

## **School of Geography & Geosciences**

**Head of School** Professor P J Boyle

### **Degree Programmes**

Postgraduate Diploma: Health Geography Research  
Environmental History (*see School of History*)  
Managing Environmental Change

M.Res.: Health Geography

M.Litt.: Environmental History (*see School of History*)

M.Phil.: Environmental History (*see School of History*)

M.Sc.: Managing Environmental Change

### **Programme Requirements**

#### **Health Geography/Health Geography Research**

Postgraduate Diploma: (120 credits): 85 credits from GE5001, ID5010, SS5101, SS5102, SS5103 and SS5104 and 35 credits from GE5010, MO5023 and/ other modules as approved by the course co-ordinator

M.Res.: 120 credits, as for the Postgraduate Diploma, plus a dissertation (GE5008) of not more than 15,000 words (60 credits)

#### **Managing Environmental Change**

(Taught in partnership with the Department of Geography, University of Dundee)

Postgraduate Diploma: (120 credits): 40 credits from GG5101, ID5005, GG5109 and either GG5105 or GG5106 (depending on availability), 15 or 20 credits from ID5010, ID5011 or ID5012, 30 credits from GG5110, and the remaining 30 or 35 credits from GE5010, GG5103, GG5104, SS5103-4, and 4000 level modules (up to 30 credits with permission of the relevant Head of School). Modules GG5105, GG5106 and GG5109 are based in Dundee, all others are based in St Andrews.

M.Sc.: 120 credits, as for the Postgraduate Diploma, plus a dissertation (60 credits, GG5111) of not more than 10,000 words

## **Modules**

### **GE5001 Health Inequalities**

Credits: 10.0 Semester: 1

Programme: Compulsory core module for Health Geography Postgraduate Taught Programme.

Description: The module will define health, disease and illness; describe the epidemiological transition and its relevance in different geographical settings; demonstrate and explain the social, demographic and ethnic inequalities in health outcomes; consider the geographical variations in health inequalities both between and within nations; and critically examine the various philosophical approaches used to understand the geography of health inequalities. Techniques will include deprivation indexes; mapping of health data; use of the census and major government surveys.

Class Hour: To be arranged.

Teaching: One lecture and one seminar/practical.

Assessment: Continuous Assessment = 50%, 1 Hour Examination = 50%

## **Geography & Geosciences – 5000 Level Modules 2008/09 – Dec 2008**

### **GE5002 Health Care Provision and Utilisation**

Credits:	10.0	Semester:	2
Programme:	Compulsory core module for Health Geography Postgraduate Taught Programme.		
Description:	Topics covered include international perspectives on health care; allocation of resources; accessibility to services; GIS and mapping of health care; models of location and allocation in health care; spatial differences in service utilisation and their social effects; qualitative and ethnographic approaches to health care systems. The course will include both lectures and practical components.		
Class Hour:	To be arranged.		
Teaching:	One lecture and one seminar/practical		
Assessment:	Continuous Assessment = 100%		

### **GE5006 Social Survey Methods in Health Research**

Credits:	15.0	Semester:	2
Programme:	Compulsory core module for Health Geography Postgraduate Taught Programme.		
Description:	This module takes students through the various stages of planning and conducting a questionnaire survey in the context of health research. Topics covered include the use of established social and health measures, designing and administering a questionnaire, sampling methods, conducting interviews and creating a usable database. Students are expected to devise a detailed research proposal and present it in written form. The module is inter-disciplinary in emphasis and deliberately encourages students to think outside their own discipline.		
Class Hour:	2.00 – 4.00 pm Friday		
Teaching:	One lecture and one practical.		
Assessment:	Continuous Assessment = 100%		

### **GE5008 Dissertation in Health Geography**

Credits:	60.0	Semester:	summer vacation
Programme:	Compulsory module for Health Geography M.Res. Postgraduate Programme.		
Description:	Students choose a topic in the field of health geography on which to conduct independent research. Each dissertation will be supervised by a member of the teaching staff who will provide advice throughout the research process. Research will be conducted over the summer after the end of the taught modules and the completed dissertation of no more than 15,000 words must be submitted before the end of the course.		
Class Hour:	To be arranged with supervisor.		
Teaching:	Individual supervision.		
Assessment:	Continuous Assessment = 100%		

### **GE5010 Health and Environment**

Credits:	10.0	Semester:	1
Programme:	Compulsory module for MSc in Managing Environmental Change. Optional module for Postgraduate Taught Programmes in Health and/or Environmental Science and the M.Litt. in Environmental History.		
Description:	This module examines the relationships between the physical environment and human health. The module will compare natural and anthropogenic environments and take its examples from air pollution, water resources, volcanoes & earthquakes, mining activities, agriculture and the built environment. Particular emphasis will be placed on the causes of adverse health effects and their mitigation. The effects on health of global climate change will also be examined.		
Class Hour:	To be arranged.		
Teaching:	20 hours of seminars over 3 weeks.		
Assessment:	Continuous Assessment = 50%, 2 Hour Examination = 50%		

## **Geography & Geosciences - 5000 Level Modules 2008/09 - Dec 2008**

### **GE5012 The Geography of HIV/AIDS**

Credits:	10.0	Semester:	2
Programme:	Optional module for Health Geography Postgraduate Taught Programme and the M.Litt. in Environmental History.		
Description:	This module addresses the uneven global geography of the HIV/AIDS pandemic and its concentration in Africa. It examines why social scientific, not just biomedical, research is vital and explores the regionally specific dimensions of the virus's rapid spread in this context. The module also examines the social, political and economic implications of HIV/AIDS for Africa's development. The course concludes by looking toward future local and global initiatives that might help reduce transmission and ease the human suffering caused by HIV/AIDS.		
Class Hour:	To be arranged.		
Teaching:	Two lectures and/or seminars.		
Assessment:	Continuous Assessment = 50%, 2 Hour Examination = 50%		

### **GE5017 Spatial Analysis of Health Data**

Credits:	10.0	Semester	2
Prerequisite:	SS5104 or equivalent Statistics course		
Programme:	Optional module for Health Geography Postgraduate Taught Programme		
Description:	This module is intended to equip students with the ability to understand and apply techniques of analysis used extensively in health geography. It focuses on techniques such as cluster detection, longitudinal analysis and logit modelling, with practical work on real data in addition to instruction on the basis of techniques studied and on health geography examples.		
Class Hour:	10.00 am – 12.00 noon Thursday.		
Teaching:	One lecture and one practical fortnightly		
Assessment	Continuous Assessment = 100%		

### **GE5051 Environmental Management in Scotland**

Credits:	20.0	Semester:	1
Prerequisite:	Available only to Students admitted to the M.Litt. in Environmental History.		
Programme(s):	Optional module for Environmental History - Postgraduate Taught Programme.		
Description:	This module focuses on current environmental management issues in Scotland. It provides, firstly, a presentation of the fundamental elements of the various systems of land and resource management (e.g. forestry, agriculture & crofting, wildlife, freshwater resources, conservation), and secondly, examples of the ways in which these systems interact. Throughout, the module aims to engender a holistic understanding of environmental management, in contrast to the sectoral approach traditionally employed by central and local government. The ultimate aim is to leave students with an informed conceptual framework for evaluating the merits of management proposals, with their attendant implications for environmental change and economic development. A particular focus, employing topical case studies and a field visit, will be the conflicts that are increasingly arising as interest groups with contrasting philosophies & value systems compete for the finite resources of Scotland's wild places.		
Class Hour:	To be arranged.		
Teaching:	Two 1 hour lectures weekly, and a weekend field excursion.		
Assessment:	Continuous Assessment = 100%		

### **GG5101 Environmental Change**

Credits:	10.0	Semester:	1
Programme(s):	Compulsory module for the Managing Environmental Change Taught Programme		
Description:	This module places special emphasis on the interactions between the major components of the Earth system, notably lithosphere, atmosphere, hydrosphere and biosphere, and their influence on the rates of change. Issues such as carbon sources and sinks in relation to "carbon taxation" will be highlighted. The Scottish context of global change will also be considered.		
Class Hour:	To be arranged.		
Teaching:	24 hours of lectures and seminars plus field trip and site visits.		
Assessment:	Continuous Assessment = 50%, 1 Hour, open book review essay Examination = 50%		

## **Geography & Geosciences – 5000 Level Modules 2008/09 – Dec 2008**

### **GG5102 Environmental Management and Policy**

Credits: 10.0 Semester: 2

Programme(s): Compulsory core module for the Managing Environmental Change Taught Programme

Description: The first part of this module deals with current thinking in environmental management, environmental ethics and values, environmental legislation and planning. The module then moves on to case studies illustrating how theoretical ideas apply in practical contexts, egs. waste management, conservation and protected areas policies, flood management, environmental impacts of commercial agriculture, and Scottish land reform and access legislation.

Class Hour: To be arranged.

Teaching: 16 hours of lectures and seminars.

Assessment: Continuous Assessment = 100%

### **GG5103 Data capture and analysis 1: Geophysics and Remote Sensing**

Credits: 10.0 Semester: 1

Programme(s): Compulsory module for the Managing Environmental Change Taught Programme

Description: The module begins with field methods of survey, notably geophysical site surveying using gravity, magnetic, electric, electromagnetic, and seismic techniques, as well as topographic surveying. Field sampling techniques are applied to water and sediments. Throughout emphasis is placed on methods for storing and manipulating spatial data using GIS.

Class Hour: To be arranged.

Teaching About 16 hours of lectures and tutorials, and about 30 hours of formal practical work.

Assessment: Continuous Assessment (Field Report on Geophysical Methods = 40%, Spatial analysis of remote sensing data 40%, poster presentation = 20%) = 100%

### **GG5104 Data capture and analysis 2: Laboratory methods**

Credits: 10.0 Semester: 1

Programme(s): Compulsory module for the Managing Environmental Change Taught Programme

Description: This module provides students with practical experience in using modern analytical methods relevant to environmental geochemistry. As well as gaining hands-on experience with a range of analytical equipment the module will cover relevant methods by which data from various analytical methods may be processed and represented. The concepts of precision and errors in practical analysis will be developed, and students will gain an understanding of the requirements of health and safety at work legislation for working in laboratories as well as an appreciation of good laboratory practice.

Class Hour: To be arranged.

Teaching: 8 hours of lectures plus 30 hours of formal practical work.

Assessment: Continuous Assessment = 100%

### **GG5105 Environmental Quality**

Credits: 10.0 Semester: 2

Programme(s): Compulsory module for the Managing Environmental Change Taught Programme

Description: The quality of surface water in rivers and streams, lakes, ponds and wetlands is determined by interactions with soil, transported solids (organics, sediments), rocks, groundwater and the atmosphere. It may also be significantly affected by agricultural, industrial, mineral and energy extraction, urban and other human actions, as well as by atmospheric inputs. The bulk of the solutes in surface waters, however, are derived from soils and groundwater base-flow where the influence of water-rock interactions is important. An appreciation of these interactions is an essential component of a Masters programme undertaken by potential geo-environmental engineers, environmental managers and environmental regulators.

Class Hour: To be arranged.

Teaching: 10 lectures plus practical and field work.

Assessment: Continuous Assessment = 50%, 1 Hour, open book review essay Examination = 50%

## **Geography & Geosciences - 5000 Level Modules 2008/09 - Dec 2008**

### **GG5106 Environmental Risk**

Credits:	10.0	Semester:	1
Programme(s):	Compulsory module for the Managing Environmental Change Taught Programme		
Description	The module combines knowledge and understanding based on classroom work (lectures and seminars/discussions) with practical work in the lab (using proprietary software to quantify flood risk) and a visit to a site where flooding is a present-day hazard. The module is designed to give students the necessary grounding in this area so that they can readily acquire additional competencies in this field when required to do so by their employer.		
Class Hour:	To be arranged.		
Teaching:	12 hours of classroom teaching plus 20 hours of seminars, practicals and fieldwork.		
Assessment:	Continuous Assessment = 50%, 1 Hour, open book review essay Examination = 50%		

### **GG5107 Elements of Environmental Law**

Credits	10.0	Semester:	2
Programme(s):	Compulsory module for the Managing Environmental Change Taught Programme		
Description:	This module provides familiarity with the legal and regulatory structures and mechanisms that are used in the field of environmental law. To this end, the course is structured in three parts: first an introduction to legal sources and the workings of legal systems; secondly, an overview of the principles and techniques used in environmental regulation; then thirdly the application of these in key areas of environmental concern. By concentrating on the fundamental structures of how the law goes about environmental regulation, then illustrating these in practice, the module aims to provide an enduring foundation for understanding the legal issues that will be faced. The details of the rules will vary over time and between countries, but the same basic building blocks will continue to be used to create the core of the regulatory framework.		
Class Hour:	To be arranged.		
Teaching:	10 hours.		
Assessment:	2 Hour Examination = 100%		

### **GG5108 The Commercial Environment**

Credits:	10.0	Semester:	Whole Year
Programme(s):	Compulsory module for the Managing Environmental Change Taught Programme		
Description:	The module is designed for students with technology or engineering backgrounds and is intended to develop their awareness and understanding of the factors, perspectives and methods that shape business decision-making. The module emphasises the application of theory in practice, in particular addressing the acquisition of the perspectives and skills of the manager engaged in their organisation's strategic management process.		
Class Hour:	To be arranged.		
Teaching	20 hours of seminars.		
Assessment	Continuous Assessment = 100%		

### **GG5109 Research Methods and Project Planning**

Credits:	10.0	Semester:	Whole Year
Programme(s):	Compulsory module for the Managing Environmental Change Taught Programme		
Description:	This module provides a practical framework for project planning, specifically for the Group and Individual Projects, but also generically. Instruction is given in effective access and utilisation of the local library resources and campus IT systems, and in communication skills in both oral and written formats. Ethical issues in research are covered. The practices and procedures that go to make effective team working are discussed along with techniques for successfully organising a work schedule. Conceptualising the phases of identifying, planning and successfully executing a research project will lead to drafting the individual research proposal.		
Class Hour:	To be arranged.		
Teaching:	10 lectures plus 14 hours of seminars.		
Assessment:	Continuous Assessment = 100%		

## **Geography & Geosciences – 5000 Level Modules 2008/09 – Dec 2008**

### **GG5110 Group Project**

Credits: 30.0

Semester: 2

Programme(s): Compulsory module for the Managing Environmental Change Taught Programme

Description: The project will be based on an environmental management problem that will involve most or all of fieldwork and site visits, sampling of material (eg soils, waters), lab analysis of materials, collection and evaluation of secondary data from a range of sources and a socio-economic study. Students will work in mini-teams addressing physical and human dimensions of the issue in the field. Each member of the group will take responsibility for one aspect of the study as well as contributing to the overall investigation.

Class Hour: To be arranged.

Teaching: Primarily based on meetings with project supervisor.

Assessment: Continuous Assessment (Individual presentation = 25%, Group presentation = 25%, Individual written report = 25%, Group written report = 25%) = 100%

### **GG5111 Individual Project**

Credits: 60.0

Semester: Summer

Programme(s): Compulsory module for the Managing Environmental Change Taught Programme

Description: The project will take the form of addressing a problem of environmental change management. It will involve gathering appropriate primary and secondary data, analysing the data, evaluating potential solutions and presenting the outcomes using a range of presentational methods. Two types of individual project are possible. 1. Students aiming for careers outwith academia will be encouraged to base their project within another organisation where they may have an opportunity for placement. 2. Students aiming to continue in environmental research may chose a project based in the field and/or in the lab and remain within the university to complete the work.

Class Hour: To be arranged.

Teaching: Primarily based on meetings with project supervisor.

Assessment: Continuous Assessment = 100%

### **ID5005 Enterprise, Creativity and Innovation (10)**

Credits: 10.0

Semester: 1

Programme(s): Optional module for Managing Environmental Change Postgraduate Taught Programme.

**Optionally** available to all Postgraduate Taught Programmes, subject to approval of Course Director/Coordinator within individual Schools.

Description: In this module students will acquire a critical understanding of the concepts and theories that help to understand enterprise and the processes of entrepreneurship and leadership. Through these two elements students will enhance their ability to generate ideas through creative thinking and cognitive-mapping as well as understand the significance and protection of intellectual property rights. This will enable them to better instigate, facilitate and practice in a rigorous approach to entrepreneurship and executive creativity. Teaching media will include formal lectures, case study analysis, team-based workgroups and visiting speakers.

Class Hour: 2.00 – 5.00 pm Wednesday.

Teaching: One lecture and one seminar per week over 7 weeks.

Assessment: Continuous Assessment = 100%

## **Geography & Geosciences - 5000 Level Modules 2008/09 - Dec 2008**

### **ID5010 Geographic Information Systems for Social Research**

Credits:	15.0	Semester:	1
Prerequisite:	A basic ability in computer skills (Basic word processing, spread sheet analysis) gained through SALTIRE if not demonstrated		
Anti-requisite:	GE5005, ID5011, ID5012		
Programme(s):	Optional module for Health Geography Research and Managing Environmental Change Taught Programmes		
Description:	This module provides an introduction to Geographic Information Systems and their use in health (and related) problem solving. The module will be taught through a series of lectures, tutorials, laboratory classes and individual projects. The module will be assessed through class exercises and the final individual project. Students will be introduced to methods of acquiring, storing, analysing and displaying (2D and 3D) spatial digital data using the ArcGIS data package. An introduction to data manipulation and statistical techniques on a variety of health examples will be given.		
Class Hour:	To be arranged.		
Teaching:	Lectures, practicals and occasional tutorials.		
Assessment:	Continuous Assessment = 50%, Short Project = 50%		

### **ID5011 Geographic Information Systems for Environmental Management**

Credits:	15.0	Semester:	1
Prerequisite:	A basic ability in computer skills (Basic word processing, spread sheet analysis) gained through SALTIRE if not demonstrated		
Anti-requisite:	GE5005, ID5010, ID5012		
Programme(s):	Optional module for Environmental Biology MSc, Mathematics & Statistics, Economics, Management and Environmental History Taught Postgraduate Programmes.		
Description:	This module provides an introduction to Geographic Information Systems and their use in environmental problem solving. The module will be taught through a series of lectures, tutorials, laboratory classes and individual projects. The module will be assessed through class exercises and the final, short individual project. Students will be introduced to methods of acquiring, storing, analysing and displaying (2D and 3D) spatial digital data using the ArcGIS data package. An introduction to data manipulation and statistical techniques on a variety of environmental examples will be given. The module is taught within the School of Geography & Geosciences but incorporates datasets and analysis techniques used in earth and environmental science, biology, archaeology, and mathematics.		
Class Hour:	To be arranged.		
Teaching:	Lectures, practicals and occasional tutorials.		
Assessment:	Continuous Assessment = 50%, Short Project = 50%		

### **ID5012 Advanced Geographic Information Systems**

Credits:	20.0	Semester:	1
Prerequisite:	A basic ability in computer skills (Basic word processing, spread sheet analysis) gained through SALTIRE if not demonstrated		
Anti-requisite:	GE5005, ID5010, ID5011		
Programme(s):	Optional module for M Res in Environmental Biology Taught Postgraduate Programmes.		
Description:	This module provides an advanced training in Geographic Information Systems (GIS) and their use in environmental problem solving. The module will be taught through a series of lectures, tutorials, laboratory classes with emphasis on a final independent GIS project. The module will begin with an introduction to data storage and manipulation, basic analysis of 2D and 3D spatial digital data and methods of display and will conclude with database design and more advanced data analysis using ArcGIS. Assessment will be based on the class exercises and the final project. The module is taught within the School of Geography & Geosciences but incorporates datasets and analysis techniques used in earth science, biology, economics and management and mathematics.		
Class Hour:	To be arranged.		
Teaching:	Lectures, practicals and occasional tutorials.		
Assessment:	Continuous Assessment = 40%, Individual Project = 60%		

## **Geography & Geosciences – 5000 Level Modules 2008/09 – Dec 2008**

### **SS5101 Being a Social Scientist: Skills, Processes and Outcomes**

Credits: 15.0 Semester: 1

Programme(s): Compulsory module for the M.Res. in Health Geography

Description: This module focuses on developing students' specific research thinking and writing skills in a practically based way. Thus, the module will address the nature of being a research social scientist including exploring some of the ethical issues involved. The module will also consider selecting suitable research questions and framing these as appropriate for Masters and Ph.D. dissertations.

Class Hour: To be arranged

Teaching: 3 hour lecture, fortnightly

Assessment: Continuous Assessment = 100%

### **SS5102 Philosophy and Methodology of the Social Sciences**

Credits: 15.0 Semester: 2

Programme(s): Compulsory module for M.Res. in Health Geography

Description: Beginning with a discussion of the evolution of the social sciences, this module addresses central philosophical questions of social science including discussion of epistemological and methodological aspects of positivism and interpretivism.

Class Hour; To be arranged.

Teaching: Details to follow.

Assessment: Continuous Assessment = 100%

### **SS5103 Qualitative Methods in Social Research**

Credits: 15.0 Semester: 2

Programme(s) Compulsory module for M.Res. in Health Geography

Description: This module offers both a theoretical and practical introduction to qualitative research. The diversity of the approaches to qualitative research will be addressed but the focus of the module is primarily practical necessitating the active participation of students.

Class Hour: To be arranged

Teaching: 2 hour, weekly

Assessment: Continuous Assessment = 100%

### **SS5104 Quantitative Research in Social Science**

Credits: 15.0 Semester: 1

Programme(s) Compulsory module for M.Res. in Health Geography

Description: This module will cover basic concepts and approaches to quantitative research in the social sciences in order to provide students with the basic quantitative tools for collecting, organising and analysing data.

Class Hour: To be arranged

Teaching: Details to follow

Assessment: Continuous Assessment = 100%