

ENEN90014 Sustainable Buildings

Credit Points:	12.50								
Level:	9 (Graduate/Postgraduate)								
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: September, Parkville - Taught on campus.								
Time Commitment:	Contact Hours: 36 hours: This is an intensive subject held in the first week of the mid-semester break. Non-contact time commitment: 84 hours Total Time Commitment: 120 hours								
Prerequisites:	None								
Corequisites:	None								
Recommended Background Knowledge:	None								
Non Allowed Subjects:	This subject is delivered in conjunction with: <table><tr><th>Subject</th><th>Study Period Commencement:</th><th>Credit Points:</th></tr><tr><td>ABPL90120 Building Sustainability</td><td>September</td><td>12.50</td></tr></table>			Subject	Study Period Commencement:	Credit Points:	ABPL90120 Building Sustainability	September	12.50
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ABPL90120 Building Sustainability	September	12.50							
Core Participation Requirements:	<p><p>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.</p> <p>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</p></p>								
Coordinator:	Assoc Prof Lu Aye								
Contact:	Dr Lu Aye l.aye@unimelb.edu.au (mailto:l.aye@unimelb.edu.au)								
Subject Overview:	<p>This subject provides a multi-disciplinary overview of the design of sustainable buildings and considers the design from an architectural, services engineering, facade engineering, environmental engineering and structural engineering, tenants and owners perspective</p> <p>Topics include: ecological sustainable design, life cycle analysis, planning for sustainable buildings and cities, regulatory environment, barriers to green buildings, green building rating tools, material selection, embodied energy, operating energy, indoor environmental quality (noise, light and air), facade systems, ventilation systems, transportation, water treatment systems, water efficiency, building economics, and staff productivity</p> <p>A number of industry based case study examples will be introduced to complement the lectures</p>								
Objectives:	<p>On successful completion of this subject students should be able to:</p> <ul style="list-style-type: none"># Identify the critical sustainability issues that should be addressed in planning a building or new development# Estimate the green star rating of a new building# Identify the issues effecting indoor environmental quality# Select different heating and cooling ventilation systems and justify the selection# Calculate the embodied energy of different structural systems including recycled material								

	<ul style="list-style-type: none"> # Calculate the utilisation energy and greenhouse gas production of different building conceptual designs # Carry out conceptual designs for the design of a water supply system for a building with a focus on water conservation and recycling measures and estimate the expected water consumption requirements # Undertake cost studies of different green star rated buildings using life cycle cost analysis techniques
Assessment:	One 2-hour written exam (40%)Written assignments of approximately 4000 words in total, or equivalent (60%)
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
Generic Skills:	<ul style="list-style-type: none"> # Understanding of social, cultural, global and environmental responsibilities and the need to employ principles of sustainable development # Ability to utilise a systems approach to complex problems and to design for operational performance # Capacity for lifelong learning and professional development # Understanding of professional and ethical responsibilities, and commitment to them
Related Course(s):	Master of Energy Systems Master of Engineering Management Master of Engineering Management Master of Engineering Project Management Master of Engineering Project Management Master of Engineering Structures Master of Engineering Structures Master of Environmental Engineering Master of Environmental Engineering
Related Majors/Minors/ Specialisations:	Climate Change Energy Efficiency Modelling and Implementation Energy Studies Master of Engineering (Civil) Master of Engineering (Geomatics) Master of Engineering (Structural)