

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	: Geomorphology and Hydrology
Course Code	: GGP4010
Department	: Science and Environmental Studies; Social Sciences
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 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

This course aims to provide students with the in-depth knowledge of geomorphology and hydrology. Diversity of landforms upon hydrologic, geologic, and anthropogenic controls will be examined. Processes controlling the near-surface components of the hydrological cycle, their interactions with the physical environment and the impacts on human systems will be covered.

2. Course Intended Learning Outcomes (CILO_s)

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

- CILO₁: demonstrate a high level of competence in theoretical and practical knowledge of major concepts and processes of hydrology and geomorphology, and apply to different local and global environmental contexts
- CILO₂: evaluate critically the impacts and interactions between hydrological and geomorphological processes, on climate, landforms, human settlement patterns and natural disasters
- CILO₃: choose appropriate data collection tools and methods to study hydrological and geomorphological processes
- CILO₄: recognise various social and economic benefits derived from ecosystem services provided by the hydrosphere and lithosphere

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
1. Landforms: agents and processes	CILO _{1,4}	♦ Lectures
2. Rocks, weathering, erosion, mass movement and slopes	CILO _{1,2,4}	♦ Presentation
3. The drainage basin and hydrology		♦ Discussion
4. Fluvial processes, landforms and management		♦ E-learning
5. Tectonic structure and global geomorphology		♦ Self-directed learning
6. Volcanicity and landforms		
7. Coastal processes, landforms and management		
8. Techniques and field investigation	CILO _{1,3}	

4. Assessment

Assessment Tasks	Weighting (%)	CILOs
(a) Coursework <ul style="list-style-type: none">Including in-class exercises and quizzes	40%	CILO _{1,2,3,4}
(b) Short essay <ul style="list-style-type: none">Covering an extended topic relevant to the course	30%	CILO _{1,2,3,4}
(c) Virtual field activity design <ul style="list-style-type: none">An inquiry-based virtual field activity and assessment design for use in teaching a secondary school geography topic in Hong Kong	30%	CILO _{1,2,3,4}

5. Required Text(s)

N/A

6. Recommended Readings

Bishop, V. & Prosser R. (2001) *Landform systems* (2nd edn.). Collins.

Gregory, K.J. (2010) *The Earth's Land Surface: Landforms and Processes in Geomorphology*. Sage Publ.

Goudie, A. (1995) *The Changing Earth: rates of geomorphological processes*. Blackwell.

Harvey, A. (2012) *Introducing Geomorphology: a guide to landforms and processes*. Dunedin Academic Press.

Huggett, R.J. (2011) *Fundamentals of Geomorphology*. Routledge.

Knighton D. (1998) *Fluvial Forms & Processes: a new perspective*. Arnold.

Rice, R.C. (1977) *Fundamentals of Geomorphology*. Longman.

Ritter, D.F., Kochel, R.C. & Miller, J.R. (2011) *Process Geomorphology* (5th edn.). Waveland Pr Inc.

Summerfield, M.A. (1991) *Global Geomorphology*. Longman.

Ward, R.C. & Robinson, M. (1999) *Principles of Hydrology* (4th edn.). McGraw-Hill.

7. Related Web Resources

Atlas of igneous and metamorphic rocks, minerals and textures:

<http://leggeo.unc.edu/Petunia/IgMetAtlas/mainmenu.html>

Geomorphology from Space, NASA

<http://daac.gsfc.nasa.gov/geomorphology/>

Google Earth

<http://www.google.com/earth/>

Examples of landforms depicted on topographic maps
<http://www.csus.edu/indiv/s/slaymaker/Archives/Geol10L/landforms.htm>
Visible Earth
<http://visibleearth.nasa.gov/>
Volcano hazards program, USGS:
<http://volcanoes.usgs.gov/>

8. Related Journals

CATENA
Earth and Planetary Science Letters
Earth Surface Processes and Landforms
Geomorphology
Hydrology Research
Journal of Hydrology

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

Newspapers and magazines related to topic issues.

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