SEE3204: URBAN SUSTAINABILITY

Effective Term
Semester A 2022/23

Part I Course Overview

Course Title
Urban Sustainability

Subject Code
SEE - School of Energy and Environment
Course Number
3204

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
SEE2201 Fundamentals of Environmental Engineering

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
SEE3205 Urban Sustainability

Part II Course Details

Abstract
This course aims to provide the students with a basic understanding of key concepts and methodologies concerning urban sustainability and enhance their ability to address actual urban sustainability issues by incorporating environmental,

technological, social and policy dimensions. The students will participate in lectures by researchers in academia, field trips and on-site discussions with practitioners from industry and the public sector to better understand the contemporary challenges in Hong Kong. In the course, the students will work together in teams on one of the urban sustainability challenges (i.e., air pollution, energy, water, housing, and waste management) and to propose policy-focused solutions for the problem. Hands-on workshop on technological innovations in urban sustainable technology (e.g., citizen science project) will also be introduced to widen students' horizon. At the end of the course, each group is required to make a poster presentation for illustrating their understanding of the structure of the challenge and suggesting possible solutions to improve the urban sustainability.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe key challenges for urban sustainability in Hong Kong.		x		
2	Explain major factors affecting urban sustainability.		x	x	
3	Describe potential solutions to urban sustainability challenges.		x	x	
4	Develop a citizen science project to address one of the urban sustainability challenges.			x	x
5	Develop proposals for public policies that would promote urban sustainability in Hong Kong.			x	x
6	Present and defend the proposed policy-focused sustainability solutions.				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.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Acquire basic understanding of key urban sustainability challenges in Hong Kong. The major concepts and methodologies covered in this course include air pollution, energy, water security, housing, and waste management, and policy-oriented solution.	1, 2, 3, 4, 5, 6	

2	Field Trip	Learn actual practices in dealing with urban sustainability challenges through field visits (e.g., Housing Authority Exhibition Center, Kai Tak District Seawater Cooling System, Energize Kowloon East Office, T-PARK and Wetland Park).	1, 2, 3, 5, 6	
3	Workshop	Hands-on workshop for citizen science project	4	
4	Analysis	Analyse urban sustainability challenges and develop proposals for policy-oriented solutions in group discussions with guidance by the lecturers and instructors.	1, 2, 3, 4, 5, 6	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Assignment	1, 2, 3, 4	16	
2	Group Work	3, 4, 5, 6	34	
3	Poster Presentation	1, 2, 3, 4, 5, 6	50	

Continuous Assessment (%)

100

Examination (%)

0

Examination Duration (Hours)

N/A

Additional Information for ATs

Examination duration: N/A
Percentage of coursework, examination, etc.: 100% by coursework

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 Assessment Rubrics.

This course will be offered jointly with Arizona State University or members of Global Consortium for Sustainability Outcomes for a joint summer school. So the entire course is only 2 weeks.

Assessment Rubrics (AR)

Assessment Task
1. Assignment

Criterion
Ability to summarize and critique the existing solutions of urban sustainability

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal level

Assessment Task
2. Group Work

Criterion
1. Ability to analyse the basic structure of an urban sustainability challenge in Hong Kong and write an opinion-editorial (op-ed) article on the urban sustainability challenge.
2. Ability to develop a citizen science project to address one of the urban sustainability challenges.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal level

Assessment Task
3. Poster Presentation

Criterion
Ability to propose policy-focused sustainability solutions and present them effectively and convincingly.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not event reaching marginal level

Part III Other Information

Keyword Syllabus
Urban sustainability, air pollution, energy, water, housing, waste management, and policy-oriented solution

Reading List

Compulsory Readings

	Title
1	Harris, Paul G. 2012. Environmental policy and sustainable development in China: Hong Kong in global context, Bristol: Policy.
2	Planning Department of Hong Kong SAR Government. 2000. Sustainable development in Hong Kong for the 21st century: Second stage consultation: public consultation report, Prepared by Environmental Resources Management (H.K. Govt. Documents - HC470.3.Z9 E735 2000).
3	This will develop from specific readings necessary for the challenge the students choose to examine.

Additional Readings

	Title
1	Glaeser, Edward. 2011. Triumph of the City, Introduction: Our Urban Species, Penguin Press.
2	Gottlieb, Paul and Simon Ng. 2017. Global Cities: Urban Environments in Los Angeles, Hong Kong, and China, MIT Press.
3	Melnick, Rob. 2013. The New City: A Perspective, Commissioned by Arizona State University Foundation.
4	Svara, James H. 2011. Local Government Action to Promote Sustainability: A Preliminary Examination.
5	Webber, Michael E. 2015. A Puzzle for the Planet, Scientific American, pp. 63-67.