

Environmental Geography (EG) modules

EG3020 Global Climate Change			
SCOTCAT Credits:	15	SCQF Level 9	Semester: 1
Academic year:	2015/6 & 2016/7		
Planned timetable:	9.00 am - 10.00 am Wed and Thu, 2.00 pm - 5.00 pm Tue		
Climate change is one of the most challenging environmental problems currently facing society. Recent global warming likely lies outside the range of natural variability when compared to the last 1000 or even 2000 years. This module addresses how this consensus view has been derived and considers the scientific evidence and arguments that underpin our current understanding of climate change. The module examines both strengths and limitations of long-term proxy climate records, historical datasets based upon direct observation, models of the climate system, and areas of greatest uncertainty within current knowledge. The impacts and policy responses to climate change are also introduced.			
Programme module type:	Compulsory for MGeol Earth Sciences and BSc Environmental Earth Sciences. Optional for Geography and Sustainable Development		
Pre-requisite(s):	Normally ES2002 or ES2003 or (GG2011 and GG2012)	Anti-requisite(s):	GG3265, GG3268
Learning and teaching methods and delivery:	Weekly contact: 2 x 1-hour lectures and 1 x 2-hour practical.		
	Scheduled learning: 44 hours	Guided independent study: 106 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 = 50%		
Re-Assessment pattern:	2-hour Written Examination = 80%, Coursework = 20%, No Re-Assessment if Coursework mark is <4		
Module Co-ordinator:	Dr R Wilson		
Lecturer(s)/Tutor(s):	Dr R Wilson, Dr T Hill, Dr J Rae		

Geography & Geosciences - Honours Level - 2015/6 - August 2015

EG3021 Contemporary Environmental Problems: Applications and Solutions				
SCOTCAT Credits:	15	SCQF Level 9	Semester:	1
Academic year:	2015/6 & 2016/7			
Planned timetable:	11.00 am - 1.00 pm Tue and Wed			
Environmental problems abound on local, regional, and global scales. The ability of current and future generations to understand, predict, and ameliorate these problems requires a solid understanding of links between their causes, processes, and environmental symptoms under various forcing conditions. This course considers several case studies of important terrestrial, marine, and atmospheric environmental problems, allowing students to evaluate the scientific evidence and challenging them to understand the physical, biological, and chemical processes that underpin their expression. The assessment will mimic the types of analysis/report used in industrial settings to describe, report and advise regarding environmental problems.				
Programme module type:	Compulsory for MGeol Earth Sciences and BSc Environmental Earth Sciences. Optional for Geography or Sustainable Development			
Pre-requisite(s):	Normally ES2002 or ES2003 or (GG2011 and GG2012)			
Learning and teaching methods and delivery:	Weekly contact: 2-hour lectures (x 11 weeks), 3 x 3-hour practical sessions and 6 tutorials over the semester.			
	Scheduled learning: 37 hours		Guided independent study: 154 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 = 50%			
Re-Assessment pattern:	2-hour Written Examination = 80%, Coursework = 20%, No Re-Assessment if Coursework mark is <4			
Module Co-ordinator:	Dr M Singer			
Lecturer(s)/Tutor(s):	Dr M Singer, Dr T Hill			

EG3031 Special Topic for Physical Geography				
SCOTCAT Credits:	5	SCQF Level 9	Semester:	1
Academic year:	2015/6 & 2016/7			
Availability restrictions:	Available only to Geography students			
Planned timetable:	To be arranged.			
This module provides support and guidance for geography students taking one of the Earth & Environmental Science modules offered as part of the Geography degree (normally ES3020-ES3030). In addition Geography MA and BSc students taking 15-credit modules from the Science Faculty may find themselves 5 credits short and this module provides the necessary credit top-up.				
Programme module type:	Optional for Geography or Sustainable Development students also taking one of EG3020 - EG3030			
Pre-requisite(s):	GG2011 and GG2012			
Co-requisite(s):	One from EG3020 - EG3030			
Learning and teaching methods and delivery:	Weekly contact: Occasional tutorials.			
	Scheduled learning: 8 hours		Guided independent study: 42 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	As used by St Andrews: Coursework = 100%			
Re-Assessment pattern:	No Re-Assessment available			
Module Co-ordinator:	Dr T Hill			
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff			

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EG3032 Special Environmental Topic for Physical Geography				
SCOTCAT Credits:	5	SCQF Level 9	Semester:	1
Academic year:	2015/6 & 2016/7			
Availability restrictions:	Only available to students on a Geography or Sustainable Development Honours programme.			
Planned timetable:	To be arranged.			
<p>This module provides support and guidance for geography students taking one of the Earth & Environmental Science modules offered as part of the Geography degree (normally EG3020-EG3030). In addition Geography MA and BSc students taking 15-credit modules from the Science Faculty may find themselves 5 credits short and this module provides the necessary credit top-up. The present module is designed to pair with environmental science-based modules such as EG3021 Contemporary Environmental Problems: Applications and Solutions.</p>				
Programme module type:	Optional for Geography or Sustainable Development students also taking one of EG3020 - EG3030			
Co-requisite(s):	Normally one from EG3020 - EG3030- currently EG3021			
Learning and teaching methods and delivery:	Weekly contact: 2-hours of tutorials (x 4 weeks)			
	Scheduled learning: 8 hours		Guided independent study: 42 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	As used by St Andrews: Coursework = 100%			
Re-Assessment pattern:	No Re-Assessment available			
Module Co-ordinator:	Dr M Singer			
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff			

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EG4020 Geochronology			
SCOTCAT Credits:	15	SCQF Level 10	Semester: 2
Academic year:	2015/6 & 2016/7		
Planned timetable:	11.00 am - 1.00 pm Mon, 2.00 pm - 5.00 pm Mon		
<p>Determining the chronological age of events is one of the most fundamental questions in Earth and Environmental Sciences. However this simple question presents extraordinary challenges and interpreting age data is complex. Different methods are used for historical, Quaternary and geological timescales, each of which has its own strengths and drawbacks. Dating is achieved using methods that vary from measuring lichens with a ruler to detecting attogram levels of isotopes using some of the most precise instrumentation in physical science. We will explore a variety of simple and complex tools to understand the time frames of Earth processes such as erosion rates, sequences of moraine deposition, and successions of volcanic eruptions. Understanding how processes are dated in many cases requires the analyst to understand more fully the process itself. This module will be of interest to anyone involved in understanding processes across historical and Quaternary timeframes to those in Deep Time.</p>			
Programme module type:	Optional for all Earth & Environmental Science BSc and MGeol degrees and Geography or Sustainable Development MA and BSc		
Pre-requisite(s):	Normally ES2002 or ES2003 or (GG2011 and GG2012)	Anti-requisite(s):	GG3269
Learning and teaching methods and delivery:	Weekly contact: 2-hour lectures (x 11 weeks), 3 x 2-hour practical sessions, 2 x 1-hour mentoring for orals over the semester.		
	Scheduled learning: 30 hours	Guided independent study: 120 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%, Practical Report = 30%, Oral Presentation = 20%		
Re-Assessment pattern:	2-hour Written Examination = 80%, Coursework = 20%, No Re-Assessment if Coursework mark is <4		
Module Co-ordinator:	Dr V Rinterknecht		
Lecturer(s)/Tutor(s):	Dr V Rinterknecht, Dr T Raub, Dr R Robinson		

Geography & Geosciences - Honours Level - 2015/6 - August 2015

EG4031 Analytical Sciences for Physical Geography			
SCOTCAT Credits:	5	SCQF Level 10	Semester: 1
Academic year:	2015/6 & 2016/7		
Availability restrictions:	Available only to students on a Geography Honours programme.		
Planned timetable:	To be arranged.		
<p>The module comprises a series of seven lectures about analytical science. The lectures explain the basic principles of accuracy and precision and these are illustrated in the context of four of the most common analytical methods used in physical geoscience. This module provides analytical science skills training to support students taking one of the Year 4 Earth & Environmental Science modules offered as part of the Geography degree (EG4020-EG4030). Students are asked to research an analytical method that complements teaching in the associated EG402X module. This is then presented in a poster format imitating the poster sessions at major conferences. Posters are marked by both students (peer assessment) and staff, and any discrepancies between those marks are discussed. The module will give BSc Geography students the necessary training in analytical science to allow them to excel in the accompanying EG402X module.</p>			
Programme module type:	Optional for Geography or Sustainable Development students also taking one of EG4020 - EG4030.		
Pre-requisite(s):	Passes at Grade 11 or better in GG2011 and GG2012		
Co-requisite(s):	One of EG4020 - EG4030		
Learning and teaching methods and delivery:	Weekly contact: 7 x 1-hour lectures and 1 x 8-hour poster presentation day over the semester.		
	Scheduled learning: 15 hours	Guided independent study: 35 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%		
	As used by St Andrews: Coursework (Poster session) = 100%		
Re-Assessment pattern:	No Re-Assessment available		
Module Co-ordinator:	Dr A Finch		
Lecturer(s)/Tutor(s):	Earth and Environmental Sciences staff		