

ENGR90028 Introduction to Energy Systems

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 Total Time Commitment: 120 hours
Prerequisites:	Enrolment in Master of Energy Systems
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>
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Subject Overview:	<p>This subject provides a general introduction to the many issues that need to be considered when examining energy systems. These include the following -</p> <ul style="list-style-type: none"> • A brief history of different forms of energy and energy technologies • The social, environmental and economic costs and benefits of different forms of energy and energy technology • A review of climate modelling, including the effect of different pollutant emissions and projected climate change scenarios • Current and projected reserves of different energy forms • A brief review of energy production and processing methods • A brief review of the levelised costs of different forms of energy • Energy use by sector and sub-sector in Australia and internationally • Current and projected greenhouse gas and other pollutant emissions from different forms of energy and energy technologies • Greenhouse gas mitigation opportunities
Objectives:	<p>On completion of this subject students should be able to -</p> <ul style="list-style-type: none"> • Consider the social, environmental and economic costs and benefits of different forms of energy and energy technology • Determine the likelihood of future climate change scenarios, and how different pollutant emissions are involved • Estimate the future availability of different energy resources • Consider the likely mitigation opportunities provided by different energy technologies
Assessment:	<ul style="list-style-type: none"> • Two assignments (25% each) not exceeding 12 pages each, one due mid-semester and the other at the end of semester • One written three-hour end-of-semester examination (50%)

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">• Ability to communicate effectively with the community at large• Understanding of the social, cultural, global and environmental responsibilities of a professional, and the need for sustainable development
Related Course(s):	Master of Energy Systems