seismic risk and the potential earthquake losses are evaluated differently by disparate industries and organisations. This course covers the fundamental components of earthquake risk assessments, i.e. the estimation of probable earthquake ground shaking in a city, ways to assess the likely damage to different building types (vulnerability), and approaches to estimate the human casualties and economic losses arising from the building damage. The course also provides an introduction to GIS and to simplified structural analysis and seismic assessment tools, through a series of computer-based tutorials. A number of guest lectures will also be delivered by professionals from the Catastrophe Modelling, Re-Insurance and Civil Engineering industries.

Aims:

- To provide an overview of how engineers and different agencies assess seismic risk to life, economy and buildings.
- Provide understanding of the technical calculation of seismic risk.
- Deliver an understanding of the uncertainties involved in seismic risk estimation.

Learning Outcomes:

- Understand the underlying principles, appreciate the limitations and be able to critically evaluate techniques for the seismic risk assessment of civil engineering structures.
- Practical knowledge of probabilistic seismic hazard calculation, building vulnerability assessment and seismic loss estimation
- Knowledge of the possible consequences of a damaging earthquake in different social and economic contexts.

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	PGT L7, Campus-based
Reading List	View on UCL website
Tutor	Prof Tiziana Rossetto
Term	Term 1
Timetable	View on UCL website

Assessment



- Coursework: 40%
- Coursework: 30%
- Coursework: 30%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk



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