

220-502 Bushfire & Climate

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: August, - Taught on campus. Intensive teaching mode.
Time Commitment:	Contact Hours: 24 hrs lectures and 36 hrs practical work delivered in a two week teaching block. Total Time Commitment: Not available
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>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.</p> <p><p>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</p></p> </p>
Coordinator:	Dr Kevin Tolhurst
Subject Overview:	The course covers the fundamentals of forest fire behaviour and the factors affecting it including fuels, weather, topography, fire scale and climatic conditions. This knowledge will be the underlying understanding required for the planning and execution of prescribed burning for land management and to understand the fundamentals of wildfire suppression strategies and tactics.
Objectives:	<p>By the end of the subject students should:</p> <ul style="list-style-type: none"> # Have an understanding of the importance of fuel characteristics including composition and structure on forest fire behaviour. In particular, an understanding of the importance of fuel moisture, fuel availability, fine fuels, live fuels, coarse fuels, fuel accumulation and decomposition processes and assessment and mapping of fuels. # Have an understanding of the fundamentals of fire behaviour, in particular, the processes of pyrolysis, combustion, and heat transfer. At a broader level, the effects of fuel, weather, topography, fire scale, and spotting on fire behaviour, how to use fire behaviour prediction models, computer based models and the use of GIS (Geographic Information Systems) to make fire behaviour predictions. # Have an understanding of the effects of climate and weather patterns on fire occurrence and behaviour. Learn how to use weather observations and forecasts to predict fire behaviour. # Know the basic composition of smoke (gases, particulates, VOCs, etc.) and the factors affecting smoke production and transport. # Have a knowledge of the science of prescribed burning including the importance of lighting patterns, fuel moisture, ignition technologies, and fire impacts.

	# Have an understanding of fire suppression strategies, fire suppression tactics, suppression tools and incident control structures.
Assessment:	Several small daily “quizzes” – 20%, Literature review assignment (2000 words) – 30%, Major assignment (3500 words) – 50%
Prescribed Texts:	None
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
Links to further information:	http://www.forests.unimelb.edu.au/subjects.html
Related Course(s):	Master of Forest Ecosystem Science