

GEOG3203 Climate Change and the Environment (6 credits)

Course Teacher: Dr J B Li

Objectives

This course has as its primary concern climatic conditions on Earth and their interactions with life and human activities over space and time.

Course Synopsis

This course has as its primary concern climatic conditions on Earth and their interaction with life and human activities. It will focus on climate change, since to deal sensibly with questions raised concerning future climatic conditions and evaluation of their impact on environment and society, it is essential to understand the nature of the climate system and what causes it to change. In particular, the impact of human activities on the climate system will be set in perspective alongside the background of natural changes in the climate of our planet. Issues associated with societal decisions taken today and their potential impact on climate over the next century will also be discussed.

Lecture Topics

- The climate system and its operation
- Climate change: Reconstructing the past, cycles and mechanisms of change
- Understanding climate change: Climate modeling
- The greenhouse effect and climate change

Assessment

Examination (two hours) 60%; coursework 40%.

Learning Outcomes

Knowledge:

- An understanding of the climate system and climate change
- Perspectives on past climates, their cycles and mechanisms of change
- An introduction to climate modeling and scenario development
- Perspectives on issues concerning societal decisions and their potential impact on climate over the next century

Skills:

- Critical reading and writing skills
- Development of data analysis/interpretation skills
- Enhancement of individual presentation skills
- Ability to think critically about the impact of human activities on the climate system within the context of natural changes in the climate of our planet

Recommended Reading List

1. Burroughs, W. (2007) *Climate Change: A Multidisciplinary Approach*, 2nd edition. Cambridge.
2. Houghton, J. (2004) *Global Warming, the Complete Briefing*, 3rd edition. Cambridge University Press.