

# **OCES 4203 Environmental Impact and Risk Assessment**

## **1. Course Description**

Credit points: 3

Pre-requisite: CHEM 1030 OR LIFS/OCES 1030

Exclusion: Nil

Brief description:

This course is a basic introduction to environmental impact assessment (EIA) and the EIA process in Hong Kong. The components of an EIA study will be taught, with particular emphasis on ecological impact assessment (EcoIA), fisheries impacts, air and water quality impact assessment, and environmental risk assessment. Comparisons of the EIA system with mainland China and other countries will be made. The objective of the course is to equip students with a working knowledge of EIA for future careers in consultancies engaged in EIA projects or non-governmental organisations reviewing EIA reports.

## **2. Intended Learning Outcomes**

On successful completion of this course, students are expected to:

- understand and be able to describe operation of the EIA process in Hong Kong in comparison with other regions
- have working knowledge of the methodologies involved in conducting ecological impact assessment, fisheries impacts, air and water quality impact assessments, and environmental risk assessment
- be able to critically evaluate environmental impacts
- be familiar with examples of EIA projects in Hong Kong through local case studies
- appreciate the relationship between the environment, sustainable development, and human health.

## **3. Assessment Scheme**

Continuous assessment (case studies assignments): 40%

Final exam: 60%

## **4. Student Learning Resources:**

Lecture notes and supplementary reading materials will be made available on Canvas (canvas.ust.hk) prior to each lecture.

## Key References:

From Environmental Protection Department (EPD):

- 1) Environmental Impact Assessment Ordinance (EIAO), EPD (<http://www.epd.gov.hk/epd/eia/english/legis/index1.html>)
- 2) Technical Memorandum on EIA Process, EPD (<http://www.epd.gov.hk/epd/eia/english/legis/index3.html>)
- 3) EIA Reports on EPD website (<http://www.epd.gov.hk/epd/eia>)

## 5. Learning Activities

Three hours of lectures per week (2 lectures per week),  
One or two field trips are intended, but this will depend on the COVID-19 situation. Students will be notified in advance if the field trips can proceed. In-Class discussions and exercises.

## 6. Course Schedule (Revised final schedule)

Wk	Topic
1	1. Course Introduction. What is Environmental Impact Assessment (EIA)?
2	2. Impacts of population and development on the environment in Hong Kong
	3. Development of EIA in Hong Kong
3	4. EIA in mainland China and other countries – the international perspective
	5. The EIA process in Hong Kong
4	6. Case Study 1: Artificial Bathing Beach in Lung Mei, Tai Po.
	7. Ecological Impact Assessment I
5	8. Ecological Impact Assessment II
	9. No lecture (Field Trip to Lung Mei Artificial Bathing Beach)
6	10. Environmental Risk Assessment I - Guest lecture by Prof. Frank L.Y. Lam (Dept. of Chemical and Biological Engineering, HKUST)
	11. Environmental Risk Assessment II - Prof. Frank L.Y. Lam (guest lecture)
7	12. Ecological Impact Assessment – Case Study 1 Lung Mei Artificial Bathing Beach Assignment 1
	<b>Public Holiday - no lecture</b>
8	Case Study 1 – Assignment 1 cont. (In-Class Discussion)
	13. Water Quality Impact Assessment I – Water Resources & Pollution
9	14. WQIA II – Water Quality & Wastewater Treatment
	15. Fisheries in Hong Kong – background perspective
10	16. Fisheries Impacts in EIA
	17. Fisheries Impacts, WQ & Eutrophication
11	18. Case Study 2 - HATS EEFS Assignment 2
	19. Case Study 2 HATS continued
12	20. No Lecture (Field Trip cancelled)
	21. Case Study 3 HK International Airport – Three Runway System (3RS)
13	22. Assignment 3 – Lantau Tomorrow (Group presentations)
	23. After the approval of the EIA report - EM&A