

ENEN90027 Energy for Sustainable Development

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 36 hours (Lectures: 2 hours per week, Set task: 1 hour per week) per semester Total Time Commitment: 120 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
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:eng-info@unimelb.edu.au)
Subject Overview:	<p>This subject will cover the following topics:</p> <ul style="list-style-type: none"> # Definitions of development and sustainability, principles that underpin sustainability # Relationship between energy and quality of life, consumption and basic needs # Potential and limitations of energy efficiency # Technologies to de-carbonise emissions # Technologies that can offer a future non-carbon energy supply - renewable and nuclear # Scenarios to provide vital needs such as electricity supply and transportation # Nuclear fission and fusion, its potential and limitations
Objectives:	<p>On successful completion of this subject students should have developed:</p> <ul style="list-style-type: none"> # A capacity to critique energy systems and sources for their sustainability # A broad overview of the various technologies that have the potential to provide a sustainable energy supply system # An appreciation of the conflicting outcomes arising from the need for increased energy use in most developing countries and the global and local needs for sustainability and minimal environmental impact # An understanding of the factors which lead to making an informed choice between energy resources and technologies
Assessment:	<p>Assessment for this subject consists of the following:One 3-hour open book examination, end of semester (50%)One 2000 word report, due at the end of semester (35%)One presentation for each student of up to 15 minutes, during the semester at a time to be advised (15%)</p>

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:	<p>Students successfully completing this subject should develop the following general skills:</p> <ul style="list-style-type: none"> # Ability to undertake problem identification, formulation and solution # Understanding of social, cultural, global, and environmental responsibilities and the need to employ principles of sustainable development # Ability to utilise a systems approach to design and operational performance # Capacity for independent critical thought, rational inquiry and self-directed learning # Ability to communicate effectively, with the engineering team and with the community at large
Related Course(s):	<p>Bachelor of Engineering (Civil Engineering) Master of Engineering Structures Master of Engineering Structures Master of Environmental Engineering Master of Environmental Engineering</p>
Related Majors/Minors/ Specialisations:	<p>Climate Change Energy Efficiency Modelling and Implementation Energy Studies Environmental Science Environmental Science Master of Engineering (Civil) Master of Engineering (Environmental) Master of Engineering (Geomatics)</p>