LONDON'S GLOBAL UNIVERSITY

Civil, Environmental and Geomatic Engineering

Advanced Seismic Design of Structures (CEGE0061)

Description

The course provides an insight to the latest methods, technologies and practical approaches implemented in Earthquake Engineering for designing and assessing the built environment. The course covers state-of-the-art design and assessment approaches recommended in codes and guidelines such as FEMA P-58, FEMA 445, FEMA 273, NEHRP, PEER, Global Earthquake Model (GEM).

Learning Outcomes

- Overview of Seismic Design of Structures to EuroCode 8
- Seismic Design of Steel Structures (e.g. Moment Resisting & Braced Frames)
- Elastic and Inelastic Response Spectra
- Modal and Response Spectrum Analysis
- Performance Based Earthquake Engineering (PBEE)
- Performance Based Seismic Design (PBSD) & Assessment (PBSA) of Structures:
- Probabilistic Seismic Hazard Assessment (PSHA)
- Nonlinear Structural Analysis Modelling
- Seismic Fragility & Vulnerability Function Derivation
- Seismic Damage Assessment
- Seismic Loss Assessment

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	PGT L7, Campus-based
Reading List	View on UCL website
Tutor	Dr Arash Nassirpour Oskouei
Term	Term 2
Timetable	View on UCL website

Assessment

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

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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