THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title	: Bachelor of Social Sciences (Honours) in Sociology and Community Studies and Bachelor of Education (Honours) (Geography); all undergraduate programmes
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.

IIn 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"):

- **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 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** ($CILO_S$)
   Upon completion of this course, students will be able to:

   $CILO_1$: discuss the concept of environmental hazards

   $CILO_2$: demonstrate competence in knowledge on the origins, characteristics and impacts of a variety of environmental hazards in both global and local contexts

   $CILO_3$: discuss the hazard adjustment measures available to different societies, including Hong Kong

   $CILO_4$: 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	*$CILO_{1,4}$*	• 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 (%)	CILO
A) Fieldtrip Report Student writes an individual fieldtrip report	20%	$CILO_{1,2,3,4}$
B) Group presentation Student presentation on their evaluation report	30%	$CILO_{1,2,3,4}$
C) Examination Multiple choice and short essay type questions	50%	$CILO_{1,2,3,4}$

5. Use of Generative AI in Course Assessments

Please select one option only that applies to this course:

☐ ***Not Permitted***: In this course, the use of generative AI tools is not allowed for any assessment tasks.

☑ ***Permitted***: In this course, generative AI tools may be used in some or all assessment tasks. Instructors will provide specific instructions, including any restrictions or additional requirements (e.g., proper acknowledgment, reflective reports), during the first lesson and in relevant assessment briefs.

6. Required Text(s)

Keith S. (2023) Environmental Hazards: Assessing Risk and Reducing Disaster (7th edn.). Routledge, 632pp.

7. Recommended Readings

Abbott, P.L. (2022). *Natural disasters*(12th edn). McGraw-Hill, 578pp.

Alexander, D.E. (2002) *Principles of Emergency Planning and Management*. Terra Publishing, 352pp.

Hyndman, D. W., & Hyndman, D. W. (2024). *Natural hazards and disasters* (6th edn.). Brooks/Cole, 576pp.

IPCC (2021). Climate Change 2021 – The Physical Science Basis: Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, 2391pp.

Keller, E.A. & DeVecchio, D.E. (2019) *Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes* (5th edn.). Prentice Hall, 664pp.

McGee, T.K., & Penning-Rowsell, E.C. (2022). Routledge Handbook of Environmental Hazards and Society (Routledge Environment and Sustainability Handbooks),

Routledge, 616pp.

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

UCLouvain, CRED, USAID (2023) Disasters in Numbers: A Significant Year of Disaster Impact, 19pp.

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

8. 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

9. 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

10. 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/00000000001633679892454 8BbN5). Students should familiarize themselves with the Policy.

11. Others

Newspapers and magazines related to topic issues.

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