Design and Analysis of Structural Systems (CEGE0062)

Outline:
The course gives a systematic overview of the main structural systems and approaches each of them from three different angles:
1. Approximate analytical modelling;
2. Finite Element modelling;
3. Design;

Aims and Learning Outcomes:

This course provides:
A systematic awareness of the main structural types available;
A fundamental understanding of the structural principles underpinning each system through approximate modelling;
The ability to model different structural systems with a commercial finite element package;
The ability to deliver preliminary designs for standard structural systems;
The ability to cross-check FE output with approximate analytical models;
The objectives above will be achieved by approximately modelling and designing case studies of the following structural systems:
Trusses and simply connected frames;
Moment resisting frames;
Plate structures;
Cable and tensile structures;
Arch structures;
Vaults, domes and other shell structures;
Bridge Types;

Key information

Year: 2018/19
Credit value: 15 (150 study hours)
Delivery: PGT L7, Campus-based
Reading List: View on UCL website
Tutor: Dr Philippe Duffour
Term: Term 2
Timetable: View on UCL website

Assessment

Coursework: 40%
Written examination (main exam period): 40%
Group coursework: 20%

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 December 2018. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
An afternoon field trip around London will be organised to observe actual examples of some of the structural systems covered in the course;
Design and Analysis of Structural Systems (CEGE0062)

Description

Outline:
The course gives a systematic overview of the main structural systems and approaches each of them from three different angles:
1. Approximate analytical modelling;
2. Finite Element modelling;
3. Design;

Aims and Learning Outcomes:

This course provides:
A systematic awareness of the main structural types available;
A fundamental understanding of the structural principles underpinning each system through approximate modelling;
The ability to model different structural systems with a commercial finite element package;
The ability to deliver preliminary designs for standard structural systems;
The ability to cross-check FE output with approximate analytical models;
The objectives above will be achieved by approximately modelling and designing case studies of the following structural systems:
Trusses and simply connected frames;
Moment resisting frames;
Plate structures;
Cable and tensile structures;
Arch structures;
Vaults, domes and other shell structures;
Bridge Types;

Key information

Year 2018/19
Credit value 15 (150 study hours)
Delivery UGM L7, Campus-based
Reading List View on UCL website
Tutor Dr Philippe Duffour
Term Term 2
Timetable View on UCL website

Assessment

- Oral Presentation: 40%
- Written examination (main exam period): 40%
- Individual project: 20%

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 December 2018. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
An afternoon field trip around London will be organised to observe actual examples of some of the structural systems covered in the course;