THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title : Doctor of Education (Science Education)
Course Title : Environmental Health Perspectives and Education
Course Code : SCG7021
Department : Department of Science and Environmental Studies
Credit Points : 3
Contact Hours : 39
Pre-requisite(s) : Nil *(If applicable)*
Medium of Instruction : English
Level : 7

Part II

1. Synopsis

Recently, the importance of the relationship between humans and the environment has become prominent in the social consciousness; therefore, environmental quality and its influences on human health are causing many concerns. This course aims at providing participants with in-depth knowledge of relationship between environmental deterioration and human health effects, and subsequent solutions and education to preclude these impacts. The course seeks to enhance the utilization, dissemination, and effective implementation of materials from, literature review, real life examples and research analysis pertaining to environmental health science. Essential approaches and education programmes to manage and address current environmental health problems caused by various types of pollutions, and education for a healthy city will be discussed.

2. Course Intended Learning Outcomes ($CILO_s$)

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

- $CILO_1$ develop an in-depth knowledge of environmental health concepts to fields and environmental contaminants.
- $CILO_2$ propose and evaluate investigation for environmental health related activities.
- $CILO_3$ develop analytical skills and educational strategies on environmental health improvement for a health city.

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
Theoretical perspectives on environmental health ● Causes/factors leading to environmental changes/deterioration, and how these causes/factors can be related to human nature ● Metabolic disorders and diseases in human; demographic changes ● Development of technology and science or technoscience, which have brought forth profound societal development and cultural changes. ● Hazardous and toxic chemicals in the environment and their impact on human health ● Treatment methods of environmental pollutants ● Solution and prevention of health effects	$CILO_{1,2}$	Lecture, case study, group discussion, literature review and field visit
Application of educational strategies for environmental health promotion ● Overview of planning for environmental health instruction ● Lab/field-based inquiry in the teaching of environmental health issues ● Roles, opportunities and challenges of education and learning in the environmental health and safety ● Strategies or programs to educate the public to participate and achieve a healthy city ● Critical evaluation of the existing strategies and programmes	$CILO_{3}$	Lecture, tutorial, case study, group discussion and presentation

4. Assessment

Assessment Tasks	Weighting (%)	CILO
(a) An essay on a critical review of the literature in environmental health perspectives and case studies of a healthy city.	60	$CILO_{1,2,3}$
(b) Design an educational program and presentation on how to educate public in the community to achieve a healthy city.	40	$CILO_{1,2,3}$

5. Required Text(s)

Nil

6. Recommended Readings

Barrow, C. J. (2006). *Environmental Management for Sustainable Development* (2nd ed.). London: Routledge.

Braus J. A. and Wood D. (1993). Environmental Education in the Schools: Creating a Program that Works!. Washington, DC: Peace Corps, 1993. Online at http://www.peacecorps.gov/library/pdf/M0044_enveduc.pdf.Daniel

Friis, R. H. (2012). *Essentials of Environmental Health* (2nd ed.). Sudbury, MA: Jones & Bartlett Learning

Kappa Phi Delta, 2002. Environmental Education: A Resource Handbook. (Bloomington, IN : Educational Foundation, 2002. ISBN: 0873678346)

Michael McKinney, Robert Schoch, Logan Yonavjak (2013) Environmental science : systems and solutions (5th ed.) Burlington, Mass.: Jones and Barlett Publishers.

Miller, G. T., and Spoolman, S. E. (2009). *Sustaining the Earth: An integrated approach* (9th ed.). Belmont, Calif.: Brooks/Cole.

Moore, G. S. (2007). *Living with the earth: Concepts in environmental health science* (3rd ed.). New York: CRC Press

Nadakavukaren, A. (2011). *Our global environment: A health perspective* (7th ed.) Prospect Heights: Waveland Press, Inc.

Nazaroff, W.W. and Alvarez-Cohen, L. (2001). *Environmental Engineering Science.* John Wiley & Sons, Inc.

Organisation for Economic Co-operation and Development (2013) *Biotechnology for the Environment in the Future: Science, Technology and Policy*. Paris : OECD Publishing

Philp, R. B. (2012). *Ecosystems and Human Health: Toxicology and Environmental Hazards* (3rd ed.). New York: CRC Press

Wright, R. T., and Boorse, D. F. (2011). *Environmental Science: Towards a Sustainable Future* (11th ed.). Upper Saddle River, N.J.: Pearson.

7. Related Web Resources

Agriculture, Fisheries and Conservation Department: http://www.afcd.gov.hk
Environmental Protection Department: http://www.epd.gov.hk/
United States Environmental Protection Agency: http://www.epa.gov
United Nations Environment Programme: www.unep.org

8. Related Journals

Chemosphere
Environment, Development and Sustainability

Environmental Health Perspectives
Environmental International
Environmental Pollution
Environmental Science and Technology
Environmental Technology
Journal of Environmental Management
Science of the Total Environment
Waste Management
Waste Management and Research
Water Research
Water Science and Technology
Water, Air, and Soil Pollution

9. Others

Nil