

FRST90031 Sustainable & Renewable Forest Products

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2011, Burnley This subject commences in the following study period/s: October, Burnley - Taught on campus.
Time Commitment:	Contact Hours: Equivalent of 24 hours of lectures and 36 hours of practical work, delivered in a 7 day 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 Barbara Ozarska
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Subject Overview:	This subject introduces students to the impact of wood utilisation in the environment, the concepts of sustainability, cradle to grave analysis, ISO 14001 within the context of continuous environmental improvement in an industrial environment, energy and chemical production from biomass. Students will be introduced to concepts in: <ul style="list-style-type: none"> # Timber engineering, including the mechanical properties of wood (stress and strain, compression stress, tension shear, bending, elastic and plastic deformation, factors affecting mechanical properties, wood creep, visual and machine stress grading, fasteners and connectors. # Design durability, including fire resistance, surface coatings, smell, acid resistance, electrical properties, acoustic properties, permeability, gluing properties and adhesion. # The design of structures, the role of industrial design, automation and modular coordination in building and furniture manufacture, 3R design concept: design for reduce, reuse and recycle. # Biomass waste utilisation and recycling, the various processing options available. # Forest industries and their role in developing economies.
Objectives:	On completion of this subject students should have a practical knowledge of: <ul style="list-style-type: none"> # The concepts in sustainability # Continuous environmental improvement # Options in biomass utilisation and reuse of products # Cradle to grave analysis

	<ul style="list-style-type: none"> # Timber engineering # Design durability # The design of timber structures # Green star rating system in buildings # Forest industries and their role in economic development
Assessment:	Completion of an assignment for example a literature review or project relating to the practical application environmental reporting or design of a timber structure. Project proposal (500 words) 5%, Report (4000 words) 65%, Presentation 10%, Work book and laboratory book (2000 words) 20%.
Prescribed Texts:	Course notes will be provided
Recommended Texts:	<ul style="list-style-type: none"> # <i>Timber Engineering Step 1. Basis of design, material properties, structural components and joints</i>. First Edition, Centrum Hout, The Netherlands. # <i>Timber Engineering Step 2. Design - Details and structural system</i>. First Edition, Centrum Hout, The Netherlands. # <i>Wood Handbook. Wood as an Engineering Material</i>. US Department of Agriculture, Forest Products Laboratory. Ag. Handbook No. 72.
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
Related Majors/Minors/Specialisations:	Sustainable Forests