

THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title	: Bachelor of Education (Honours) (Geography) (Five-year Full-time)
Programme QF Level	: 5
Course Title	: Natural Hazards
Course Code	: GGP4025
Department	: Science and Environmental Studies; Social Sciences and Policy Studies
Credit Points	: 3
Contact Hours	: 39
Pre-requisite(s)	: Nil
Medium of Instruction	: English
Course Level	: 4

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 Sub-degree, Undergraduate, Taught Postgraduate, Professional Doctorate 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

This course provides students with the knowledge of a wide range of natural hazards, their impacts on human societies and relevant hazard adjustment measures. The course covers threats from nature such as geological, geomorphological, atmospheric, and biological hazards. The formation, process, distribution and impacts of these natural hazards on human societies will be examined in details. Responses from the human societies to the occurrence of these hazards will be discussed and evaluated for a deeper understanding of the human-nature relationship.

2. Course Intended Learning Outcomes (CILOs)

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

- CILO₁: discuss the concept of environmental hazards
- CILO₂: demonstrate competence in knowledge on the origins, characteristics and impacts of a variety of environmental hazards in both global and local contexts
- CILO₃: discuss the hazard adjustment measures available to different societies, including Hong Kong
- CILO₄: evaluate critically with regard to the relationship between human societies and hazards

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
1. Fundamentals of hazards and disasters 2. Risks, vulnerability & responses	CILO _{1,4}	<ul style="list-style-type: none"> • Lectures • Presentation • Discussion • E-learning • Self-directed learning
3. Geophysical hazards: volcanicity, seismicity (including tsunamis), mass movements 4. Meteorological hazards: tropical cyclones, extreme temperatures, thunderstorms 5. Hydrological hazards: droughts and floods 6. Biological hazards: pests & infectious diseases (malaria & influenza) 7. Technological hazards: large-scale structures, transport, industrial & nuclear 8. Linkage of environmental & climate change with natural hazards 9. Community preparedness, resilience and social impacts of natural hazards 10. Social problems after natural disaster	CILO _{2,3,4}	

4. Assessment

Assessment Tasks	Weighting (%)	CILOs
Hazard diary <ul style="list-style-type: none"> A record of various hazards for the duration of the semester outlining the location, impacts and mitigation measures 	40%	CILO _{1,2,3,4}
Group presentation <ul style="list-style-type: none"> Student presentation on a selected case study related to a hazard recorded in their diary 	20%	CILO _{1,2,3,4}
Examination <ul style="list-style-type: none"> Multiple choice and short essay type questions 	40%	CILO _{1,2,3,4}

5. Required Text(s)

Keith S. (2013) *Environmental Hazards: Assessing Risk and Reducing Disaster* (6th edn.). Routledge.

6. Recommended Readings

Abbott, P.L. (2008). *Natural disasters*. McGraw-Hill.

Alexander, D.E. (2002) *Principles of Emergency Planning and Management*. Terra Publishing.

Guha-Sapir D., Hoyois P. & Below R. (2014) *Annual Disaster Statistical Review 2013: the numbers and trends*. Centre for Research on the Epidemiology of Disasters (CRED).

Guha-Sapir D., Hargitt, D. & Hoyois P. (2004) *Thirty Years of Natural Disasters 1974 – 2003: the numbers*. UCL Presses.

Hyndman, D. W., & Hyndman, D. W. (2009). *Natural hazards and disasters* (2nd edn.). Brooks/Cole.

Keller, E.A. & DeVecchio, D.E. (2014) *Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes* (4th edn.). Prentice Hall.

Paul, B.K. (2011) *Environmental Hazards and Disasters: Contexts, Perspectives and Management*. Wiley.

Trenberth, K.E. et al. (2007) *Observations: Surface and Atmospheric Climate Change*. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.

Wisner, B., Gaillard, J.C. and Kelman, I. (2012) *The Routledge Handbook of Hazards and Disaster Risk Reduction*. Routledge.

Wisner, B., Blaikie, P., Cannon, T. & Davis, I. (2003). *At risk: Natural hazards, people's vulnerability and disasters* (2nd edn.). Routledge.

7. Related Web Resources

EM-DAT Database

<http://www.emdat.be/database>

Disaster statistics, UNISDR

<http://www.unisdr.org/we/inform/disaster-statistics>

Natural Disasters. Protecting the Public's Health:

http://www.paho.org/hq/index.php?option=com_content&view=article&id=2186:natural-disasters-protecting-public-s-health&Itemid=1894&lang=en

Natural Disaster Risk Reduction, UNESCO

<http://www.unesco.org/new/en/unesco/themes/pcpd/natural-disaster-risk-reduction/>

Natural Hazards and Disasters Information Resources, University of Colorado at Boulder

<http://www.colorado.edu/hazards/resources/>

Teaching about Hazards in Geoscience

<http://serc.carleton.edu/NAGTWorkshops/hazards/index.html>

8. Related Journals

Community, Environment and Disaster Risk Management

Disaster Prevention and Management

Geomatics, Natural Hazards and Risk

Environmental Hazards

International Journal of Disaster Resilience in the Built Environment

Natural Hazards

Natural Hazards and Earth System Science

Natural Hazards Review

9. Academic Honesty

The University upholds the principles of honesty in all areas of academic work. We expect our students to carry out all academic activities honestly and in good faith. Please refer to the *Policy on Academic Honesty, Responsibility and Integrity* (<https://www.eduhk.hk/re/uploads/docs/00000000016336798924548BbN5>). Students should familiarize themselves with the Policy.

10. Others

Newspapers and magazines related to topic issues.

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