

**GEOG 4005 Advanced Climatology (3,3,0)**

Prerequisite: GEOG 2016 Earth System: Atmosphere and Biosphere or consent of the instructor

This course introduces selected scopes of climatology. They include an introduction to synoptic climatological methods and applications, with particular emphasis on the climate of China, climate change and climate modelling, and a comprehensive introduction to applied climatology.

**GEOG 4006 Advanced Quantitative Methods in Geography (3,2,1)**

Prerequisite: GEOG 2007 Introduction to Quantitative Methods in Geography or consent of the instructor

This course teaches students the application of quantitative methods to geographic problem solving. Statistical methods that are commonly used in geography studies and spatial analysis methods are introduced. Emphasis is placed on the application of analytical tools to real-world geographic problems and interpretation of analysis results. The course also teaches students one of the most widely used statistical software programmes for social sciences-SPSS. Topics include Analysis of Variance (ANOVA), regression models, factor analysis, spatial pattern analysis and cluster analysis, etc.

**GEOG 4007 Applied Geomorphology (3,2,1) (E)**

The course develops a student's knowledge and understanding of modern earth surface processes and landscape development. Emphasis is placed on human impacts on the natural landscape of Hong Kong. Special attention is given to methods of measurement, monitoring and interpretation of collected data from various natural environments. Fieldwork is an essential component.

**GEOG 4015 Coastal Environments and Processes (3,2,1)**

Much of the territorial area of Hong Kong and southern China lies below sea level, yet few people are fully aware of how coastal processes operate or what marine resources and problems exist. This course will familiarise students with the processes that dominate local marine settings and introduces them to major coastal environments, especially in the Hong Kong region.

**GEOG 4016 Energy Development in China (3,3,0)**

Prerequisite: GEOG 3007 Energy Problems and the Environment or consent of the instructor

Energy used to be a serious bottleneck in the economic development of China in the 1980s when the country first opened up to the outside world. In the past three decades, momentous changes occurred in the Chinese energy sector, including changes in the institutional framework—moving from state allocation to the market economy—and with respect to individual energy industries. By the mid-1990s, the problem of energy shortage had largely been resolved (which re-appeared in another form lately), yet the country has become a net oil importer, and is projected to import an increasingly larger amount in the future, with serious implications for the security of energy supply and future oil import outlay. The course takes a comprehensive survey of the Chinese energy sector, including the resource endowment, energy policy since the 1980s, the major energy industries like oil, coal, natural gas, electricity—HEP and nuclear included—and the international energy trade of China. Current issues such as the West–East Pipeline and looming energy security issues are also dealt with.

**GEOG 4017 Geographical Information Systems (3,2,2)**

Prerequisite: GEOG 2015 Cartography

Geographical Information System (GIS) is an information system that is specially designed for handling spatial (or geographical) data. It combines a set of interrelated sub-systems that create, edit, manipulate, analyse and display data both in text and graphic forms. GIS supports spatial analysis and modelling within the discipline of geography (e.g. location, proximity, and spatial distribution), making it a vital tool for modern geography.

**GEOG 4025 Geographical Imaginations (3,2,1) (E)**

This course introduces geography students to the major philosophical and methodological discussions in the field. “What do geographers do?”, “how do they differ from other social scientists such as economists and sociologists?” and “how are geography works influenced by different schools of philosophical thought?” This course attempts to answer these questions by investigating the main trends in Western geographic thinking since the 20th century. Also, a brief introduction to Chinese geographic thought is provided.

**GEOG 4026 Geography of Economic Development (3,3,0)**

This course provides an in-depth understanding on development issues. A variety of theories and strategies on economic development are investigated. Special emphasis is given to the development experience of Asian countries, in particular Hong Kong, Singapore and South Korea. The notion of globalization and its impact on regional economic development will be examined.

**GEOG 4027 Geography of Environmental Hazards (3,3,0) (E)**

Environmental hazards such as earthquakes, volcanic eruptions, flooding, landslides, typhoons and air/water pollution have a huge impact on our lives and, with a growing world population, there is an increasing need to understand how these hazards can be reduced. This course introduces environmental hazard research in a geographical context. The course provides a comprehensive introduction to the causes of climatic and geological hazards and environmental health hazards, and human responses and adjustments.

**GEOG 4035 Geography of Transportation (3,2,1) (E)**

This is an introductory course on transportation geography. It first introduces the economical and spatial concepts underlying transportation geography and transportation systems. Next, the development history and experience of China's transportation systems will be outlined and discussed. Basic concepts of logistics and geography will be introduced and form the basis for discussion of Hong Kong as a transportation hub. This is followed by the introduction of two important transportation analysis methods: spatial interaction and network analysis. Next, characteristics of urban travel and problems related to urban transportation are outlined. The final module of the course deals with the externalities of transportation activities in the context of sustainable transportation and policies that may mitigate traffic congestion and meet the objective of sustainable development.

**GEOG 4036 Political Geography (3,3,0)**

This course examines how geographical factors affect political organization at the national and international level. The effects of geographic elements such as territory, population, boundaries, and distance from the sea are covered, followed by a treatment of the capital, the core area of a state, selection of a unitary or federal form of government, emergence of the Third World following the dismemberment of the colonial empires, supra-national organizations, and the complex issues involved in the law of the sea treaty. Moreover, certain major theories in political geography and globalization are presented.

**GEOG 4037 Population Geography of China (3,2,1)**

Prerequisite: GEOG 3025 Population Geography or consent of the instructor

This course provides an in-depth analysis of China's population from a spatial point of view. Specifically the course will examine the integration of population planning in socialist China and its relationship with the four modernizations.

**GEOG 4045 Problems in the Physical Geography of China (3,3,0)**

Prerequisite: GEOG 3006 or CHSG 3006 Regional Geography of China

This course presents an examination of how the various physical