

School of Geography & Geosciences  
 Earth Sciences (ES) Modules

ES1001 Introduction to Planet Earth			
<b>SCOTCAT Credits:</b>	20	SCQF Level 7	<b>Semester:</b> 1
<b>Planned timetable:</b>	12.00 noon		
The module provides an introduction to the fundamentals of geoscience. The discoveries of the last 25 years provide a framework for the module which covers an introduction to planet Earth, plate tectonic and volcanic systems, long-term landscape evolution, metamorphic and sedimentary rock formation, geodynamics, climate change over geological timescales and planetary geology. Key skills for geoscientists are introduced and the module includes two one-day fieldtrips.			
<b>Programme module type:</b>	Compulsory for Chemistry and Geology, Earth Sciences (M.Geol.), Geology, Environmental Geoscience		
<b>Anti-requisite(s):</b>	GG1011	<b>Required for:</b>	ES2001
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 lectures, 1 tutorial and 1 x 2-hour practical per week, 6-hours fieldwork.		
	<b>Scheduled learning:</b> 79 hours	<b>Guided independent study:</b> 121 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 30%, Coursework = 20%		
	<b>As used by St Andrews:</b> Coursework = 20%, Practical Examination = 30%, Written Examination = 50% Re-Assessment: Coursework 20%, 2-hour Examination = 80%		
<b>Module Co-ordinator:</b>	Dr R A J Robinson		
<b>Lecturer(s)/Tutor(s):</b>	Team taught		

## Geography & Geosciences - 1000 & 2000 Level 2012/13 - September 2012

ES1002 Earth Resources and Fundamentals of Geology			
<b>SCOTCAT Credits:</b>	20	SCQF Level 7	<b>Semester:</b> 2
<b>Planned timetable:</b>	12.00 noon		
The module considers the applied nature of geoscience and how the subject contributes to solutions for resource and environmental problems. The key concept of the Earth as a finite resource, in supplying materials for human activities and as an environment to sustain life, is introduced. The scientific dimensions of such issues as earth resources, natural hazards, the Gaia Hypothesis and past and present extinctions will be considered and placed within the wider context of geoscience and society. Key skills for geoscientists are developed and the module includes a field class.			
<b>Programme module type:</b>	Compulsory for Chemistry and Geology, Earth Sciences (M.Geol.), Geology, Environmental Geoscience		
<b>Pre-requisite(s):</b>	Normally ES1001	<b>Anti-requisite(s):</b>	GG1012
<b>Required for:</b>	ES2001		
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 lectures, 1 tutorial and 1 x 2-hour practical per week, plus 35 hours of fieldwork over the semester.		
	<b>Scheduled learning:</b> 111 hours	<b>Guided independent study:</b> 89 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 25%, Coursework = 25%		
	<b>As used by St Andrews:</b> Coursework = 25%, Practical Examination = 25%, Written Examination = 50% Re-Assessment: Coursework = 20%, 2-hour Examination = 80%		
<b>Module Co-ordinator:</b>	Dr R A J Robinson		
<b>Lecturer(s)/Tutor(s):</b>	Team taught		

ES2001 Dynamic Earth: Evolution of Life and Lithosphere			
<b>SCOTCAT Credits:</b>	30	SCQF Level 8	<b>Semester:</b> 1
<b>Planned timetable:</b>	10.00 am		
This module aims to provide a broad understanding of some of the natural processes that have interacted through time to shape and modify our planet and its life forms. Methods and insights from the exciting new field of Earth Systems Science will be used to comprehend the hallmark features of Earth history, biospheric and lithospheric evolution and humankind's role in influencing environmental change. Lectures and laboratory classes are integrated with emphasis on recording and analysing geoscience information, fieldwork and presentational skills.			
<b>Programme module type:</b>	Compulsory for Chemistry and Geology, Earth Sciences (M.Geol.), Geology, Environmental Geoscience		
<b>Pre-requisite(s):</b>	ES1001 and ES1002 or equivalent	<b>Required for:</b>	ES2002, ES2003
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 5 lectures and 1 x 3-hour laboratory per week, and occasional tutorials; 16 hours fieldwork		
	<b>Scheduled learning:</b> 112 hours	<b>Guided independent study:</b> 188 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 30%, Coursework = 20%		
	<b>As used by St Andrews:</b> Coursework = 20%, Practical Examination = 30%, Written Examination = 50% Re-Assessment: Coursework = 20%, 2-hour Examination = 80%		
<b>Module Co-ordinator:</b>	Dr R A J Robinson		
<b>Lecturer(s)/Tutor(s):</b>	Team taught		

## Geography & Geosciences - 1000 & 2000 Level 2012/13 - September 2012

ES2002 Dynamic Earth: Magma, Minerals and Metamorphism				
<b>SCOTCAT Credits:</b>	30	SCQF Level 8	<b>Semester:</b>	2
<b>Planned timetable:</b>	10.00 am			
<p>This module aims to give a broad understanding of the genesis of materials that comprise Earth and the processes that are involved in creating and modifying Earth's surface and lithosphere. Practical tools for the systematic recognition and accurate identification of solid Earth materials are emphasised. These provide the basis to interpret the physical conditions of formation and geodynamical evolution of the Earth System through time.</p>				
<b>Programme module type:</b>	Compulsory for Chemistry and Geology, Earth Sciences (M.Geol.), Geology, Environmental Geoscience			
<b>Pre-requisite(s):</b>	Normally ES2001 or GS2011	<b>Anti-requisite(s):</b>	GS2012	
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 lectures and 1 x 3-hour laboratory per week, and occasional tutorials; 16 hours fieldwork			
	<b>Scheduled learning:</b> 81 hours		<b>Guided independent study:</b> 219 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 20%, Coursework = 30%			
	<b>As used by St Andrews:</b> Coursework = 30%, Practical Examination = 20%, Written Examination = 50% Re-Assessment: Coursework = 20%, 2-hour Examination = 80%			
<b>Module Co-ordinator:</b>	Dr R A J Robinson			
<b>Lecturer(s)/Tutor(s):</b>	Team taught			

ES2003 Dynamic Earth: Geodynamics in the Field				
<b>SCOTCAT Credits:</b>	30	SCQF Level 8	<b>Semester:</b>	2
<b>Planned timetable:</b>	10.00 am, practical 2.00 pm - 5.00 pm Tue.			
<p>This module promotes the study of Earth Sciences as an integrated subject, looking at the interrelationships of igneous, metamorphic and sedimentary rocks and rock deformation. The central part of this module will be an 8-day residential field course to an area in which many aspects of geology are exceptionally well developed in a small area (currently Spain). The module comprises a holistic examination in which the integration of disparate Earth Science topics is explored. The learning in this module supplements and complements other Level 2 teaching.</p>				
<b>Programme module type:</b>	Compulsory for Geology, Earth Sciences (M.Geol.), Environmental Geoscience			
<b>Pre-requisite(s):</b>	ES2001	<b>Co-requisite(s):</b>	ES2002	
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> Weekly skills practical classes, tutorials and 80 hours fieldwork.			
	<b>Scheduled learning:</b> 96 hours		<b>Guided independent study:</b> 204 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 0%, Coursework = 50%			
	<b>As used by St Andrews:</b> Coursework = 50%, Written Examination = 50% Re-Assessment: Coursework = 50%, 2-hour Examination = 50%			
<b>Module Co-ordinator:</b>	Dr R A J Robinson			
<b>Lecturer(s)/Tutor(s):</b>	Team taught			

## Geography & Geosciences - 1000 & 2000 Level 2012/13 - September 2012

ES2004 Practical and Field Skills for Earth Sciences (Direct Entrants)			
<b>SCOTCAT Credits:</b>	30	SCQF Level 8	<b>Semester:</b> Whole Year
<b>Planned timetable:</b>	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 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 &amp; 2003 teaching.</p>			
<b>Programme module type:</b>	Compulsory for Direct entrants to Second Year Geology		
<b>Pre-requisite(s):</b>	Direct Second Year acceptance to B.Sc. Geology, B.Sc. Environmental Geoscience or M.Geol . Earth Science Degree		
<b>Co-requisite(s):</b>	Normally ES2001, ES2002 and ES2003		
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> Weekly lectures, practical classes, and fieldwork		
	<b>Scheduled learning:</b> 190 hours	<b>Guided independent study:</b> 110 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 50%, Coursework = 50%		
	<b>As used by St Andrews:</b> Coursework = 100% (made up of Group Work and 2 Field Excursions, = 50%, Practical Examinations = 50%) Re-Assessment: Coursework = 100%		
<b>Module Co-ordinator:</b>	Dr R A J Robinson		
<b>Lecturer(s)/Tutor(s):</b>	Team taught		

Geography (GG) Modules

GG1001 Geography: Earth, Environment and Society				
<b>SCOTCAT Credits:</b>	20	SCQF Level 7	<b>Semester:</b>	1
<b>Planned timetable:</b>	11.00 am			
<p>This module provides a general introduction to Human and Physical Geography. Some basic concepts of Human Geography - space and place, location and scale, distance and difference - are introduced and used to examine the nature of the human environment. Both contemporary and historical examples allow an exploration of these issues in a British setting, in an urban setting and in relation to world geographies. The Physical Geography component introduces the characteristics of global environmental systems: the lithosphere, atmosphere, hydrosphere and biosphere. Key skills for geographers are introduced and the module includes two one-day field trips.</p>				
<b>Programme module type:</b>	Either GG1001 or GG1002 is compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
<b>Required for:</b>	GG2011			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 lectures, 1 tutorial and 1 practical class each week and 2 field days during the semester.			
	<b>Scheduled learning:</b> 55 hours		<b>Guided independent study:</b> 145 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 0%, Coursework = 50%			
	<b>As used by St Andrews:</b> Coursework = 50%, Written Examination = 50%			
<b>Module Co-ordinator:</b>	Dr M B Sothern			
<b>Lecturer(s)/Tutor(s):</b>	Team taught			

## Geography & Geosciences - 1000 & 2000 Level 2012/13 - September 2012

GG1002 Global Environmental Problems				
<b>SCOTCAT Credits:</b>	20	SCQF Level 7	<b>Semester:</b>	2
<b>Planned timetable:</b>	11.00 am			
<p>This module explores the interrelationships between human activity and the physical environment in the context of the examination of some pressing global problems. The scientific, political, social and economic dimensions of such issues as population growth, global warming, desertification, food supply and the exploitation of natural resources are examined, and the potential for sustainable development is considered. The module illustrates the close interrelationship between human and physical geography and the need for a broad knowledge of both if we are to understand the nature of the global environmental problems that currently confront society. Key skills for geographers are developed through this module.</p>				
<b>Programme module type:</b>	Either GG1001 or GG1002 is compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
<b>Required for:</b>	GG2011			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 lectures, 1 tutorial and 1 group project each week during the semester.			
	<b>Scheduled learning:</b> 37 hours		<b>Guided independent study:</b> 163 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 0%, Coursework = 50%			
	<b>As used by St Andrews:</b> Coursework = 50%, Written Examination = 50%			
<b>Module Co-ordinator:</b>	Dr M B Sothern			
<b>Lecturer(s)/Tutor(s):</b>	Team taught			

GG2011 Geographical Processes and Change				
<b>SCOTCAT Credits:</b>	30	SCQF Level 8	<b>Semester:</b>	1
<b>Planned timetable:</b>	9.00 am Mon - Fri, 2.00 pm - 6.00 pm Mon.			
<p>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.</p>				
<b>Programme module type:</b>	Compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography			
<b>Pre-requisite(s):</b>	GG1001 or GG1002		<b>Anti-requisite(s):</b>	GE2001
<b>Required for:</b>	GG2012			
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 - 5 lectures per week plus 2 seminars, 3 tutorials, 2 practical classes and a Field Excursion during the semester.			
	<b>Scheduled learning:</b> 56 hours		<b>Guided independent study:</b> 244 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 40%, Practical Examinations = 15%, Coursework = 45%			
	<b>As used by St Andrews:</b> Coursework = 45%, Practical Examination = 15%, Written Examination = 40%			
<b>Module Co-ordinator:</b>	Dr V Rinterknecht			
<b>Lecturer(s)/Tutor(s):</b>	Team taught			

## Geography & Geosciences - 1000 & 2000 Level 2012/13 - September 2012

GG2012 Processes, Perspectives and Ideas in Geography			
<b>SCOTCAT Credits:</b>	30	SCQF Level 8	<b>Semester:</b> 2
<b>Planned timetable:</b>	9.00 am Mon - Fri, 2.00 pm - 6.00 pm Mon.		
<p>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).</p>			
<b>Programme module type:</b>	Compulsory for all Single Honours, Joint Honours and 'with' Degrees in Geography		
<b>Pre-requisite(s):</b>	GG2011	<b>Anti-requisite(s):</b>	GE2012
<b>Learning and teaching methods and delivery:</b>	<b>Weekly contact:</b> 4 lectures per week plus 2 seminars, 3 tutorials, 1 practical class over the semester.		
	<b>Scheduled learning:</b> 50 hours	<b>Guided independent study:</b> 250 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examination = 60%, Practical Examination = 0%, Coursework = 40%		
	<b>As used by St Andrews:</b> Coursework = 40%, Written Examination = 60%		
<b>Module Co-ordinator:</b>	Dr V Rinterknecht		
<b>Lecturer(s)/Tutor(s):</b>	Team taught		