FRST90025 Bushfire & Climate

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2011, Creswick This subject commences in the following study period/s: July, Creswick - Taught on campus. Intensive teaching, Creswick and Burnley and field trips.
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:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Coordinator:	Assoc Prof Kevin Tolhurst
Contact:	**Melbourne School of Land & Environment Student Centre** Ground Floor, Land & Food Resources (building 142) *Enquiries* Phone: 13 MELB (13 6352) Email: **13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)**
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:	By the end of the subject students should: # 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. # 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
Notes:	This subject can be taken as part of the Postgraduate Certificate in Bushfire Management and the Postgraduate Diploma in Bushfire Management **http://www.forests.unimelb.edu.au/bushfire-management/ (http://www.forests.unimelb.edu.au/bushfire-management/)**
Related Course(s):	Master of Forest Ecosystem Science Postgraduate Certificate in Bushfire Management Postgraduate Diploma in Bushfire Management
Related Majors/Minors/ Specialisations:	Climate Change Environmental Science Environmental Science Sustainable Forests