Design and Professional Skills II (CENG0007)

Description

Aims:
The module aims to offer the student a variety of authentic engineering problems and experiences in order to promote professional values and behaviour, and to locate Chemical Engineering theory in a realistic context. The topics selected for the scenarios will be related to material taught in other Year 2 modules.

Learning Outcomes:
On completion of this module students should:

- Understand issues important to engineering designers and which support the development of their own design skills such as decision-making, team organization, idea development, concept testing, material selection, engineering judgment etc.;
- Understand the relation between environment, society and societal development;
- Be able to perform simple sustainable assessment in process design;
- Be able to identify hazards and understand the concepts of inherently safe design;
- Understand the legal framework in which a chemical engineer operates

Synopsis:
This course comprises four professional design projects (scenarios) designed to complement and, where appropriate, extend the learning opportunities afforded by the modules running throughout Year 2. Students are posed authentic engineering challenges intended to explore different aspects of the design cycle and to simulate real-world, professional practice. The scenarios will be supplemented by materials, classes and/or online materials provided by the Faculty of Engineering Sciences and external sources as appropriate. Each scenario will comprise different combinations of practical engineering
and design skills, systems integration, ethics, management and sustainability.