

## MC-ENGYSYS Master of Energy Systems

<b>Year and Campus:</b>	2014 - Parkville
<b>CRICOS Code:</b>	075124A
<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>Level:</b>	Graduate/Postgraduate
<b>Duration &amp; Credit Points:</b>	150 credit points taken over 18 months full time. This course is available as full or part time.
<b>Coordinator:</b>	Dr. Michael John Brear Email: <a href="mailto:mjbrear@unimelb.edu.au">mjbrear@unimelb.edu.au</a>
<b>Contact:</b>	<p><b>Melbourne School of Engineering</b> Ground Floor, Old Engineering (Building 173)</p> <p>Current Students: Email: <a href="mailto:13MELB@unimelb.edu.au">13MELB@unimelb.edu.au</a> (<a href="mailto:13MELB@unimelb.edu.au">mailto:13MELB@unimelb.edu.au</a>) Phone: 13 MELB (13 6352) +61 3 9035 5511</p> <p>Prospective Students: Email: <a href="mailto:eng-info@unimelb.edu.au">eng-info@unimelb.edu.au</a> (<a href="mailto:eng-info@unimelb.edu.au">mailto:eng-info@unimelb.edu.au</a>) Phone: + 61 3 8344 6944</p>
<b>Course Overview:</b>	<p>The Master of Energy Systems is a 150 point degree, including 100 points of core subjects and 50 points of electives. This degree is designed for graduates with at least a three-year degree in Engineering, Economics/Business or Science or related disciplines, with appropriate mathematics.</p> <p>The course aims to meet the educational needs of students ultimately seeking to work as energy specialists in government and industry, the latter including technical and business consulting and accounting/audit. Graduates will bridge the gap between technical and non-technical roles and will have an understanding of renewable and non-renewable energy as well as relevant business, policy and management.</p> <p>A key feature of this degree is its strong engagement with industry and the potential to undertake industry based work in the subject 'Energy Systems Project'. This is primarily through the degree's Advisory Panel, which is made up of energy sector specialists from a wide range of organisations. Subject prerequisites have also been sequenced to enable part time course plans.</p>
<b>Learning Outcomes:</b>	<p>This degree is offered as a response to the demand for professionals with a strong understanding of energy technology combined with relevant economics and business. By undertaking an integrated study of the technology and business of energy, graduates of the Master of Energy Systems will be able to -</p> <ul style="list-style-type: none"> <li>• Analyse energy systems from technical and business standpoints</li> <li>• Understand key energy economics and finance</li> <li>• Critique renewable and non-renewable energy sources and systems</li> <li>• Integrate technical and business analysis to inform decision making</li> </ul>
<b>Course Structure &amp; Available Subjects:</b>	<p><b>This course will be delivered flexibly to meet the needs of local students. Emphasis is placed on after hours teaching to meet the needs of students in full-time employment.</b></p> <p>Degree structure is as follows -</p> <ul style="list-style-type: none"> <li>• Semester 1: 4 compulsory subjects</li> <li>• Semester 2: 2 compulsory and 2 elective subjects</li> <li>• Semester 3: a 25 point Capstone subject and 2 electives, (either two elective subjects or a 25 point project Energy Systems Project. This project is available to students who achieve an average mark of 75% or more in preceding subjects).</li> </ul> <p><b>Preferred course plan - full time</b> <b>Sem 1</b> Introduction to Energy Systems Analysing Energy Systems Financial Management Managerial Economics</p>

**Sem 2**  
 Non-renewable Energy  
 Renewable Energy  
 2 electives

**Sem 3**  
 Energy Supply & Value Chains  
 2 electives or Energy Systems Project

**Preferred course plan - part time**

**Sem 1**  
 Introduction to Energy Systems  
 Analysing Energy Systems

**Sem 2**  
 Financial Management  
 Managerial Economics

**Sem 3**  
 Energy Supply & Value Chains

**Sem 4**  
 Non-renewable Energy  
 Renewable Energy

**Sem 5**  
 2 electives or Energy Systems Project

**Sem 6**  
 2 electives

**Subject Options:****Core subjects**

Subject	Study Period Commencement:	Credit Points:
ENGR90028 Introduction to Energy Systems	Semester 1	12.50
ENGR90029 Analysing Energy Systems	Semester 1	12.50
ECON90015 Managerial Economics	Semester 1, Semester 2	12.50
FNCE90060 Financial Management	Semester 1, Semester 2	12.50
ENGR90030 Non-Renewable Energy	Semester 2	12.50
SCIE90014 Renewable Energy	Semester 2	12.50
ENGR90032 Energy Supply and Value Chains	Semester 1	25

**Elective subjects**

Subject	Study Period Commencement:	Credit Points:
ACCT90031 Sustainability Accounting	Semester 2	12.50
ELEN90069 Electrical Power Systems	Semester 2	12.50
ENST90004 Climate Change Politics and Policy	Semester 2	12.50
ENST90017 Environmental Policy Instruments	Semester 2	12.50
ENEN90014 Sustainable Buildings	September	12.50
ENEN90033 Solar Energy	Semester 1	12.50
CHEN90033 Carbon Capture and Storage Fundamentals	Semester 1	12.50
ERTH90026 Climate Modelling and Climate Change	Semester 2	12.50

ENGR90031 Energy Systems Project	Semester 1, Semester 2	25
LAWS70141 Energy Regulation and the Law	March	12.50
MGMT90141 Business Analysis & Decision Making	Semester 1, Semester 2	12.50
PHYC90028 Nuclear Energy	Not offered 2014	12.50
MCEN90034 Propulsion Systems	Not offered 2014	12.50
CVEN90048 Transport Systems	Semester 2	12.50

Enrolment in Energy Regulation and the Law is subject to approval from the Faculty of Law.

The Energy Systems Project is a semester 1 subject which is only available to students who achieve an average mark of 75% or more in the preceding subjects in this degree.

Students may also take other relevant University subjects as electives, subject to approval from the degree coordinator.

#### Entry Requirements:

- The Selection Committee will evaluate the applicant's ability to successfully pursue the course using the following criteria:
  - An undergraduate degree in a relevant discipline (such as Commerce, Science, Engineering) with with at least a H2B (70%) average, including at least 12.5 points of mathematics, statistics or another quantitative subject at an appropriate level, or equivalent;
  - OR
  - An undergraduate degree in a relevant discipline (such as Commerce, Science, Engineering) with at least a H3 (65%) average, including at least 12.5 points of mathematics, statistics or another quantitative subject at an appropriate level, and 2 years of continuous, documented work experience in an applicable field, or equivalent.
- The Selection Committee may conduct interviews and tests and may call for referee reports and employer references to elucidate any of the matters referred to above.

#### English requirements :

All students studying at the University of Melbourne must satisfy the University's English language entry requirements in accordance with Selection Principles: Regulation 11.1.A2 – Admission and Selection to Courses.

<http://futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements> (<http://futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements>)

For graduate students the University's English language entry requirements are set out at: <http://futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements/graduate-toefl-ielts> (<http://futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements/graduate-toefl-ielts>)

#### The University of Melbourne English Language Bridging Program (UMELBP)

The UMELBP provides a direct English language pathway from Hawthorn-Melbourne to specific courses at the University of Melbourne. Students who have achieved an IELTS band 0.5 lower than their University of Melbourne course entry requirement may be able to proceed directly to their University studies upon successful completion of the UMELBP. More information is available from the Hawthorn Melbourne website - <http://www.hawthornenglish.com/> (<http://www.hawthornenglish.com/>)

The Melbourne School of Engineering's English Language alternative may affect the duration and cost of your course

<http://www.eng.unimelb.edu.au/study/english-requirements.html> (<http://www.eng.unimelb.edu.au/study/english-requirements.html>)

#### 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 Overview, Objectives, Assessment and Generic Skills sections of this entry. 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 the Disability Liaison Unit: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Graduate Attributes:</b>	The University of Melbourne Graduate Attributes can be found <a href="#">here</a>