

ENGR90030 Non-Renewable Energy

Credit Points:	12.50									
Level:	9 (Graduate/Postgraduate)									
Dates & Locations:	This subject is not offered in 2014.									
Time Commitment:	Contact Hours: 48 hours Total Time Commitment: 200 hours									
Prerequisites:	Admission to a Masters level program and ENGR90029 Analysing Energy Systems (./. /view/2012/ENGR90029) or equivalent									
Corequisites:	None									
Recommended Background Knowledge:	None									
Non Allowed Subjects:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MCEN90015 Thermodynamics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>MCEN90019 Advanced Thermodynamics</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	MCEN90015 Thermodynamics	Semester 1	12.50	MCEN90019 Advanced Thermodynamics	Semester 2	12.50
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MCEN90015 Thermodynamics	Semester 1	12.50								
MCEN90019 Advanced Thermodynamics	Semester 2	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>									
Contact:	mohsen.talei@unimelb.edu.au (mailto:mohsen.talei@unimelb.edu.au)									
Subject Overview:	<p>This subject examines in detail the main forms of non-renewable energy and their uses, including -</p> <ul style="list-style-type: none"> # The composition and origin of coal, oil, natural gas and uranium # The fundamentals of combustion and nuclear fission # The performance of coal, gas and nuclear power generation # The performance of refrigeration and heat pump systems # The performance of reciprocating engines 									
Learning Outcomes:	<p>On completion of this subject the student is expected to be able to -</p> <ul style="list-style-type: none"> # Explain what determines the performance of different energy technologies # Explain why different non-renewable, primary energies have different economic, social and environmental costs and benefits # Estimate the potential role of different non-renewable energies and energy technologies in a sustainable energy system 									
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 apply scientific fundamentals• Ability to undertake problem identification, formulation and solution• Ability to use a systems approach to analysis operational performance• 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
Related Majors/Minors/ Specialisations:	Energy Studies Energy Studies