Biochemical Engineering

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

Assessment
Practical examination (departmentally managed): 50%
Coursework: 5%
Coursework: 15%
Coursework: 15%
Coursework: 15%

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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.
• safety and liability issues and identify situations in their engineering discipline that may have legal ramifications