THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title : Bachelor of Education (Honours)
Programme QF Level : 5
Course Title : Environmental Studies for Sustainable Development
Course Code : SCI2562
Department : Science and Environmental Studies
Credit Points : 3
Contact Hours : 39
Pre-requisite(s) : Nil
Medium of Instruction : EMI
Course Level : 2

Part II

The University's Graduate Attributes and seven Generic Intended Learning Outcomes (GILOs) represent the attributes of ideal EdUHK graduates and their expected qualities respectively. Learning outcomes work coherently at the University (GILOs), programme (Programme Intended Learning Outcomes) and course (Course Intended Learning Outcomes) levels to achieve the goal of nurturing students with important graduate attributes.

In gist, the Graduate Attributes for Undergraduate, Taught Postgraduate and Research Postgraduate students consist of the following three domains (i.e. in short "PEER & I"):

- **P**rofessional **E**xcellence;
- **E**thical **R**esponsibility; **&**
- **I**nnovation.

The descriptors under these three domains are different for the three groups of students in order to reflect the respective level of Graduate Attributes.

The seven GILOs are:

1. Problem Solving Skills
2. Critical Thinking Skills
3. Creative Thinking Skills

4a. Oral Communication Skills

4b. Written Communication Skills

5. Social Interaction Skills
6. Ethical Decision Making

7. Global Perspectives

1. Course Synopsis

This course provides an introduction to the scientific, technological, cultural and socio-economic aspects of environmental studies with particular reference to current environmental issues in the local, national and global contexts.

2. Course Intended Learning Outcomes ($CILO_s$)

Upon completion of this course, students will be able to:

$CILO_1$ demonstrate an understanding of the concepts and knowledge required to interpret and comment on local, national and global environmental issues;

$CILO_2$ demonstrate a range of skills necessary to investigate and comprehend environment issues; and

$CILO_3$ develop informed and responsible attitudes relating to the care and conservation of the environment.

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
a. Sustainable development; i. overview of sustainable development (SD): origin, framework and dimensions ii. important concepts of SD: sustainability, equity and stakeholders iii. SD as an overarching framework for understanding environmental issues	$CILO_1$	Mini-lectures, case studies, group discussion and presentation
b. Ecosystem and conservation: ecological concepts and ecosystem: habitats, niches and trophic levels, energy transfer and nutrient cycling, examples and interrelationships of ecosystems (e.g. rainforest and wetland), importance of biodiversity;	$CILO_{1,2}$	Mini-lectures, case studies, group discussion and presentation

c. Natural resources consumption, exploitation and management; i. outlook of important natural resources: (e.g. water, forestry and fisheries) ii. unsustainable and sustainable resources consumption pattern iii. lifestyles and ecological footprints	$CILO_{1,2,3}$	Mini-lectures, case studies, group discussion and presentation
d. Environmental pollution, legislation and management: major types of environmental problems and pollution, sources, effects of pollution and their relevance to Hong Kong;	$CILO_{1,2,3}$	Mini-lectures, case studies, group discussion and presentation
e. Overviews of major global environmental problems (e.g. global warming, deforestation, extinction of species), strategies for combating these problems (e.g. carbon trading); and	$CILO_{1,2,3}$	Mini-lectures, case studies, group discussion and presentation
f. Sustainable urbanization: environmental issues caused by urbanization, issues for sustainable urban development, examples in the local and regional context.	$CILO_{1,2,3}$	Mini-lectures, case studies, group discussion and presentation

4. Assessment

Assessment Tasks	Weighting (%)	CILO
Tutorial Questions/ on-line learning/ class participation	50	$CILO_{1,2,3}$
Group laboratory reports and worksheets	35	$CILO_{1,2,3}$

A group project (Poster presentation) to study a local, national / regional environmental issue. The project should critically examine the various factors affecting the issue, together with the roles of different stakeholders. Students also need to make suggestions to resolve the problems encountered.	15	$CILO_{1,2,3}$

5. Required Text(s)

Botkin, D.B., & Keller, E.A. (2009). *Environmental science: Earth as a living planet*. New York: J. Wiley.

6. Recommended Readings

Sustainable Development and General Environmental Science

Wright, R., & Boorse, D. (2015). *Environmental science: Toward a sustainable future* (Thirteenth ed.). Hoboken, NJ : Pearson Higher Education

Miller, G.T., & Spoolman, S. E. (2009). *Sustaining the Earth: An integrated approach*. Pyrmont: Brooks/Cole.

Cunningham, W. P., & Cunningham, M. A. (2018). *Environmental science : A global concern* (Fourteenth ed.). New York : McGraw-Hill Education

Miller, G.T. (2006). *Environmental science: Working with the Earth*. Pacific Grove, California: Brooks/Cole.

Environmental Pollution and Health

Oreskes, N & Conway, E. M. (2010), *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming (1st ed.)*, New York: Bloomsbury Press.

Schneider, S. H., Rosencranz, A. & Niles, J. O. (eds.), (2002), *Climate Change Policy: A Survey*, Island Press.

程胜高、但德忠（編）（2006）:《环境与健康》，北京，中国环境科学出版社。

乔玮主、黃凯、郝鹏鹏、谢珊参（編）（2005）:《环境保护基础》，北京，北京大学出版社。

伊恩.波頓（2010）:《環境也是災害：你準備好面對了嗎?》，台灣，聯經。

7. Related Web Resources

香港天文台教育資源

http://www.weather.gov.hk/education/educ.htm

UNEP Intergovernmental Panel on Climate Change
http://www.ipcc.ch/
香港環境保護署
http://www.epd.gov.hk/epd/
香港特別行政區可持續發展委員會
http://www.susdev.gov.hk/
Agenda 21
http://www.un.org/esa/sustdev/documents/agenda21/index.htm
UNESCO. Teaching and learning for a sustainable future: a multimedia professional development programme
http://www.unesco.org/education/tlsf/
香港教育學院環境及持續發展教育網
http://www.eduhk.hk/esdweb/

8. Related Journals

Ecological Applications. Ecological Society of America.
International Research in Geographical and Environmental Education. Taylor & Francis.
Environmental Reviews. Canadian Science Publishing.
Environmental Science and Pollution Research International. Springer Science & Business Media.
Environmentalist. Springer Healthcare Communications.

9. Academic Honesty

The University adopts a zero tolerance policy to plagiarism. For the University's policy on plagiarism, please refer to the *Policy on Academic Honesty, Responsibility and Integrity with Specific Reference to the Avoidance of Plagiarism by Students* (https://www.eduhk.hk/re/modules/downloads/visit.php?cid=9&lid=89). Students should familiarize themselves with the Policy.

10. Others

Nil

Last update: February 2021