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.

This course is intended to cover the following topics:

- 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
  - Fragility & Vulnerability Function Derivation
  - Damage Assessment
  - 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](http://ucl.ac.uk).

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

This course is intended to cover the following topics:

- 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
  - Fragility & Vulnerability Function Derivation
  - Damage Assessment
  - Loss Assessment

**Key information**

<table>
<thead>
<tr>
<th><strong>Year</strong></th>
<th>2019/20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit value</strong></td>
<td>15 (150 study hours)</td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td>UGM L7, Campus-based</td>
</tr>
<tr>
<td><strong>Reading List</strong></td>
<td><a href="#">View on UCL website</a></td>
</tr>
<tr>
<td><strong>Tutor</strong></td>
<td>Dr Arash Nassirpour Oskouei</td>
</tr>
<tr>
<td><strong>Term</strong></td>
<td>Term 2</td>
</tr>
<tr>
<td><strong>Timetable</strong></td>
<td><a href="#">View on UCL website</a></td>
</tr>
</tbody>
</table>

**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](http://ucl.ac.uk)