GEOG90026 Global Climate Change In Context

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus. An enrolment quota of 23 students (in undergraduate and post-graduate offering) applies to this subject. For detailed information on the quota subject application process, enrolment deadlines and selection preferences, refer to the Faculty of Science website: http://science.unimelb.edu.au/students/course-planning-and-advice Students undertake field trip experiences that will require them to be physically capable of undertaking outdoor field work in remote locations.
Time Commitment:	Contact Hours: Lectures: 14 x 1 hr (10 x 1 hr lectures will be given in the week prior to the field trip; the remainder will take place during the field trip and the first 4 weeks of semester 1) Field study: 11 x 8 hr days (the field trip will take place in early to mid February, prior to Sem. 1) Practicals: 4 x 2 hr (to take place during the first 4 weeks of Sem. 1) Total Time Commitment: 170 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	At least some background in Physical Geography and/or Earth Science is strongly recommended. That is, students are expected to have completed one or more 2 nd yr physical geography/earth science subjects. Interested students who are unsure if they possess sufficient academic background are welcome to contact the coordinator for advice.
Non Allowed Subjects:	**Subject** / **Study Period Commencement:** / **Credit Points:** GEOG30023 Global Climate Change in Context / February / 12.5
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Assoc Prof Russell Drysdale
Contact:	**rnd@unimelb.edu.au (mailto:rnd@unimelb.edu.au)**
Subject Overview:	This subject examines the nature and causes of past changes in Earth's climate during the Quaternary Period (the last 2.7 million years), with a particular emphasis on the last glacial-interglacial cycle. It aims to place modern climate and the projections of future global warming into a longer-term perspective, and will allow students to understand why human interference in the climate system may be a legitimate cause for concern. Emphasis is placed on how Earth materials (ice, rocks, sediments, biological materials) record past climate changes, the techniques used to extract this 'palaeoenvironmental information', and the principles that govern how this information is interpreted. A series of lectures covering the theoretical elements of the subject will immediately precede 10 days of field study (in either Tasmania, mainland SE Australia or New Zealand). The field component focuses on how particular environments (e.g. coastal, lake, fluvial, cave, and glacial) preserve evidence of past climate change. Additional lectures and practicals following completion of the field work will focus on the types of analytical

	methods employed in this field, the nature of the data that are produced and how these are processed and interpreted. By the end of the subject, students will not only appreciate the dynamics of Earth's past climate and the mechanisms that have forced it, but also the way in which we practice this important and growing field of study. Student numbers are subject to a quota. . The estimated cost of the field trip is in the vicinity of $900. The field trip will take place in the week prior in February.
Learning Outcomes:	At the completion of this subject, students will have a comprehensive understanding of: # the nature of past climate changes, i.e. the frequency, magnitude and geographic extent; # the range of driving mechanisms of past climate changes, particularly how they vary according to the time scales considered; # how specific environments and materials preserve evidence of past climate changes; # the advantages and weaknesses of the various 'palaeoclimate archives'; # how the current global warming debate fits into the longer-term perspective of climate change. ; Students will also gain extensive skills in the following: # Hands-on field and laboratory experience in the identification, sampling and analysis of a range of important palaeoclimate archives; # Producing, organising, analysing and interpreting palaeoclimate data; # Critical analysis of the key literature and current debates on past climates; .
Assessment:	Research Assignment (1,500 words) due the day before the field work commences (30%) Computer based practicals (1000 words) due after completion of each session (20%) Individual Field report (2,500 words) due six weeks after the field trip (50%)
Prescribed Texts:	William Ruddiman 2 nd Ed (2014) Earth's Climate: past and future. 3 rd edition. WH Freeman, New York.
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	# ability to comprehend some of the current debates in the relevant fields; # software skills, such as Word, PowerPoint, Excel and more specialised software; # illustrate an understanding many of the key issues facing many of Australia's near neighbours; # develop an understanding of small island state landscape and environmental issues; # oral presentation skills; # group field and research activities .
Related Course(s):	Master of Science (Geography)