City University of Hong Kong
Course Syllabus

offered by School of Energy and Environment
with effect from Semester A 2022/23

Part I Course Overview

Course Title:	Energy and Environmental Economics
Course Code:	SEE8123
Course Duration:	One semester
Credit Units:	3
Level:	R8
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites:	Nil
Precursors:	Nil
Equivalent Courses:	Nil
Exclusive Courses:	Nil

Part II Course Details

1. Abstract

This course aims to introduce students a set of economic concepts that economists use to understand energy and environmental issues, and use the concepts to analyze energy and environmental problems, and to model their solutions. They will understand the economic principles and practices behind the use of market and policy instruments, including command-and-control regulation, tax and emission trading, to conserve energy resources and to control environmental impacts. They will be able to apply innovative solutions to tackle energy and environmental problems.

2. Course Intended Learning Outcomes (CILOs)

No.	CILOs[#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Identify, describe, and clarify economic concepts that are relevant to energy and environment problems	30%	✓	✓	
2.	Apply the economic concepts to energy and environmental problems, and model their solutions	30%	✓	✓	
3.	Design and critically evaluate from an economic perspective public policies associated with energy and the environment	20%		✓	✓
4.	Understand and be able to join intellectual discussions as an aid in the discovery of innovative applications of economics to energy and the environment	20%		✓	✓
		100%			

A1: *Attitude*
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: *Ability*
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No.				Hours/week (if applicable)
		1	2	3	4	
Interactive lectures	Explaining the basics of energy and environmental economics as well as some recent developments	✓	✓	✓	✓	3h/week
Assignment	Application of the knowledge obtained during the lectures and material to generate discussions on energy and environmental issues	✓	✓	✓	✓	1h/week
Term paper	Identifying an issue related to energy and the environment and analysing the nature and characteristics of the issue	✓	✓	✓	✓	0.5h/week

4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.				Weighting	Remarks
	1	2	3	4		
Continuous Assessment: 60 %						
Assignment	✓	✓	✓	✓	30%	
Term paper	✓	✓	✓	✓	30%	
Examination: 40 % (duration: 2h, if applicable)						
					100%	

To pass a course, a student must do ALL of the following:

1) obtain at least 30% of the total marks allocated towards coursework (combination of assignments, pop quizzes, term paper, lab reports and/ or quiz, if applicable);
2) obtain at least 30% of the total marks allocated towards final examination (if applicable); and,
3) meet the criteria listed in the section on Grading of Student Achievement.

5. Assessment Rubrics

- Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Assignment	Ability to analyse and solve problems related to energy and environmental economics.	High	Moderate	Basic	Not even reaching marginal levels
2. Group work	Ability to analyse and solve problems related to energy and environmental economics.	High	Moderate	Basic	Not even reaching marginal levels
3. Examination	Ability to analyse and solve problems related to energy and environmental economics.	High	Moderate	Basic	Not even reaching marginal levels

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Assignment	Ability to analyse and solve problems related to energy and environmental economics.	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Group work	Ability to analyse and solve problems related to energy and environmental economics.	High	Significant	Moderate	Basic	Not even reaching marginal levels
3. Examination	Ability to analyse and solve problems related to energy and environmental economics.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III Other Information

1. Keyword Syllabus

- Economics and the environment (including basic economics)
- Externalities
- Public goods
- Property rights
- Instruments for environmental policy (command-and-control regulation, tax and emission trading)
- Economic valuation
- Climate change
- Renewable resources
- Energy economics
- Innovation

2. Reading List

2.1 Compulsory Readings

1.	Jonathan M. Harris and Brian Roach, Environmental and Natural Resource Economics: A Contemporary Approach, Fourth Edition, Routledge (2018).
2.	Tom Tietenberg and Lynne Lewis, Environmental and Natural Resource Economics, 10th Edition, Routledge (2016).
3.	Perman R., Ma Y. and McGuilvray J. : Natural Resources and Environmental Economics, Pearson Education 3rd ed., 2011

2.2 Additional Readings

1.	Stephen Smith, Environmental Economics: A Very Short Introduction, Oxford University Press (2011).
2.	Robert Falkner, ed., The Handbook of Global Climate and Environmental Policy, Wiley-Blackwell (2016).
3.	Christine Greenhalgh and Mark Rogers, Innovation, Intellectual Property, and Economic Growth, Princeton University Press (2010).
4.	J.D. Angrist and J.S. Pischke, Mastering 'Metrics: The Path from Cause to Effect, Princeton University Press, 2015(MM).