

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

processes interact with China's socio-political milieu to affect the current physical landscapes and the kinds of environmental problems that the country has to face. This involves a problem-oriented approach, with a view to improving the sustainability of China's physical/environmental system.

GEOG 4046 Remote Sensing and Image Interpretation (3,2,2) (E)

Remote sensing is defined as the science and art of acquiring information about material objects without being in touch with them. These measurements are possible with advanced airborne and space-borne remote sensing platforms and sensors that are capable of observing any part of the world frequently with various details. It is discovered that each earth cover has its own spectral reflectance characteristics. The characteristics are so unique that they are called "signature" which enable us to discern the objects from its intermixed background. The final remote sensing process is completed by the analysis of the data using image interpretation and image processing techniques. Some key elements, or cues from the imagery, such as shape, size, pattern, tone or colour, shadow and association, are used to identify a variety of features on earth. The techniques of image interpretation can be further enhanced by the techniques of image processing that can restore, enhance and extract geographical information from original remote sensing images. These altogether yield valuable information on earth resources and living environment of human beings.

GEOG 4047 Resource Management in China (3,2,1) (P)

This course introduces the concepts, knowledge and skills in natural resource evaluation and management, with the emphasis the real-world cases in China. The course is presented in two major parts. The first part begins with the introduction to the concepts about the natural resources and their distribution in China. This is followed by an extensive study on methodology for land and water resource evaluation. The second part presents details about the nature, distribution and utilisation of natural resources in China. Environmental conservation and sustainable development in relation to natural resources are also discussed. Laboratory work for this course focus on resource assessment methods with the aid of remote sensing and geographical information system (GIS) technology.

GEOG 4055 Rural and Agricultural Development in China (3,2,1)

This course employs a geographical perspective to investigate issues concerning rural and agricultural development in contemporary China. Focus is put on the social and economic spheres and how the dynamics of change since 1978 have affected these spaces. A variety of spatial variations on development experiences are investigated to show how space makes a difference.

GEOG 4056 Selected Topics in the Geography of China (Human Geography) (3,3,0)

This course involves an in-depth study of selected issues in the contemporary geography of China. The major socio-economic topics or physical/environmental topics to be discussed have been intentionally designed to be flexible.

GEOG 4057 Selected Topics in the Geography of China (Physical and Environmental Geography) (3,3,0)

This course involves an in-depth study of selected issues in the contemporary geography of China. The major socio-economic topics or physical/environmental topics to be discussed have been intentionally designed to be flexible.

GEOG 4065 Energy Policy and Analysis (3,3,0)

Prerequisite: GEOG 3007 Energy Problems and the Environment or consent of the instructor
Partly built upon GEOG 3007 Energy Problems and the Environment, this course focuses on the construction of national energy policies. Apart from the factors discussed in the

previous subject, other factors that affect the formulation of a national energy policy are treated, including pattern of sectoral consumption of energy, energy intensiveness of economy, pollution problems of energy and the role of the non-conventional sources such as wind, solar and geothermal energy. Case studies of energy policies of selected Asian countries are covered, together with substantial research on an energy topic.

GEOG 4066 Seminar in Environmental Planning and Management (3,3,0)

Prerequisite: GEOG 3017 Global Environmental Issues and Sustainability; GEOG 3007 Energy Problems and the Environment; GEOG 3015 Geography of Health and the Environment or consent of the instructor

This course starts with a comprehensive introduction to the major principles and approaches of environmental planning and management. This is followed by in-depth analysis of several classical local environmental planning and management cases. The final part of this course will focus on the green urbanism theme by discussing how environmental planning and management profession can help to develop a sustainable low carbon city.

GEOG 4067 Seminar in Social Geography (3,3,0)

This course is concerned with the understanding of the cause and effect of how social groups and other social phenomena (such as social services, crime and delinquency, and housing provision) are distributed, especially in the urban context. The course focuses on interactions, positive or negative, beneficial or harmful, constructive or destructive.

GEOG 4075 Seminar in Urban Geography (3,3,0)

Prerequisite: GEOG 3027 Urban Geography
This course discusses in depth selected topics of major concern in the Urban Geography and Urban Studies literature. The contents of the course vary from year to year, depending on the current research focus of the instructor. Possible topics to be examined included globalization, world cities and mega-urban regions, housing, inequality and residential differentiation, urban politics and conflict resolution, and new urbanism and sustainable urban development.

GEOG 4076 Urban Cultural Landscape (3,3,0) (E)

This course looks into the urban landscape, specifically (1) its formation and evolution with time and space, (2) its symbolic meanings and effects on urban living, as well as (3) issues in relation to its planning and design.

GEOG 4077 Urban Development and Planning in Hong Kong (3,2,1) (E)

Urban Hong Kong has developed rapidly since the 1950s. The built environment has expanded from one concentrated on two sides of the Victoria Harbour to one encroaching into the New Territories and even spreading across the boundary to Shenzhen. What are the salient features of this urban development, both in the inner city and at the periphery? Is it business-biased? Is it over-dominated by the property sector? How to interpret its growth pattern and dynamics? What is the role of the Hong Kong Government? What is urban planning? This course will be of interest to anyone who dares to know more about urban Hong Kong and develop an urban model within the broader contexts of China, Asia and the West.

GEOG 4085 Urban Development in China (3,3,0)

Prerequisite: GEOG 3006 or CHSG 3006 Regional Geography of China or consent of the instructor

This course introduces students to China's immense urban transformation process. The course is divided into three parts. Part A briefly reviews the urbanization process. It deals with questions such as the nature of the urbanization process before and after reform, and the question of hukou and rural to urban migration. Part B is on the internal structure of Chinese cities, focusing on urban land development. China's changing