FRST90031 Timber, Sustainable & Renewable Material

<table>
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<th>Credit Points:</th>
<th>12.5</th>
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<td>Level:</td>
<td>9 (Graduate/Postgraduate)</td>
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| Dates & Locations:   | 2016, Burnley  
This subject commences in the following study period/s: October, Burnley - Taught on campus. Please note that this subject has a pre-teaching period and during this time students will be required to read the book 'Wood in Australia' (Part 1) by Keith R Bootle, McGraw-Hill Book Company, 2010. |
| Time Commitment:     | Contact Hours: 42 hours Total Time Commitment: 170 hours |
| 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 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. 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>http://services.unimelb.edu.au/disability</a></p> |
| Coordinator:         | Assoc Prof Barbara Ozarska |
| Contact:             | bo@unimelb.edu.au (mailto:bo@unimelb.edu.au) |

**Subject Overview:**
This subject introduces students to various concepts of sustainable and renewable timber products including timber engineering, design durability, manufactured wood products, biomass waste utilization and recycling, environmental considerations in timber use and more. A major focus will be placed on environmental aspects of the use of timber as a building material and the role of timber in ecologically sustainable design. Students will be introduced to concepts in:

- Environmental properties of timber and the role of forest products in climate change
- Utilisation of young plantation timber resources
- Timber engineering, including physical and mechanical properties of wood, visual and machine stress grading, fasteners and connectors
- Design durability, including wood permeability, wood preservation and termite control
- Surface coatings, gluing properties and adhesion
- Engineered wood products
- The use of timber in internal and external applications
- Principles of design, the role of industrial design, 3R design concept (design for Reduce, Reuse and Recycle)
- Biomass waste utilisation and recycling
- Forest industries and their role in developing economies.

**Learning Outcomes:**
On completion of this subject students should have a practical knowledge of:

- The concepts in sustainability
- Environmental attributes of timber and timber products
# Options in biomass utilisation and reuse of products
# Cradle to grave analysis
# Timber engineering
# Design durability
# The design of timber products
# Green star rating system in buildings
# Forest industries and their role in economic development.

| Assessment: | Final test based on the knowledge gained on the subject on the last day of Intensive subject (30%) 1000 words, Major assignment - 4,000 words due 8 weeks after subject ends (70%). |
| Prescribed Texts: | Course notes will be provided on LMS |
| 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: | Conservation and Restoration  
Master of Science (Ecosystem Science) - Discipline Elective subjects  
Sustainable Forests  
Sustainable Forests  
Tailored Specialisation  
Tailored Specialisation |