

THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title	: Doctor of Education (Science Education)
Programme QF Level	: 7
Course Title	: Field-Based Education and Environmental Literacy
Course Code	: SCG7022
Department	: Department of Science and Environmental Studies
Credit Points	: 3
Contact Hours	: 39
Pre-requisite(s)	: Nil
Medium of Instruction	: English
Course Level	: 8

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"):

- Professional Excellence;
- Ethical Responsibility; &
- Innovation.

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

Environmental literacy is a core competency for the 21st century global citizens. The field-based approach has long been recognized as one of the most effective educational pedagogies in enhancing people’s environmental literacy. This course is designed to develop students’ understandings in the theoretical framework underlying field-based learning and environmental literacy, and therefore developing their capacity in not only conserving the environment, but also designing and implementing educational activities or programmes to enrich environmental literacy of different audiences. Through literature analysis, case studies along with field-based enquiries, the participants will develop an in-depth understanding in the theories and research as well as gaining critical perspectives on the field-based learning approach in a practical context of education, in order to promote people’s environmental literacy. Upon completion of the course, students are encouraged to develop their own research plan in relation to theory development and applications in this area of environmental education.

2. Course Intended Learning Outcomes (CILOs)

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

- CILO₁ Understand the principles and theoretical framework of field-based learning and environmental literacy along with their inter-relationship in an educational context.
- CILO₂ Evaluate the strengths and weaknesses of a variety of field-based learning activities.
- CILO₃ Apply the principles and concepts of field-based learning approach to promote competencies in environmental literacy.

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
Key concepts in field-based learning and environmental literacy: <ul style="list-style-type: none"> - Concepts and features of education for sustainable development - Evolution and research in environmental literacy - Theoretical framework and diversified applications of field-based experiential learning in the educational contexts. 	CILO ₁	Lecture, literature analysis, discussion / online forum discussion and student presentation.

Evaluation and application of field-based approach in promotion of environmental literacy in a practical context of education.	<i>CILO</i> _{2, 3}	Discussion / online forum discussion, video, field-based inquiry and student presentation.
--	-----------------------------	--

4. Assessment

Assessment Tasks	Weighting (%)	CILO
a. Class participation: Including class discussion, in-class activities involving case studies and literature analysis.	15%	<i>CILO</i> _{1,2,3}
b. Group project: Development and demonstration of a field-based activity in an environmental education context. The report should include the rationale, the objectives and hypothesis of field investigation (if any), research approach and data collection methods, collection of data and findings, analysis and suggestions for solutions	40%	<i>CILO</i> _{1,2,3}
c. Seminar presentations: Involving reflection and analysis of relevant concepts, theories and cases from literature reviewed, and how these pieces of knowledge can be applied to promote environmental literacy.	45%	<i>CILO</i> _{1,2,3}

5. Required Text(s)

Nil

6. Recommended Readings

Ardoin N., Heimlich J., Braus J. & Merrick C. (2013). *Influencing Conservation Action: What Research Says About Environmental Literacy, Behavior, and Conservation Results*. Washington, DC: Audubon.

Bodzin, A. M. (2010). Integrating web-based activities and site-based experiences to investigate environmental issues. In A. M. Bodzin, B. S. Klein, & S. Weaver (Eds.), *The inclusion of environmental education in science teacher education* (pp. 323-336). London: Springer.

Bowers, C. A. (1996). The cultural dimensions of ecological literacy. *Journal of Environmental Education*, 27(2), 5-10.

Brennan, A. (1994). Environmental literacy and educational ideal. *Environmental*

Values, 3(1), 3-16.

- Heineke, A. J. & Ryan, A. M. (2018) *Teaching, Learning, and Leading with Schools and Communities: Field-Based Teacher Education*. N.Y.: Routledge.
- Hollweg, K. S., Taylor, J. R., Bybee, R. W., Marcinkowski, T. J., McBeth, W. C., & Zoido, P. (2011). *Developing a framework for assessing environmental literacy*. Washington, DC: North American Association for Environmental Education.
- Hsu, S.-J., & Roth, R. E. (1998). An assessment of environmental literacy and analysis of predictors of responsible environmental behavior held by secondary teachers in the Hualien area of Taiwan. *Environmental Education Research*, 4(3), 229-249.
- Jett, C. C. (2015) *Field Studies: Challenging Project Based Learning For High School and College Students (Middle School Students, too!) The "Socratic Method" in Action!*. Outskirts Press.
- Johnson, E. A., & Mappin, M. J. (2005). *Environmental education and advocacy: Changing perspectives of ecology and education*. Cambridge, UK: Cambridge University Press.
- King, R. J. H. (2000). Defining literacy in a time of environmental crisis. *Journal of Social Philosophy*, 31(1), 68-81.
- Lonergan, N., & Andresen, L. W. (1988). Field-based education: Some theoretical considerations. *Higher Education Research and Development*, 7(1), 63-77.
- Orr, D. W. (1992). *Ecological literacy: Education and the transition to a postmodern world*. Albany, NY: SUNY Press.
- Palmberg, I. E., & Kuru, J. (2000). Outdoor activities as a basis for environmental responsibility. *The Journal of Environmental Education*, 31(4), 32-36.
- Roth, C. E. (1992). *Environmental literacy: Its roots, evolution and directions in the 1990s*. Columbus, USA: ERIC Publications.
- Scholz, R. W. (2011). *Environmental literacy in science and society: From knowledge to decisions*. New York, USA: Cambridge University Press.

7. Related Web Resources

- United Nations Educational, Scientific and Cultural Organization. (1978). *Final report on the 1st intergovernmental conference on environmental education at Tbilisi (USSR) (ED/MD/49)*. Retrieved from <http://unesdoc.unesco.org/images/0003/000327/032763eo.pdf>
- Environmental Literacy Council and associated virtual library (2013). Retrieved from <http://enviroliteracy.org/>

8. Related Journals

Educational Philosophy and Theory

Environmental Education Research
Environmental Values
International Journal of Educational Development
Research in Science and Technological Education
The Journal of Environmental Education

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: 9 January 2019