Civil, Environmental and Geomatic Engineering

Design and Professional Skills II (CEGE0088)

Description

Building on the Year 1 modules Civil Engineering Design, Professional Skills in Civil Engineering and the Year 2 Lampeter Fieldtrip, and drawing on departmental expertise and guest lecturers from industry, this module will cover the following topics: Civil Engineering Design, GIS (Geodesign), Project Risk, Law, Health & Safety (CDM - Construction (Design and Management); Risk Assessment), Costing, Tendering and Research Skills.

Outcomes

The aims of this module are to develop students’ aptitude and understanding in design, geodesign, professional practice and research skills - through group projects, computing practicals, workshops and lectures. Students will use the competences developed through this module in the subsequent Year 2 scenarios and the Constructionarium field course.

On completion of Design and Professional Skills 2, students should have an improved knowledge and understanding of:

1. Engineering, Design, Projects, the Law, Society and the relationship between them.
2. The importance of properly understanding the downstream part of the project process (construction, operation and decommissioning) if they are to be effective designers.
3. The importance of them properly understanding the upstream part of the project process (need, identification and brief preparation) if they are to be effective designers.
4. The role of contextual factors in shaping the outcome of a design process.
5. The range of tools (thinking, computation, visualisation, communication, etc.) used by designers, and that the construction / engineering industry requires them to have an understanding of these tools.

Key information

Year: 2019/20
Credit value: 15 (150 study hours)
Delivery: UG L5, Campus-based
Reading List: View on UCL website
Tutor: Mr James Ford
Term: Terms 1 and 2
Timetable: View on UCL website

Assessment

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.
6. The role of modelling in the design process.

7. The role of regulations, design codes and best practice guidance in modern engineering design.

8. That design is carried out as part of a team, and the different roles of those involved in different types of design projects.

9. Identifying and quantifying engineering problems, and deploying a strategy to design an appropriate solution.

10. A range of professional skills utilised by practising engineers in the construction industry and their importance in the successful completion and delivery of engineering projects.

The module will include lectures, computer lab sessions & workshops to enhance student learning / understanding.