

LIFS/OCES 1030 - Environmental Science (Spring 2020-21)

Section 1 (L1): Tuesday and Thursday; 13:30 – 14:50

Section 2 (L2): Tuesday and Thursday; 12:00 – 13:20

Note: Lectures will be conducted ONLINE via Zoom. The Zoom link(s) will be provided in the course Canvas site. Students should join in the online lectures under their corresponding section and **actively participate** in the class interactions. **Examinations will cover all lecture contents (not only the PPT contents).**

Learning Outcomes

By the end of this course, the students are expected to be able to

- 1) Comprehend essential environmental concepts such as life supporting system, biodiversity and biomes, natural resources, sustainability, and their inter-relationships,
- 2) Develop a broad interest and connect the knowledge to their major study,
- 3) Recognize the importance of harmony among human, the nature, and a sustainable living society,
- 4) Apply the knowledge in daily life and contribute to environmental protection.

Course Format

Two lectures per week.

Course Assessment

- Midterm Examination (about 35%)
- Final Examination (about 65%)

Course Instructors

Dr Ice KO (iceko@ust.hk) – *Course Coordinator*

Dr Cynthia YAU (cynthiastyau@ust.hk)

Major Reference

Cunningham, W.P. and Cunningham, M.A. (2020) *Principles of Environmental Science: Inquiry and Application*. 9th Edition. McGraw-Hill Companies, Inc.

Lecture Outline and Schedule (TENTATIVE)

Part 1: Course Introduction & Overview			
1)	Feb 2 (Tue)	Course Introduction	Ko & Yau
Part 2: Matter and Energy (Chapters 2 & 13)			
2)	Feb 4 (Thu)	Energy, Matter and Resources in the Environment (I)	Ko
3)	Feb 9 (Tue)	Energy, Matter and Resources in the Environment (II)	Ko
Part 3: Biomes and Biodiversity (Chapter 5)			
4)	Feb 11 (Thu)	Earth's Major Biomes (I)	Ko
5)	Feb 16 (Tue)	Earth's Major Biomes (II)	Ko
6)	Feb 18 (Thu)	Biodiversity: Its Significance and Threats (I)	Ko
7)	Feb 23 (Tue)	Biodiversity: Its Significance and Threats (II)	Ko
Part 4: Food and Nutrition (Chapter 7)			
8)	Feb 25 (Thu)	Nutrition and Food Supply	Ko
9)	Mar 2 (Tue) (class time)	Online Trial Run for Midterm Exam [MANDATORY]	Ko
10)	Mar 4 (Thu) 08:00 – 09:00	Midterm Exam [ONLINE] - Students from <u>both Section 1 and Section 2</u> will need to take the exam <u>together</u> at 08:00 – 09:00 (arrangement to be confirmed)	Ko & Yau
Part 5: Human Populations (Chapter 4)			
11)	Mar 9 (Tue)	Human Population Dynamics (I)	Ko
12)	Mar 11 (Thu)	Human Population Dynamics (II)	Ko
13)	Mar 16 (Tue)	Overpopulation and Population Control	Ko
Part 6: Environment and Human Health (Chapter 8)			
14)	Mar 18 (Thu)	Environment and Human Health (I)	Yau
15)	Mar 23 (Tue)	Environment and Human Health (II)	Yau
16)	Mar 25 (Thu)	Environmental Toxicology	Yau
Part 7: Atmosphere and Air Pollution (Chapters 9 & 10)			
17)	Mar 30 (Tue)	Atmospheric Circulation and Climate	Yau
	<i>Apr 1 (Thu)</i>	<i>Midterm Break</i>	
	<i>Apr 6 (Tue)</i>	<i>Public Holiday</i>	
18)	Apr 8 (Thu)	Global Climate Change	Yau
19)	Apr 13 (Tue)	Air Pollution	Yau
20)	Apr 15 (Thu)	Acid Rain and Ocean Acidification	Yau
Part 8: Water Resources and Pollution (Chapter 11)			
21)	Apr 20 (Tue)	Water Resources and Usage	Yau
22)	Apr 22 (Thu)	Water Conservation and Pollution	Yau
23)	Apr 27 (Tue)	Wastewater Treatment; Eutrophication	Yau
Part 9: Solid and Waste Management (Chapter 14)			
24)	Apr 29 (Thu)	Solid Waste and Waste Disposal	Yau
25)	May 4 (Tue)	Microplastics: Global and Local Impacts	Yau
26)	May 6 (Thu)	Online Trial Run for Final Exam [MANDATORY]	Yau