ENEN90027 Energy for Sustainable Development

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 3 hours per week. Total 36 hours Total Time Commitment: 120 hours for the semester
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	421-619 Energy for Sustainable Development
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/
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Subject Overview:	# 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:	On successful completion, students should have developed: # A capacity to critique energy systems and sources for their sustainability. # Have 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 technologies.

Assessment:	One three-hour examination held at the 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%)
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:	# 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
Notes:	From 2010 this subject replaces 421-619 Energy for Sustainable Development
Related Course(s):	Master of Energy Studies Master of Engineering Structures Master of Engineering Structures Master of Environment Master of Environment Master of Environmental Engineering Master of Environmental Engineering Master of Water Resource Management Master of Water Resource Management Postgraduate Certificate in Environment Postgraduate Diploma in Environment
Related Majors/Minors/ Specialisations:	Climate Change Energy Studies