

GEOG30025 Biogeography and Ecology of Fire

Credit Points:	12.5
Level:	3 (Undergraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. The estimated additional cost of the 6 day field trip is in the vicinity of \$600. The field trip will take place during mid-Semester 1 break.
Time Commitment:	Contact Hours: 68 hours Total Time Commitment: 170 hours total time commitment
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	Some background in Ecology, Physical Geography and/or Earth Science is strongly recommended. Students are normally expected to have completed one or more 2 nd yr physical geography, biology and/or earth science subjects. Interested students should contact the coordinator for advice.
Non Allowed Subjects:	None
Core Participation Requirements:	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. This course requires all students to enrol in subjects where they must actively and safely contribute to field excursions and laboratory activities. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the Subject Coordinator and Disability Liaison http://services.unimelb.edu.au/disability/ students email: disability-liaison@unimelb.edu.au
Coordinator:	Dr Michael-Shawn Fletcher
Contact:	Faculty of Science Between the Doug McDonell building and the Eastern Resource Centre (ERC) <i>Enquiries</i> Phone: 13 MELB (13 6352) Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au) Subject co-ordinator: msfl@unimelb.edu.au (mailto:msfl@unimelb.edu.au)
Subject Overview:	Fire is one of the most important controls over the distribution of vegetation on Earth. This subject examines the role of fire in natural systems, with a particular emphasis on the importance of fire in determining global vegetation patterns and dynamics over long periods of time. The aim is to understand how terrestrial systems have evolved to cope with and exploit fire, and to place the extreme flammability Australia's vegetation within a global context. The subject will examine concepts such as resilience, positive feedback loops, hysteresis and alternative stable states. The use of fire by humans to manipulate environments will be examined, with a particular emphasis on the variety of approaches employed by people across a diversity of environments over long periods of time, allowing an exploration of the social and cultural dynamics of fire and environmental management. A mid-semester field excursion in Tasmania will visit a number of sites which will exemplify the subject themes. The practical exercises leading up to the field trip will focus on how to gather fire-related ecological data. The practical exercises following the field trip will be devoted to processing, analysing, interpreting and reporting on the field data. At the end of the subject, students will have gained an understanding of the way in which fire has shaped natural systems, as well as acquiring the skills necessary to formulate and test hypotheses. More information about the subject and field trip can be seen at: http://michaelsresearch.wordpress.com/GEOG30025/ (http://michaelsresearch.wordpress.com/GEOG30025/)

	<i>The estimated additional cost of the 6 - 7 day field trip is in the vicinity of \$600. The field trip will take place during mid-Semester 1 break.</i>
Learning Outcomes:	At the completion of this subject, students will have achieved the following objectives <ul style="list-style-type: none"> # An understanding of the causes and consequences of fire in terrestrial systems; # An understanding of the specific adaptations that plants and animals have evolved to cope with fire; # An ability to generate and test ecological hypotheses, design in-field ecological experiments and gather data to address specific hypotheses; # Familiarity with the key literature and current debates on fire-ecology; # An understanding of how the current global warming debate fits into the longer-term perspective
Assessment:	two pre-field trip practical exercises (300 words each) due at the completion of each prac class, 15% nine online reading assignments to be done prior to each lecture (excluding weeks 1 and 12) equivalent to 100 words per assignment, total of 900 words, 22.5% Individual report based on the analysis of field data 1500 words, due at the end of the penultimate week of semester, 37.5% 15 minute group presentation due in last practical class of semester, 25%
Prescribed Texts:	None
Recommended Texts:	Fire on Earth: An Introduction – Scott, Bowman, Bond, Pyne and Alexander.
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:	<ul style="list-style-type: none"> # ability to conduct library searches to source the latest relevant literature on key topic areas; # ability to comprehend some of the current debates in the field; # software skills, such as Excel and more specialised software, such as ecological ordination software and R; # basic introduction to plant identification, ecological data acquisition and analysis; # field skills, especially an ability to design and execute controlled field experiments; # data interpretation skills, informed by the relevant literature; # group field and research activities.
Related Majors/Minors/ Specialisations:	Environmental Geographies, Politics and Cultures major Environmental Geography Environments Discipline subjects Geography Geography Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED