Geospatial Analysis in the Social and Environmental Sciences

GEOG323-17S2 (15 pts) – 0.1250 EFTS

This course provides an introduction to a number of spatial analytic methods, theories and techniques used in the social sciences. The course focuses specifically on the 'geography of crime' and the 'geography of health' and looks at ways in which GIS has been used to bolster private and public decision-making in these fields. A variety of software packages are introduced and used to explore different elements of spatial analysis as well as highlight a number of problems inherent when dealing with spatial data such as the ecological fallacy and modifiable areal unit problem (MAUP).

Coordinator: Ioannis Delikostidis

Advanced GIS

GEOG324-17S1 (15 pts) – 0.1250 EFTS

This course builds on GEOG205: Introduction to GIS, delving deeper into the nuts and bolts of how GIS works and advancing students' knowledge and skills in geographic data management, analysis and visualisation. GEOG324 is a technical, largely lab and project based course, where students will use a mix of the leading proprietary GIS software, ArcGIS, and open source software to gain advanced skills in GIS. Students will learn how databases are used to store geographic information and how we can customise existing GIS to our needs, and gain practice in spatial analysis and how to publish and visualise geographic information on paper and on the web. There is also a research component to the course in order to ensure students are aware of the research landscape in GIS and are able to critically analyse work undertaken in GIScience.

Coordinator: Ioannis Delikostidis

Rethinking Development

GEOG351-17S2 (15 pts) – 0.1250 EFTS

This course explores the ways in which people across the globe are building community economies based on ethical concerns for more sustainable and equitable futures. It will provide students with a theoretical basis for rethinking development worldviews, alongside practical skills in organising for community-based development interventions in both developed and developing contexts.

Coordinator: Kelly Dombroski

Contact

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UNIVERSITY OF CANTERBURY
Te Whare Wananga o Waitaha
CHRISTCHURCH NEW ZEALAND

2017

Geography
300-level courses

UC SCIENCE
Te Rāngai Pūtaiao

300-Level Courses

300-Level Coordinator: Angela Curl
angela.curl@canterbury.ac.nz

Environmental Hazards, Risk, and Resilience

GEOG305-17S1 (30 pts) – 0.2500 EFTS

The course provides an understanding of hazards, risk and resilience. It also aims to develop some of the skills necessary for disaster management (e.g. the ability to collaborate, direct a project with limited supervision, use simulations). Topics dealt with include the character of specific hazard types (e.g. floods, drought, severe storms, avalanches, mass movement, wildfires, coastal erosion and tsunamis); responses to hazards from the local to the global scale; and the social and community dimensions of hazards, risk and resilience. Examples will be drawn from New Zealand and overseas.

Coordinator: Christopher Gomez

Research Methods in Geography

GEOG309-17S2 (30 pts) – 0.2500 EFTS

The goals of this course are to develop students' ability to undertake geographical research and to foster a critical appreciation of the research of others, both in preparation for graduate study and for entry into the workforce. This course takes a novel approach being based on problem-based learning in which students learn by being engaged in the research process. The training, practice and critical evaluation of the conduct of geographical research is carried out in groups with the communication of research findings using oral, numerate and written skills. The course is taught through occasional lectures and regular two-hour work-group meetings each week, supported by the availability of web-based resources, as well as active involvement in two field trips. The emphasis is on students working together to solve real world problems using transferable workplace skills.

Coordinator: Simon Kingham

Weather Systems

GEOG310-17S2 (15 pts) – 0.1250 EFTS

This course examines the processes responsible for day to day weather variations, and the operational techniques used in their analysis and forecasting. This includes both research and operational approaches to the study of synoptic scale weather systems and their impact. The processes studied include those that influence the generation and decay of weather systems, but also those that affect the weather experienced in a local area, such as Canterbury. The emphasis is on factors important in short term weather changes, including stability/instability and atmospheric motion. These factors are studied in relation to air mass changes, as well as the effects of topography. Links between the general and synoptic scale atmospheric circulation are included, along with the effects of longer term change, such as the ENSO cycles.

Coordinator: See Head of Department

Coastal Studies

GEOG311-17S1 (15 pts) – 0.1250 EFTS

This course is aimed at those wanting to work in the fields of coastal/environmental science, resource and hazard management and coastal/environmental engineering, as well as at anyone with an interest in the coast. It explores the processes responsible for change in coastal environments and the development of coastal landforms in New Zealand, the Pacific and worldwide. Topics examined include waves, currents, sea levels, sediments, beaches, wetlands, tropical reefs and human interactions with the coast. Students will gain an understanding of conceptual and computational models of the coastal zone, along with practice in the field and laboratory techniques used in coastal zone investigation. There will be direct industry involvement with ECAN, CCC and NIWA and a compulsory one-day field-trip on which you will have the opportunity to measure waves, currents and profiles, and to collect sediment and ecological data to analyse.

Coordinator: Deirdre Hart

Snow, Ice and Climate

GEOG312-17S2 (15 pts) – 0.1250 EFTS

This course examines the physical processes involved with the formation and evolution of mountain glaciers and seasonal snow, including processes such as surface mass balance, dynamics and hydrology. The course develops knowledge by drawing on key research, and encourages students to critically evaluate published work. The supporting lab programme will enable students to develop a range of transferable skills by working with real data and equipment, for example, ground penetrating radar (GPR), snowpit analysis, and simple glacier models.

Coordinator: Heather Purdie

European Integration from Community to Union

GEOG321/EURO310-17S2 (30 pts) – 0.2500 EFTS

This course is designed to introduce students to the process of European integration that has transformed Europe, and seen the European Union emerge as a new global power. The course draws on an interdisciplinary approach and is focused on policy analysis.

Coordinator: Martin Holland

Geography of Health

GEOG322-17S1 (30 pts) – 0.2500 EFTS

The course provides an introduction to the concepts and applications of health geography through exploration of spatial patterns of human disease and health-care services. The course is organised into the following sections: health and the physical environment, health inequalities, geography of health systems and service provision, and global health challenges.

Coordinator: Angela Curl