FRST90015 Forest Ecosystems

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2015, Creswick This subject commences in the following study period/s: February, Creswick - Taught on campus. Please note that this subject has a pre-teaching period. During this time students will be required to read the following: Chapters from Attiwill P. M. & Wilson B. (editors), Ecology: An Australian Perspective. 2nd Edition. 2006: Chapter 11: Carbon Flow, Energy Transformations, and Productivity Chapter 33: Forests Australia's State of the Forests Report 2013, Executive summary (www.daff.gov.au/ABARES/forestsaustralia/Documents/executive-summary_web2.pdf) The subject involves several field trips including an overnight field trip from the Creswick Campus.
Time Commitment:	Contact Hours: 24 hours of lectures and discussions, 36 hours field work and practical exercises, delivered in a two-week intensive teaching block Total Time Commitment: 170 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
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 Christopher Weston, Dr Luba Volkova
Contact:	**Graduate School of Science** *Enquiries* Phone: 13 MELB (13 6352) Email: **13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)** *Coordinators* Dr Chris Weston **weston@unimelb.edu.au (mailto:weston@unimelb.edu.au)** Dr Luba Volkova **lubav@unimelb.edu.au (mailto:lubav@unimelb.edu.au)**
Subject Overview:	An introduction to the forests and woodlands of southeastern Australia based on lectures and field visits to forests across a broad rainfall gradient. The subject aims to provide a sound theoretical and practical understanding of the major ecosystem processes in forests, including a focus on regeneration and recovery following both low- and high-intensity fire. Field visits to mallee, box-ironbark, *Eucalyptus* open forests and cool temperate rainforest and associated practical work will ensure that students obtain direct experience of a range of forest ecosystems. These field visits and associated lectures develop knowledge of state-of-the-art methods to analyse ecosystem processes, such as nutrient and carbon cycling, and also a functional appreciation of forest soils.
Learning Outcomes:	By the end of the subject students should: # Understand the ecosystem paradigm including energy flow, organic and inorganic transformation processes in forests

	# Have a broad understanding of relationships among vegetation types, climate and soils within forest ecosystems of south-eastern Australia # Understand the relevance of forests and forest soils in the global carbon cycle and the amelioration of global climate change # Have gained practical experience in the quantitative analysis of forest biomass, decomposition and respiration processes involved in nutrient and carbon cycling within forests, and between forest ecosystems and the atmosphere # Be capable of critically evaluating management impacts on forest ecosystem processes maintaining water, air and soil quality.
Assessment:	Progress exercises, 40% (1500 words), due March 2. Progress exercises are based on field trips and revision of lectures and fieldwork discussion. Major assignment, 60% (3500 words), due April 11.
Prescribed Texts:	Costermans, L. Native Trees and Shrubs of South-Eastern Australia OR Costermans, L. Trees of Victoria and Adjoining Areas
Recommended Texts:	Attiwill P.M & Adams M.A, (editors) *Nutrition of Eucalypts*
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://graduate.science.unimelb.edu.au/master-of-forest-ecosystem-science
Related Course(s):	Graduate Certificate in Bushfire Planning and Management Graduate Diploma in Bushfire Planning and Management Graduate Diploma in Forest Systems Management Master of Forest Ecosystem Science Master of Urban Horticulture Postgraduate Certificate in Bushfire Planning and Management Postgraduate Diploma in Bushfire Planning and Management
Related Majors/Minors/ Specialisations:	Honours Program - Forest Science Sustainable Forests Sustainable Forests Tailored Specialisation Tailored Specialisation