

School of Geography & Geosciences

Earth & Environmental Sciences (ES) modules

ES1001 Planet Earth			
SCOTCAT Credits:	20	SCQF Level 7	Semester: 1
Academic year:	2013/4		
Planned timetable:	12.00 noon		
This module provides a foundation into the study of Earth and environmental sciences. The key elements of the planet will be introduced. The bulk structure of the solid Earth (and the other planets of our solar system), and the dynamic hydrosphere and atmosphere will be covered from planetary to atomistic scales. Practical and transferable skills will be developed in tutorials and laboratory exercises which include the identification of minerals and rocks both in hand specimen and using microscopes. Fieldwork will be introduced as two half-day excursions. University-level study skills associated with this module include working in groups, oral and written presentations, advanced use of the University's internet and library facilities for data acquisition, and critically assessing scientific data and reports.			
Programme module type:	Compulsory for BSc Geology, Environmental Earth Science, joint degrees with Biology and Chemistry, and MGeol Earth Science		
Anti-requisite(s):	GG1011	Required for:	ES2001
Learning and teaching methods and delivery:	Weekly contact: 5 lectures, tutorials and skills sessions, and 1 x 2-hour practical per week; 7-hours fieldwork in total.		
	Scheduled learning: 79 hours	Guided independent study: 121 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 50%, Practical Examinations = 30%, Coursework = 20%		
	As used by St Andrews: 2-hour Written Examination = 50%, 2-hour Practical Examination = 30%, Coursework = 20% Re-Assessment: Coursework 20%, 2-hour Examination = 80%		
Module Co-ordinator:	Dr J Walden		
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff		

Geography & Geosciences 1000 & 2000 Level - 2013/14 - August 2013

ES1002 Earth Resources and Environment				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	2
Academic year:	2013/4			
Planned timetable:	12.00 noon			
<p>This module builds on the understanding of planet Earth gained in ES1001, with an underlying theme of the Earth's resources and environment. The processes in action at different tectonic settings (volcanism, metamorphism etc) and the natural hazards induced by these processes leads into Earth resources (metals, hydrocarbons, energy and more) and the applied nature of Earth Sciences in problem-solving resource and environmental issues. Key skills for Earth and environment scientists are developed and the module includes a 4-day residential field excursion to the northeast of Scotland around Easter.</p>				
Programme module type:	Compulsory for BSc Geology, Environmental Earth Science, joint degrees with Biology and Chemistry, and MGeol Earth Science			
Pre-requisite(s):	Normally ES1001	Anti-requisite(s):	GG1012	
Required for:	ES2001			
Learning and teaching methods and delivery:	Weekly contact: 5 lectures, tutorials and 1 x 2-hour practical per week, plus 40 hours of fieldwork over the semester.			
	Scheduled learning: 111 hours		Guided independent study: 89 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 50%, Practical Examinations = 25%, Coursework = 25%			
	As used by St Andrews: 2-hour Written Examination = 50%, 2-hour Practical Examination = 30%, Coursework = 20% Re-Assessment: Coursework 20%, 2-hour Examination = 80%			
Module Co-ordinator:	Dr J Walden			
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff			

ES2001 Dynamic Earth: The Earth System				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	1
Academic year:	2013/4			
Planned timetable:	10.00 am			
This module reflects an up-to-date approach to understanding of the behaviour of the solid Earth and its interaction with the atmosphere and biosphere and beyond. It will provide detailed training in some of the processes acting at or near the Earth's surface (for example the dynamics of erosional processes). The evolution of the planet as a whole (including the evolution of life) from magma oceans in the early Earth to the present day will be covered in detail. Practical and theoretical training in geophysical methods for probing the near surface of the Earth will be provided.				
Programme module type:	Compulsory for BSc Geology, Environmental Earth Science, joint degrees with Biology and Chemistry, and MGeol Earth Science			
Pre-requisite(s):	ES1001 and ES1002 or equivalent	Required for:	ES2002, ES2003	
Learning and teaching methods and delivery:	Weekly contact: 5 lectures and 1 x 3-hour laboratory per week, and occasional tutorials; 16 hours fieldwork			
	Scheduled learning: 112 hours		Guided independent study: 188 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 50%, Practical Examinations = 30%, Coursework = 20%			
	As used by St Andrews: 2-hour Written Examination = 50%, 3-hour Practical Examination = 30%, Coursework = 20% Re-Assessment: Coursework 20%, 2-hour Examination = 80%			
Module Co-ordinator:	Dr J Walden			
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff			

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ES2002 Dynamic Earth: Magma, Minerals and Metamorphism				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	2
Academic year:	2013/4			
Planned timetable:	10.00 am			
<p>This module focuses on the geology and geochemistry of the solid Earth and high temperature processes in the Earth's interior. The mineral building blocks of the Earth will be covered in detail, as well as volcanic and metamorphic processes and geodynamics. A key component of this course is the residential field course to central Spain around the time of the Easter vacation, where independent field mapping will be introduced. Undergraduates on the BSc Geology degree must take ES2002, and are strongly encouraged also to take ES2003.</p>				
Programme module type:	Optional for BSc Geology, Environmental Earth Science, joint degrees with Biology and Chemistry, and MGeol Earth Science			
Pre-requisite(s):	Normally ES2001	Anti-requisite(s):	GS2012	
Learning and teaching methods and delivery:	Weekly contact: 5 lectures and 1 x 3-hour laboratory per week, and occasional tutorials; 16 hours fieldwork.			
	Scheduled learning: 81 hours		Guided independent study: 219 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 50%, Practical Examinations = 20%, Coursework = 30%			
	As used by St Andrews: 2-hour Written Examination = 50%, 2-hour Practical Examination = 30%, Coursework = 20% Re-Assessment: Coursework 20%, 2-hour Examination = 80%			
Module Co-ordinator:	Dr J Walden			
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff			

ES2003 Dynamic Earth: Earth Surface Processes				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	2
Academic year:	2013/4			
Planned timetable:	10.00 am, practical 2.00 pm - 5.00 pm Tue.			
This module focuses on the low temperature processes that occur in the outer envelopes of the Earth, including land-atmosphere interactions, glacial processes, tectonic geomorphology, geomicrobiology and oceanography. Relationships between physical, chemical and biological processes occurring along Earth's surface, and their impact on climate, will be explored using case studies. A key component of this course will be fieldwork to sites of environmental interest developing field skills in water/sediment sampling and analysis, and unravelling contaminant flow-patterns.				
Programme module type:	Compulsory for BSc Geology, Environmental Earth Science, joint degrees with Biology and Chemistry, and MGeol Earth Science			
Pre-requisite(s):	ES2001			
Learning and teaching methods and delivery:	Weekly contact: Weekly skills practical classes, tutorials and 80 hours fieldwork.			
	Scheduled learning: 96 hours		Guided independent study: 204 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 50%, Practical Examinations = 0%, Coursework = 50%			
	As used by St Andrews: 2-hour Written Examination = 50%, Coursework = 20% Re-Assessment: Coursework 20%, 2-hour Examination = 80%			
Module Co-ordinator:	Dr J Walden			
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff			

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ES2004 Practical and Field Skills for Earth Sciences (Direct Entrants)			
SCOTCAT Credits:	30	SCQF Level 8	Semester: Whole Year
Academic year:	2013/4		
Availability restrictions:	Available only to students who have been accepted for direct 2nd year entry to an Earth Science degree programme.		
Planned timetable:	12.00 noon, practical 2.00 pm - 4.00 pm Thu or Fri.		
<p>This module is only available to students who have been accepted for direct 2nd year entry to an Earth Science degree programme. It provides basic practical and fieldwork skills that are not taught at secondary school and which characterise University-taught, accredited Earth Science programmes. Students will take part in level 1 practical and field-based exercises, and then apply these skills to the level 2 teaching programme. The students will also attend those aspects of the lecture programme that are not covered in A-level or Higher Geology curricula. The learning in this module will supplement and complement the ES2001, 2002 & 2003 teaching.</p>			
Programme module type:	Compulsory for Direct entrants to Second Year Geology		
Pre-requisite(s):	Direct Second Year acceptance to B.Sc. Geology, B.Sc. Environmental Earth Science or M.Geol. Earth Science Degrees		
Co-requisite(s):	Normally ES2001, ES2002 and ES2003	Anti-requisite(s):	ES1001, ES1002
Learning and teaching methods and delivery:	Weekly contact: Weekly lectures, practical classes, and fieldwork		
	Scheduled learning: 190 hours	Guided independent study: 110 hours	
Assessment pattern:	<p>As defined by QAA: Written Examinations = 0%, Practical Examinations = 50%, Coursework = 50%</p>		
	<p>As used by St Andrews: Coursework = 100% (made up of Group Work and 2 Field Excursions = 50%, Practical Examinations = 50%) Re-Assessment: Coursework = 100%</p>		
Module Co-ordinator:	Dr J Walden		
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff		

Geography (GG) modules

GG1001 Geography: Understanding our Changing World				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	1
Academic year:	2013/4			
Planned timetable:	11.00 am			
As the global population speeds past 7 billion, mounting evidence about resource depletion and climate change, and global economic inequality and social injustice, suggests that we are now living in the “Anthropocene” – an era in which human activity has, for the first time, become the dominant driver of environmental processes, and is causing unprecedented global change. The module shows how Geography, a discipline that draws on traditions across the social and natural sciences and the humanities, is uniquely placed to understand our changing world. Its combination of lectures, tutorials, laboratory sessions in spatial data analysis is relevant to students across the University.				
Programme module type:	Either GG1001 or GG1002 is compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
Required for:	GG2011			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 1 practical class each week and 2 field days during the semester.			
	Scheduled learning: 55 hours		Guided independent study: 145 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: 2-hour Written Examination = 60%, Coursework = 40%			
Module Co-ordinator:	Dr M B Sothern			
Lecturer(s)/Tutor(s):	Team taught			

GG1002 A World in Crisis?				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	2
Academic year:	2013/4			
Planned timetable:	11.00 am			
Contemporary global problems such as pollution, biodiversity loss and population growth are critical issues for the planet's future and demonstrate the interdependence of social and environmental systems. This module unpacks the complexity of these challenges by analyzing different manifestations of 'a world in crisis' as questions of geography – shaped by geographic processes operating at a range of scales (from the global to the local). The module thus explores how Geography works as a 'world discipline' that is equipped to examine global problems from a range of human, environmental and physical geography perspectives. Teaching comprises a mix of lecture learning and project work on selected global problems.				
Programme module type:	Either GG1001 or GG1002 is compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
Required for:	GG2011			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 1 group project each week during the semester.			
	Scheduled learning: 37 hours		Guided independent study: 163 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: 2-hour Written Examination = 60%, Coursework = 40%			
Module Co-ordinator:	Dr M B Sothern			
Lecturer(s)/Tutor(s):	Team taught			

Geography & Geosciences 1000 & 2000 Level - 2013/14 - August 2013

GG2011 Geographical Processes and Change				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	1
Academic year:	2013/4			
Planned timetable:	9.00 am Mon - Fri, 2.00 pm - 6.00 pm Mon.			
This module examines some fundamental processes in human and physical geography. The physical geography component of the module considers the operation of a range of atmospheric, hydrological and geomorphological processes. Topics include hydrometeorological processes, weathering, slope processes, fluvial processes, glacial processes and periglacial processes. The human geography component of the module explores the extraordinary character of the modern world from a range of geographical perspectives. Topics include the economic, historical, political and social geography of capitalism, imperialism, urbanisation and globalisation.				
Programme module type:	Compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
Pre-requisite(s):	GG1001 or GG1002	Anti-requisite(s):	GE2001, ES2003	
Required for:	GG2012			
Learning and teaching methods and delivery:	Weekly contact: 4 - 5 lectures per week plus 2 seminars, 3 tutorials, 2 practical classes and a Field Excursion during the semester.			
	Scheduled learning: 56 hours		Guided independent study: 244 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 40%, Practical Examinations = 15%, Coursework = 45%			
	As used by St Andrews: 2-hour Written Examination = 40%, Practical Examination = 15%, Coursework = 45%			
Module Co-ordinator:	Dr D Reuschke			
Lecturer(s)/Tutor(s):	Team taught			

GG2012 Processes, Perspectives and Ideas in Geography				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	2
Academic year:	2013/4			
Planned timetable:	9.00 am Mon - Fri, 2.00 pm - 6.00 pm Mon.			
The first part of the module extends the understanding of the physical and human world developed in G22011 and explores the contemporary relevance of geography, using case studies of environmental problems and social inequalities in the developed world. The second part of the module then takes a holistic view of geography by examining some enduring themes which have fascinated geographers for centuries, before illustrating the potential for an integrated understanding of the world through a detailed case study of one world region (e.g. the Himalayas).				
Programme module type:	Compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
Pre-requisite(s):	GG2011	Anti-requisite(s):	GE2012	
Learning and teaching methods and delivery:	Weekly contact: 4 lectures per week plus 2 seminars, 3 tutorials, 1 practical class over the semester.			
	Scheduled learning: 50 hours		Guided independent study: 250 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: 2-hour Written Examination = 60%, Coursework = 40%			
Module Co-ordinator:	Dr D Reuschke			
Lecturer(s)/Tutor(s):	Team taught			