GEOG1021 Geographic issues of Polar Regions

TIMETABLE ARRANGEMENT: Annual; 2nd Semester **CREDITS:** 6

COURSE TEACHER: Professor Kin-chung HO

ASSESSMENT:

EXAMINATION 40 %	COURSEWORK 60 %
• 1.5 hours	• Mid-term quiz • 1 short essay

OBJECTIVES:
The course will provide students with knowledge related to the geographic significance of the Polar Regions and lead students to discuss issues relevant to the sustainability of the Arctic and Antarctic areas. Students will be developed with practical ideas which contribute to environmental management of the Polar Regions as well as environmental responsibilities of their future careers.

COURSE SYNOPSIS:
Polar Regions cover the Arctic and Antarctic areas of the Earth. These mysterious places were the focus of exploration and colonial contest in the early 20th Century. Today, Polar Regions are internationally co-administrated and where scientists of different countries are allowed to station and conduct research. The regions hold about 90% of the world's freshwater resources mainly in the forms of glaciers, icebergs and ice-caps. It is known that rising temperatures are the causes of changing global climates, oceanographic currents, biomes and carbon reserve. As human activities are increasingly affecting Polar Regions which are environmental sensitive and vulnerable, it is important to understand these interrelationships and what can be done to protect the tundra. The course provides fundamental knowledge and discusses the geographic significance and issues related to future management of the Polar Regions.

LECTURE TOPICS:
• Overview of polar exploration and history of discovery
• Core scientific and social knowledge of polar regions
• Significance of the polar regions with regard to climate, oceanographic changes, biome and environmental sustainability
• Natural resources in polar regions
• Recent development of polar regions with regard to human activities and impacts
• Challenges and opportunities of global climate change with particular attention to polar regions
• Innovation of polar research and development
• Environmental sustainability of polar regions

RECOMMENDED READING LIST:
• Stone, D. P. (2015) The Changing Arctic Environment – The Arctic Messenger. Cambridge University Press. ISBN 978-107-09441-3
• Walton, D. W. H. (Ed.) (2013) Antarctica – Global Science from a Frozen Continent. Cambridge University Press. ISBN 978-1-107-00392-7

	Course Learning Outcomes (CLOs) After completing this course, students would be able to:	**Alignment with Programme** Learning Outcomes (PLOs)*						**Course Assessment Methods**
		1	2	3	4	5	6	
1	describe and analysis the geographic significance of Polar Regions	✔	✔		✔			Short questions, short essay & exam
2	associate Polar Regions with the causes and impacts of global climate change	✔	✔		✔	✔		Short questions, short essay & exam
3	discuss the environmental issues of Polar Regions and their relevance to human society	✔	✔	✔	✔	✔	✔	Short questions, short essay & exam
4	develop practical and innovative ideas with regard to environmental stewardship	✔	✔	✔	✔	✔	✔	Short questions, essay & exam
5	contribute to sustainability for their future careers with particular reference to innovations and social responsibilities	✔	✔	✔	✔	✔	✔	Short questions, essay & exam

*Geography Major Programme Learning Outcomes (PLOs)

In order to meet the demands and challenges in this dynamic and ever-changing world, the Department has designed a series of well-structured and contemporary courses to cater to the different interests of students. Its courses are designed to align with the University's educational aims which hope to nurture future generations not only with a critical and intellectual mindset, but also with a passion to contribute to society in general.

After completing the programme, Geography Major students should be able to:

PLO1 **critically analyse the geographical aspects of the relationship between people and the natural environment;**

PLO2 **demonstrate and develop an understanding of how these relationships have changed with space and over time;**

PLO3 **identify, collect and utilize primary and secondary data to investigate and analyse the issues and problems facing people, places and society;**

PLO4 **integrate, evaluate and communicate information from a variety of geographical and other sources;**

PLO5 **participate in promoting social, economic and environmental sustainability at the local, regional and global scales; and**

PLO6 **effectively apply a range of transferable skills in academic, professional and social settings.**