FRST90019 Forest Assessment and Monitoring

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2015, Creswick This subject commences in the following study period/s: May, Creswick - Taught on campus. Please note that this subject has a pre-teaching period and during this time students will be required to read: West, P. W. (2009) Tree and Forest Measurement, chapters 9 and 10 Elzinga, C. L. et al (2007) Measuring and Monitoring Plant Populations, chapter 2
Time Commitment:	Contact Hours: 24 hours of lectures, 36 hours practical work and excursions, 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 Julian Di Stefano, 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 Luba Volkova **lubav@unimelb.edu.au (mailto:lubav@unimelb.edu.au)** Dr Julian Di Stefano **juliands@unimelb.edu.au (mailto:juliands@unimelb.edu.au)**
Subject Overview:	This subject promotes understanding of quantitative assessment of forest carbon, timber and biodiversity. Specifically, the aim is to: # Present the state of the art of forest assessment for carbon, timber and biodiversity # Present methods for formulating and planning an effective and efficient forest assessment # Enable participants to implement a modern assessment and determine the advantages and disadvantages of available methods # Enable participants to analyse assessment data to determine reliable estimates and confidence limits Topics include: introduction to statistics and sampling theory, issues in forest assessment design, modern measurement tools and techniques, Geographic Information Systems (GIS), remote sensing, and specific techniques for assessment of carbon, timber and biodiversity.
Learning Outcomes:	This subject will provide students with an advanced understanding of: # The role of assessment in forest management # Statistical techniques for sampling design and analysis, sources of assessment errors and their significance

	# The use of standard equipment to estimate tree and stand parameters such as diameter, basal area, height, crown cover and stem volume # The use of modelling tools to estimate forest carbon # Techniques to asses forest biodiversity including species richness and composition # The use of GIS for forest assessment and creating maps using ArcGIS # The use of remote sensing in forest assessment and project management. Ability to access and use various satellite data for specific purposes At subject completion students should be able to design and implement a forest assessment.
Assessment:	Progress exercises (total of 40% and 2000 words; due May 25. There will be several progress exercises based around the main components of the course). Major Report (60%, 3000 words; due June 29)
Prescribed Texts:	None
Recommended Texts:	# P Burrough, *Principles of Geographical Information Systems for Land Resources Assessment*. # P.W. West, *Tree and Forest Measurement.* # Elzinga, C.L., D.W. Salzer, J.W. Willoughby and J.P. Gibbs, *2001 Monitoring Plant and Animal Populations*. Blackwell, Malden
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 Forest Systems Management Graduate Diploma in Forest Systems Management Master of Forest Ecosystem Science
Related Majors/Minors/ Specialisations:	Sustainable Forests Sustainable Forests