Waste and Resource Efficiency (CEGE0064)

Description
Human prosperity is underpinned by extraction, processing, manufacturing, use and reuse/recycling/recovery/disposal of materials resources. In the first part of this module on Waste and Resource Efficiency (before Reading Week), students will learn about global resource use, including flows of materials in major sectors, the implications for environmental, social and economic sustainability, and related concepts such as the circular economy. They will be introduced to the standard quantitative tools that can be used to better understand the sustainability of resource use, including material flow analysis, life cycle assessment, and cost benefit analysis, as well as qualitative assessment of social impacts, and how policy and legislation can influence resource use and avoidance of waste. In the second part of the module, students will learn about waste management technologies, including reuse, recycling, energy-from-waste, landfill, in the context of their sustainability.

This module aims to:

1. give students an overall perspective on resource use and waste management in human society;
2. provide an introduction to technologies and systems for waste and resource management.

Students will be able to:

1. discuss quantities of materials used and waste generated, in major sectors of the global economy;
2. describe the basic principles of material flow analysis, life cycle assessment, and cost-benefit analysis, and be able to use these techniques in simple examples;
3. discuss the environmental, social and economic impacts of resource use and waste management;
4. discuss main policy, legislation and other incentives in relation to resource use and waste management;
5. discuss the concept of the circular economy;

Key information

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<th>Year</th>
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<td>Credit value</td>
<td>15 (150 study hours)</td>
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<td>Tutor</td>
<td>Prof Julia Stegemann</td>
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Assessment

- Written examination (main exam period): 50%
- Coursework: 50%

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.
discuss the technical principles, and advantages and disadvantages of different waste management practices, with the waste management hierarchy.
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Credit value | 15 (150 study hours)
Delivery | PGT L7, Campus-based
Reading List | View on UCL website
Tutor | Prof Julia Stegemann
Term | Term 2
Timetable | View on UCL website

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