Design and Professional Skills II (BENG0016)

**Description**
To prepare students to work successfully, safely, responsibly, and ethically as professional engineers. This module is intended to develop topics introduced in the first year Design and Professional Skills course: design, technical communication and professionalism. Specific components will include: critical thinking/problem solving; team working/learning own strengths and weaknesses; ethics for engineers; business planning and financial modeling; the design cycle, including project lifecycle and sustainability evaluation; sourcing information and the technical literature; visualization; technical writing and presentation; industry standards/ professional conduct. Students will also learn about career planning and continuing professional development. Law topics relevant to engineering including contracts and intellectual property will also form part of the material.

**Intended learning outcomes**
Upon completion of the course, a student should be able to:

- Recognise the key risk issues, including health & safety, environmental and commercial risk, and of risk assessment and risk management techniques and identify these for given process examples

- Be able to use technical literature and data from a range of sources and synthesise information to produce process flowsheets.

- Be able to describe an engineering problem and the commercial, economic and social context in a written or spoken report, and be capable of giving examples of possible constraints to a process including environmental and sustainability limitations; be able to quantify the effect of changing parameters on the design through sensitivity analysis, evaluating potential outcomes.

- Identify the relevant legal requirements governing engineering activities, including personnel, health & safety, contracts, intellectual property rights, product

**Key information**
- **Year**: 2018/19
- **Credit value**: 15 (150 study hours)
- **Delivery**: UG L5, Campus-based
- **Reading List**: [View on UCL website](https://www.ucl.ac.uk)
- **Tutor**: Dr Brenda Parker
- **Term**: Terms 1 and 2
- **Timetable**: [View on UCL website](https://www.ucl.ac.uk)

**Assessment**
- Practical examination (departmentally managed): 50%
- Coursework: 5%
- Coursework: 15%
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● safety and liability issues and identify situations in their engineering discipline that may have legal ramifications