Introduction to Seismic Design of Structures (CEGE0032)

**Outline:**

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;

**Aims and Learning Outcomes:**

*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 Eurocode 8;
- to introduce the use of software packages for seismic analysis and design;

*The learning outcomes of the course are:*

understanding the concepts behind seismic design;

**Key information**

- **Year**: 2018/19
- **Credit value**: 15 (150 study hours)
- **Delivery**: PGT L7, Campus-based
- **Reading List**: View on UCL website
- **Tutor**: Dr Carmine Galasso
- **Term**: Term 1
- **Timetable**: View on UCL website

**Assessment**

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

**Find out more**

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

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