Introduction to Seismic Design of Structures (CEGE0032)

Description

**Aims and Topics.**
The aims of the course are: to provide knowledge of the concepts behind seismic design and their implementation in different building codes of practice; to impart knowledge of materials, structural element behaviour and global structural behaviour under seismic loading; to provide the knowledge necessary for students to design reinforced concrete structures to any seismic code; to introduce the use of software packages for seismic analysis and design.

This course is intended to cover the following topics:

1. Intro to Seismology and Earthquake Engineering
2. Intro to Probabilistic Seismic Hazard Analysis (PSHA)
3. Earthquake Load Representation: Response Spectrum and Equivalent Static Approach
4. Intro to Eurocode 8
5. Intro to GSA
6. Response of structures to earthquakes/Conceptual Design
7. Detailed design of RC structures (Eurocode 8)
8. Advanced topics in Seismic Design
9. Earthquake case studies
10. Earthquake Engineering Field Trip

**Learning outcomes.**
The learning outcomes of the course are: understanding the concepts behind seismic design; understanding the behaviour of building materials, structural members and structural systems under earthquake loading; having the ability to interpret and critique different seismic codes of practice; gaining knowledge of how to design civil engineering structures for seismic resistance.
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Key information

Year 2019/20
Credit value 15 (150 study hours)
Delivery UGM L7, Campus-based
Reading List View on UCL website
Tutor Dr Carmine Galasso
Term Term 1
Timetable View on UCL website

Assessment

Coursework: 20%
Coursework: 40%
Coursework: 40%

Find out more

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

Disclaimer: All information correct as of August 2019. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.