

# ENGR90030 Non-Renewable Energy

<b>Credit Points:</b>	12.5									
<b>Level:</b>	9 (Graduate/Postgraduate)									
<b>Dates &amp; Locations:</b>	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.									
<b>Time Commitment:</b>	Contact Hours: 48 hours Total Time Commitment: 200 hours									
<b>Prerequisites:</b>	Admission to a Masters level program and <b>ENGR90029 Analysing Energy Systems</b> ( <a href="#">../view/2012/ENGR90029</a> ) or equivalent									
<b>Corequisites:</b>	None									
<b>Recommended Background Knowledge:</b>	None									
<b>Non Allowed Subjects:</b>	<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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MCEN90019 Advanced Thermodynamics	Semester 2	12.50								
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt; &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>									
<b>Coordinator:</b>	Dr Mohsen Talei									
<b>Contact:</b>	<a href="mailto:mohsen.talei@unimelb.edu.au">mohsen.talei@unimelb.edu.au</a> ( <a href="mailto:mohsen.talei@unimelb.edu.au">mailto:mohsen.talei@unimelb.edu.au</a> )									
<b>Subject Overview:</b>	<p><b>AIMS</b></p> <p>This subject examines in detail the main forms of non-renewable energy and their uses, including:</p> <ul style="list-style-type: none"> <li># The composition and origin of coal, oil, natural gas and uranium</li> <li># The performance of coal, gas, liquid fuel and nuclear power generation</li> <li># The performance of power plants featuring steam turbines, gas turbines and reciprocating engines.</li> </ul>									
<b>Learning Outcomes:</b>	<p><b>INTENDED LEARNING OUTCOMES (ILO)</b></p> <p>Upon completion of this subject, students should be able to:</p> <ol style="list-style-type: none"> <li>1 Explain what determines the performance of different energy technologies</li> <li>2 Explain why different non-renewable, primary energies have different economic, social and environmental costs and benefits</li> <li>3 Estimate the potential role of different non-renewable energies and energy technologies in a sustainable energy system.</li> </ol>									

<b>Assessment:</b>	<ul style="list-style-type: none"> <li>• Two assignments (25% each) not exceeding 12 pages each, one due mid-semester and the other at the end of semester, each requiring approximately 30-35 hours of work.</li> <li>• One written three-hour end-of-semester examination (50%).</li> </ul>
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>Having completed this unit the student should have:</p> <ul style="list-style-type: none"> <li>• The ability to apply scientific fundamentals</li> <li>• The ability to undertake problem identification, formulation and solution</li> <li>• The ability to use a systems approach to analysis operational performance</li> <li>• The ability to communicate effectively with the community at large</li> <li>• An understanding of the social, cultural, global and environmental responsibilities of a professional, and the need for sustainable development.</li> </ul>
<b>Related Course(s):</b>	Master of Energy Systems
<b>Related Majors/Minors/Specialisations:</b>	Climate Change Energy Studies Energy Studies