

## 421-711 Solar Energy

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 36 hours, (24 one-hour lectures & 12 one-hour tutorials); Non-contact time commitment: 84 hours Total Time Commitment: Not available
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<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 Lu Aye
<b>Contact:</b>	Dr Lu Aye Department of Civil and Environmental Engineering Tel: +61 3 8344 6879 email: lua@unimelb.edu.au
<b>Subject Overview:</b>	Nature and availability of solar energy; radiation estimations and measuring instruments; selected heat transfer topics; radiative properties and thermal transport properties of opaque materials and glazing; materials for solar energy utilisation; flat-plate and concentrating collectors; energy storage; design methods and performance estimation; solar component and solar system operational characteristics; solar process economics; practical applications of solar energy: solar water heating, building heating, solar cooling, industrial process heat, solar thermal power systems and solar ponds; solar devices for developing countries: desalination, photovoltaics and solar water pumping.
<b>Objectives:</b>	On successful completion of this subject students will have: <ul style="list-style-type: none"> <li># comprehended the potential and limitations of solar energy as an alternative source of energy;</li> <li># developed an advanced understanding of the distribution and variability of solar energy availability, and the limitations of solar energy devices;</li> <li># developed creativity in the design of sustainable energy solutions</li> </ul>
<b>Assessment:</b>	A 3-hour written examination at the end of the subject (50% weighing). Project work 2,500 words (50%).
<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>Related Course(s):</b>	Master of Development Technologies Master of Energy Studies Master of Engineering Management Master of Engineering Science (Development Technologies) Master of Engineering Science (Energy Studies) Master of Environmental Engineering
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