

LIFS 1030 Environmental Science (Fall 2016-2017)

Time/ Place: Tuesday and Thursday 13:30 - 14:50 (LTA)

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 (80 minutes each) per week.

Course Assessment (based on the following course activities and examinations)

Course Activities (total: about 30%)

- a. Group project with Intra-group peer evaluation (about 25%)
 - Each group needs to produce a 5-minute video clip (*submitted by 21 November*)
- b. Inter-group peer evaluation (about 5%)
 - Each student needs to mark 10 video clips from other groups (*finished by 28 November*)

Examinations

Midterm Examination (about 25%) and Final Examination (about 45%)

Course Instructors

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Major Reference

Cunningham, W.P. and Cunningham, M.A. (2017) *Principles of Environmental Science: Inquiry and Application*. Eighth Edition. McGraw-Hill Companies, Inc.

Tentative Lecture Outline and Schedule

		Lecture Topic	Instructor
Part 1: Understanding Our Environment (Chapter 1)			
1)	1 Sept (Thu)	Course Introduction & Group Project Briefing	Ko & Lam
2)	6 Sept (Tue)	Pressing Global Environmental Issues (1)	Qian
3)	8 Sept (Thu)	Pressing Global Environmental Issues (2)	Qian
4)	13 Sept (Tue)	Pressing Global Environmental Issues (3)	Qian
5)	15 Sept (Thu)	Global Effort in Addressing Environmental Challenges	Qian
Part 2: Life Supporting Systems (Chapters 3 & 6)			
6)	20 Sept (Tue)	Life Supporting Systems—Species, Population, and Community	Qian
7)	22 Sept (Thu)	Life Supporting Systems—Ecosystem	Qian
8)	27 Sept (Tue)	Climates and Earth's Major Biomes	Qian
9)	29 Sept (Thu)	<ul style="list-style-type: none"> • Summary of Project Requirements • Workshop on Video-Making 	<ul style="list-style-type: none"> • Ko & Lam • Mr K.S. Shek (Publishing Technology Center, HKUST)
10)	4 Oct (Tue)	Hong Kong Environmental Issues	Lam
11)	6 Oct (Thu)	Midterm	Qian/Ko/Lam
Part 3: Matter and Energy (Chapters 2 & 13)			
12)	11 Oct (Tue)	Matter and Energy	Ko
Part 4: Biodiversity (Chapter 5)			
13)	13 Oct (Thu)	Biodiversity and Its Significance	Ko
14)	18 Oct (Tue)	Threats to Biodiversity	Ko
Part 5: Human Populations (Chapter 4)			
15)	20 Oct (Thu)	Human Population Dynamics	Ko
Part 6: Food and Nutrition (Chapter 7)			
16)	25 Oct (Tue)	Nutrition and Food Supply	Wang
Part 7: Environmental Health and Toxicology (Chapter 8)			
17)	27 Oct (Thu)	Environmental Toxicology and Health (1)	Wang
18)	1 Nov (Tue)	Environmental Toxicology and Health (2)	Wang
Part 8: Atmosphere and Pollution (Chapter 9)			
19)	3 Nov (Thu)	Atmosphere and Climate	Wang
20)	8 Nov (Tue)	Air Pollution (1)	Wang
21)	10 Nov (Thu)	Air Pollution (2)	Wang
Part 9: Water Resources and Pollution (Chapter 10)			
22)	15 Nov (Tue)	Water Usage	Wang
23)	17 Nov (Thu)	Water Pollution (1)	Wang
24)	22 Nov (Tue)	Water Pollution (2)	Wang
Part 10: Solid and Hazardous Wastes (Chapter 13)			
25)	24 Nov (Thu)	Wastes and Disposal (1)	Lam
26)	29 Nov (Tue)	Wastes and Disposal (2)	Lam