UOW COLLEGE HONG KONG / COMMUNITY COLLEGE OF CITY UNIVERSITY
COURSE INFORMATION RECORD
(Associate Degrees, Higher Diplomas and Diploma)

This form is for the completion by the Course Examiner. The information provided on this form is the official record of course. It will be used for the College's database, various College publications (including websites) and documentation for students and others as required. Please refer to the *Explanatory Notes* attached to this form on the various items of information required.

Offered by	Faculty of Science and Technology
With effect from *(semester and academic year)*	Semester B, 2021/2022

Part I Course Overview

Course Title:	Environment and Technology
Course Title *(in Chinese if applicable):*	Nil
Course Code:	CGE23216
Course Duration:	1 semester
Credit Units:	3
Level:	A2
QF Credit Units:	14
QF Level:	4
GE Domain: *(for GE courses only)*	☐ Arts and humanities ☒ Science and technology ☐ Society and organisations
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course code and title)*	Nil
Precursors: *(Course code and title)*	Nil
Equivalent courses: *(Course code and title)*	CGE23206 Environment and Technology
Exclusive courses: *(Course code and title)*	CGE13206 Environment and Technology
Programmes/cohorts of students not allowed to enrol in this course (if any):	Nil

Part II Course Details

1. Course Aims

> The course aims to develop a broad understanding of current environmental and technology issues, their interrelationship, and their impact on society. Basic scientific, technical, and numerical analysis is introduced to prepare students for participation in meaningful discussion of, and dialog on, environmental issues. An important goal is to facilitate understanding of developments, especially as reported in the media, which have an impact on our lives, and thereby facilitate informed participation in civic decision making.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	Distinguish between alternative explanations relating to environment or technology in terms of accuracy or relevance.	20
2.	Apply basic methods in science and quantitative reasoning to the solution of practical problems encountered in daily life and understanding of current issues.	10
3.	Analyze the impact of technology on people's quality of life and the environment.	20
4.	Explain how technologies should be developed to ensure environmental sustainability.	20
5.	Examine the ethical issues involved concerning the impact of scientific and technological development on society and individuals.	20
6.	Communicate coherently in written and spoken language on topics relevant to the course.	10
	If weighting is assigned to CILOs, they should add up to	100%

3. Alignment of the CILOs with the Programme Intended Learning Outcomes

Only for Generic Courses and General Education Courses	**CILOs** *(Please ✓ if the CILO(s) is/are aligned with the PILOs)*					
Intended learning Outcomes of General Education	1	2	3	4	5	6
I-V Required (All outcomes below must be aligned with at least one CILO)						
I. Demonstrate a solid foundation of inquiry skills for life-long learning			✔		✔	
II. Apply critical and creative thinking skills			✔		✔	
III. Communicate coherently in written and spoken language						✔
IV. Apply quantitative reasoning / problem solving skills	✔	✔				

	1	2	3	4	5	6
V. Demonstrate capacity for ethical reasoning and responsible actions					✔	
VI – VIII Optional (At least one outcome below must be aligned with at least one CILO)						
VI. Recognize the important characteristics of diverse peoples and cultures			✔		✔	
VII. Examine the major regional and global issues and relate them to the socio-political, cultural, economic and technological factors.						
VIII. Appreciate the impact of scientific and technological development on society and individual.			✔	✔	✔	

4. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.					
		1	2	3	4	5	6
a. Lecture Examples	Lectures will introduce concepts and issues and provide various examples. Explanations will be supplemented by short video clips and various online sources.	✔	✔	✔	✔	✔	
b. Online Lecture Participation Exercises	Short online participation exercises will be used in each lecture to provide students with basic feedback on their understanding of recent topics. Each class section performance will be reviewed immediately after each exercise to identify common areas of misunderstanding.	✔	✔	✔	✔	✔	✔
c. Site Visit	During one particular week, typically close to mid-semester, students will participate in an out-of-classroom learning activity. In informal groups they will visit a local site of relevance to the environment and/or technology, perform certain observational and evaluative tasks, and submit an individual report using a prescribed template.			✔	✔	✔	✔
d. Group Project	Students in teams of 4 or 5 each will provide both a presentation and a group portfolio exploring in depth a particular environment and/or technology related problem or issue.	✔	✔	✔	✔	✔	✔

5. Teaching Schedule:

Lecture (hr/week):	3	Tutorial (hr/week):	Nil	Other (please specify) (hr/week):	Nil

6. Assessment Tasks/Activities (ATs)

(ATs are designed to allow students to demonstrate how well they have achieved the CILOs.)

AT	Brief Description	CILO No.						Weighting (%)
		1	2	3	4	5	6	
a. Lecture Exercises	Students do short exercises (usually online) in class (10 minutes or less) based on materials covered in the current lesson to assess their understanding of the concepts.	✓	✓	✓	✓	✓	✓	30
b. Individual Assignment	Students visit a site in Hong Kong of their own choice which is of environmental significance (either a biodiversity site or an environmental facility) and submit a case study report.			✓	✓	✓		35
c. Group Project	Students form project teams of approximately 4 to 5 students, collectively decide on a topic of environmental and/or technological significance and make a group report and a poster..	✓	✓	✓	✓	✓	✓	35
The weightings must add up to								100%

7. Assessment Schedule (on the basis of Assessment Tasks/ Activities identified above)

Examination (%): 0	Duration (Hrs): 0	Coursework (%): 100
Grading Mode: Standard ~~or Pass/Fail~~* (delete as appropriate)		

Part III Learning Contents and Readings

1. Syllabus and Alignment with Course Intended Learning Outcomes

Major themes	Related issues and topics	CILOs					
		1	2	3	4	5	6
a. Our Environment	• The earth in space; requirements for the evolution of life on earth, the importance of the question of the uniqueness of life on Earth; • A brief introduction to genetics; genetic engineering and related ethical issues; • The process of evolution; ecology, biogeographic regions and ecosystems, biodiversity and its importance; ecological crisis.	✓		✓	✓	✓	✓
b. Climate	• The atmosphere and biosphere; weather, climate and their impact on human history and human migration. • Greenhouse gases and their effect on climate; climate change and global warming, causes and environmental consequences; mitigation and adaptation; what actions can an individual take.	✓		✓	✓	✓	✓
c. Environmental Degradation	• Human population projections, consumption and environmental impact. • Pollution of the air, oceans, water and land. • Primary areas of concern – food, energy, water – and their interrelationships. • Increasing scarcity of arable land and drinking water; species extinction and over-fishing. • Solutions.	✓		✓	✓	✓	✓
d. Energy Technology and the Environment	• The qualitative and quantitative relationship between energy and power; carbon emission estimates; energy distribution (electricity, gas, fuel). • Population growth, economic growth and the demand for energy; the use of energy in modern urban environments (transportation technologies, buildings, information communication technologies). • Energy availability, energy security and the potential for conflict. • Non-renewable and renewable energy source, peak oil, energy efficiency. • Sustainable energy solutions.	✓	✓	✓	✓	✓	✓
e. Technology, Lifestyle and the Environment	• Consumer products, consumerism and technology, materials, resources and waste. • The evolution of architecture; materials and design; green architecture. • Green technologies.	✓		✓	✓	✓	✓

		Urban technology and lifestyle – the evolution of transportation and mobility.						
f.	Technology, Food Safety and the Environment	• Additives and preservatives and their impact on human health. • Genetic engineering and genetically modified foods; merits and ethical issues; food labelling; risk and "ecocide". • Designer babies and beyond.	✓		✓	✓	✓	✓

2. Reading List

Compulsory Readings:

Moaveni, S. (2018). *Energy, environment, and sustainability*. Boston, MA: Cengage Learning.

Sandler, R. L. (2014). *Ethics and emerging technologies*. Basingstoke, UK: Palgrave Macmillan.

Additional Readings:

DeGregori, T.R. (2002). *Bountiful harvest: Technology, food safety, and the environment.* Washington, DC: Cato Institute.

Kaushika, N. D., Reddy, K. S., & Kaushik, K. (2016). *Sustainable energy and the environment: A clean technology approach*. Cham, Switzerland: Springer.

Part IV

1. Course Examiner:

Name: Ms. Kin Yan KIU

Date: 23 August 2021

2. Associate Dean of Faculty

Name: Dr. Ho-lam LAU

Date: 29 August 2021

3. Reviewer (if applicable):

Name: _____

Position/Affiliation: _____

Date: _____