

# SEE3001: ENERGY AND ENVIRONMENTAL POLICY

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## Effective Term

Semester A 2024/25

## Part I Course Overview

### Course Title

Energy and Environmental Policy

### Subject Code

SEE - School of Energy and Environment

### Course Number

3001

### Academic Unit

School of Energy and Environment (E2)

### College/School

School of Energy and Environment (E2)

### Course Duration

One Semester

### Credit Units

3

### Level

B1, B2, B3, B4 - Bachelor's Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

SEE3002 Energy and Environmental Economics

### Precursors

Nil

### Equivalent Courses

Nil

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

The course aims to nurture critical thinking of energy and environmental policies among students. It introduces scientific, economic, social and political considerations in managing energy and environment related challenges. Students will gain hands on experiences in evidence-based policy analysis by engaging in problem identification, issue framing, stakeholder analysis, intervention design, and monitoring and evaluation. By taking the course, the students are prepared to engage in debating contemporary sustainability issues from an informed and analytical perspective.

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Understanding the causes of and policy instruments for addressing energy and environmental challenges	15	x	x	
2	Conducting evidence-based policy analysis by incorporating field measurement, social survey, stakeholder analysis, cost-benefit analysis, and/or institutional analysis	15	x	x	x
3	Creating an issue paper and demonstrating connections between energy/environmental science, economics, and public policy to gain insight into contemporary energy and environmental issues	20	x	x	x
4	Applying various value systems to decision-making in personal, professional, and social/political situations	50	x	x	x

#### 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 real-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.

### Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Interactive lectures	Interactive lectures are designed to facilitate application and synthesis of assigned readings.	1, 2
2	Group project	It aims for students to practice evidence-based policy analysis and to engage in current debates on energy and/or environmental issues.	1, 2, 3, 4

3	Final exam	Students will be tested on their understanding of fundamental concepts, methods, and problem solving skills.	1, 2, 3, 4	
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**Assessment Tasks / Activities (ATs)**

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Group project	1, 2, 3, 4	50

**Continuous Assessment (%)**

50

**Examination (%)**

50

**Examination Duration (Hours)**

2

**Additional Information for ATs**

Examination duration: 2 hrs

Percentage of continuous assessment, examination, etc.: 50% by continuous assessment; 50% by exam

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

- 1) obtain at least 30% of the total marks allocated towards continuous assessment (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 Assessment Rubrics.

**Assessment Rubrics (AR)****Assessment Task**

1. Group project

**Criterion**

Ability to analyse and solve problems related to energy and environmental policy.

**Excellent (A+, A, A-)**

Excellent understanding of concepts, relevance and integration of materials, and excellent ability to solve selected sustainability challenges in Hong Kong.

**Good (B+, B, B-)**

Good understanding of concepts, relevance and integration of materials, and good ability to solve selected sustainability challenges in Hong Kong.

**Fair (C+, C, C-)**

Fair understanding of concepts, relevance and integration of materials, and fair ability to solve selected sustainability challenges in Hong Kong.

**Marginal (D)**

Marginal understanding of concepts, relevance and integration of materials, and marginal ability to solve selected sustainability challenges in Hong Kong.

**Failure (F)**

Fail to understand concepts, relevance and integration of materials, and fail to solve selected sustainability challenges in Hong Kong.

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### Assessment Task

#### 2. Examination

#### Criterion

Ability to analyse and solve problems related to energy and environmental policy.

#### Excellent (A+, A, A-)

Excellent ability to analyze and solve problems related to energy and environmental policy.

#### Good (B+, B, B-)

Good ability to analyze and solve problems related to energy and environmental policy.

#### Fair (C+, C, C-)

Fair ability to analyze and solve problems related to energy and environmental policy.

#### Marginal (D)

Marginal ability to analyze and solve problems related to energy and environmental policy.

#### Failure (F)

Fail to analyze and solve problems related to energy and environmental policy.

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## Part III Other Information

### Keyword Syllabus

- Fossil fuel, carbon intensity of fossil fuel, peak oil, resource depletion, renewable energy, conventional energy, nuclear energy
- Greenhouse gas, radiative forcing, global warming, climate change, ocean acidification, biodiversity
- Energy efficiency, energy demand and energy supply
- Emission permits trading, Kyoto protocol, Clean Development Mechanism, UN Framework Convention on Climate Change, cap-and-trade, risk management, precautionary principle
- Environmental political economics: lobbies and interest group theory
- Cost benefit analysis
- Non-market valuation, willingness to pay (WTP) and willingness to accept (WTA), option, bequest and existence values, valuation methods
- Government planning and regulation: HKSAR government, PRC Central government, Intended Nationally Determined Contributions (INDCs) and international agreements.

### Reading List

#### Compulsory Readings

	Title
1	OECD. 10 June 2020. Innovative citizen participation and new democratic institutions. Organisation for Economic Cooperation and Development (Paris). <a href="https://www.oecd-ilibrary.org/content/publication/339306da-en">https://www.oecd-ilibrary.org/content/publication/339306da-en</a> .
2	United Nations. 2015. Sustainable Development Goals – 17 goals to transform our world. Accessible at <a href="http://www.un.org/sustainabledevelopment/#">http://www.un.org/sustainabledevelopment/#</a> .
3	McGartland, Al, Richard Revesz, Daniel A. Axelrad, et al. 2017. "Estimating the health benefits of environmental regulations." Science no. 357 (6350):457-458. doi: 10.1126/science.aam8204.

4	Chan, Chung-Shing. 2017. "Health-related elements in green space branding in Hong Kong." <i>Urban Forestry &amp; Urban Greening</i> no. 21:192-202. doi: 10.1016/j.ufug.2016.12.009.
5	Council for Sustainable Development. 2020. Report on public engagement on long-term decarbonisation strategy. Hong Kong.

**Additional Readings**

Title	
1	Other readings and journal articles will be assigned.