Seismic Risk Assessment (CEGE0033)

Description

Outline:
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 from the estimation of probable earthquake ground shaking in an area, ways to assess building types and their vulnerability to the consequent building damage, human casualties and economic losses.

The course provides an introduction to GIS and to simplified structural analysis and seismic assessment tools.

Aims and Learning Outcomes:

Aims:
1. To provide an overview of how engineers and different agencies assess seismic risk to life, economy and buildings;
2. Provide understanding of the technical calculation of seismic risk;
3. 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            2018/19
Credit value    15 (150 study hours)
Delivery        PGT L7, Campus-based
Reading List    View on UCL website
Tutor           Prof Tiziana Rossetto
Term            Term 2
Timetable       View on UCL website

Assessment

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

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Reading List: View on UCL website
Tutor: Prof Tiziana Rossetto
Term: Term 1
Timetable: View on UCL website

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