

## Chemical Engineering

**Dissertation (CENG0037)****Description****Aims:**

The module will include several parts, each with well-defined aims:

- Research Skills for a Successful Research Project

This portion of the dissertation prepares students to complete research. This encompasses the rationale for undertaking research projects; the choice and allocation of projects; expectations and resources as well as developing research skills and methods in order to produce a robust and thorough piece of research. As part of this process, students will have the opportunity to take a previous piece of research and construct an executive summary, allowing them to demonstrate the ability to synthesize information and present it in a different format. The students will also undertake a Group report and presentation in Australia, evaluating what they have learnt and how it has developed their understanding of the management of natural resources, with a particular focus on the future and sustainability.

- Research Project

Undertaken in Adelaide with the University of South Australia. The individual parts of the dissertation will be completed during term 3 and the summer period. The projects on fundamental research will be conducted by the students embedded in research programs with adequate experience on the subject matter. Some students will for example investigate new methods for mineral flotation, new processes for environmental remediation and consider applying new business models to existing or proposed developments etc. The students will be closely supervised with a particular focus on health and safety first.

There will be a number of stage-gates whereby students can consult with UCL staff on the content and construction of sections of their research, helping to guide them through the process.

- Oral viva

**Key information**

<b>Year</b>	2020/21
<b>Credit value</b>	60 (600 study hours)
<b>Delivery</b>	PGT L7, Campus-based
<b>Reading List</b>	<a href="#">View on UCL website</a>
<b>Tutor</b>	<a href="#">Prof Alberto Striolo</a>
<b>Term</b>	Terms 1 and 2
<b>Timetable</b>	<a href="#">View on UCL website</a>

**Assessment****Find out more**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](https://ucl.ac.uk)

One learning objective is for the students to be able to present critically their results both via oral presentation as well as in a written form. The Oral Examination is designed to test this ability as well as to test the fundamental understanding they have achieved, both within the boundaries of their specific research projects, and in a wider boundary within the subject matter of the MSc in Global Management of Natural Resources.

- Field Trips to Port Pirie, Wyhalla and the Onshore Petroleum Centre of Excellence training facility at Tonsley

The students will also be required to experience first hand a smelter, steelworks and an offshore oil/gas simulation facility, with an associated report on the processes observed at these facilities

### **Learning Outcomes:**

Upon successful completion of this module the students will be able to

- Formulate a complex problem in simpler tasks;
- Design and conduct research;
- Appraise individual research tasks;
- Judge individual research results to literature;
- Conduct literature review;
- Assess the scale of mining operations;
- Present research results in various forms;
- Defend codes of conducts and operate within them;
- Manage time and commitments;
- Work in groups.

### **Synopsis:**

The goal of the dissertation is to bring to fruition the material learned by the students during the programme. The students will also learn how to plan and execute research projects, as well as to report the results, discuss them openly, compare them to the literature, and defend their conclusions.

The students will learn to work in groups and to manage their time towards a satisfactory completion of the dissertation.