

# Energy Studies

<b>Year and Campus:</b>	2016
<b>Coordinator:</b>	Dr Lu Aye (Engineering)
<b>Contact:</b>	Email: <a href="mailto:query-environment@unimelb.edu.au">query-environment@unimelb.edu.au</a> (mailto:query-environment@unimelb.edu.au)
<b>Overview:</b>	<p>Energy Studies is offered as a major field of study in the Master of Environment degree.</p> <p>The amount of energy we consume as a global society is immediately impacted by the technologies we use to consume that energy, and how that energy is produced.</p> <p>The Energy Studies major is concerned with the theoretical and practical needs of professionals working in energy use and planning. A range of technologies, both mainstream and non-conventional, can be used for energy supply. We study these technologies and how they can be applied in energy planning and energy end use. We also examine the social and political factors influencing the acceptance of energy technologies.</p> <p>The Energy Studies major is a great way of accessing elements of an engineering education for students with an undergraduate degree in other disciplines. Graduates can expect to find employment in energy agencies, utility companies, industry, education, and consultancy.</p>
<b>Learning Outcomes:</b>	<p>Students who complete the Master of Environment will have:</p> <ul style="list-style-type: none"> <li># Knowledge to undertake professional practice in environment or sustainability, including: <ul style="list-style-type: none"> <li># Specialised knowledge in an environmental discipline or field of practice, including knowledge of recent developments in this field</li> <li># Knowledge of the cross-disciplinary nature of environmental issues and professional practice to promote sustainable futures</li> <li># Knowledge of research principles and methods applicable to specialist field of environmental inquiry</li> </ul> </li> <li># Skills for collaborative and creative problem solving in environmental practice, including: <ul style="list-style-type: none"> <li># Ability to critically analyse and synthesise environmental knowledge</li> <li># Ability to envision environmental change and propose pathways to realise this change</li> <li># Ability to communicate complex environmental knowledge and research effectively to a range of audiences</li> <li># Ability to work effectively in cross-disciplinary teams</li> <li># Technical skills for professional practice and research in field of specialisation</li> </ul> </li> <li># Demonstrated capacity to:</li> </ul> <p>Upon successful completion of the Energy Studies specialisation, students will be able to:</p> <ul style="list-style-type: none"> <li># Analyse technological, social and political factors influencing the success of energy systems;</li> <li># Explain the advantages and limitations of energy technologies to a range of audiences;</li> <li># Propose strategies for application of mainstream and non-conventional technologies for effective energy planning; and</li> <li># Collaborate with engineers, policy makers and other stakeholders in the application of energy technologies.</li> </ul>
<b>Structure &amp; Available Subjects:</b>	<p>Students will be required to complete the two core subjects, plus choose three subjects from the compulsory specialisation subject list. Students must also take at least 25 points of subjects from the compulsory capstone subjects – these subjects enable students to complete an independent project related to professional practice or scholarship in energy studies. Students must also undertake electives to make up the balance of the award. The selection of electives is made in consultation with the Energy Studies major coordinator. A list of subjects with special requirements within this specialisation can be found at <a href="http://environment.unimelb.edu.au/courses/streams/energy_studies">http://environment.unimelb.edu.au/courses/streams/energy_studies</a></p>
<b>Subject Options:</b>	<p><b>Core Subjects</b></p> <p>Students must complete the following core subjects:</p>

Subject	Study Period Commencement:	Credit Points:
MULT90004 Sustainability Governance and Leadership	March, July	12.50
MULT90005 Interdisciplinarity and the Environment	Semester 2	12.50

### Compulsory Specialisation

Students must complete at least three of the following compulsory specialisation subjects:

Subject	Study Period Commencement:	Credit Points:
ENEN90005 Environmental Management ISO 14000	Semester 2	12.50
ENEN90011 Energy Efficiency Technology	Semester 2	12.50
ENEN90014 Sustainable Buildings	September	12.50
ENEN90027 Energy for Sustainable Development	Semester 1	12.50
ENEN90033 Solar Energy	Semester 1	12.50

### Compulsory Capstone Experience

Students must complete at least 25 points from the following compulsory capstone experience subjects:

Subject	Study Period Commencement:	Credit Points:
DEVT90008 International Internship in Development	January, Semester 1, Semester 2	25
ENST70001 Environmental Research Proj (50 Long)	Semester 1, Semester 2	25
ENST70002 Environmental Industry Research: 50 Long	Semester 1, Semester 2	25
ENST90006 Environmental Research Review (12.5)	Semester 1, Semester 2	12.50
ENST90007 Environmental Research Project (25)	Semester 1, Semester 2	25
ENST90016 Environmental Research Project (50)	Semester 1, Semester 2	50
ENST90025 Environmental Industry Research (25)	Semester 1, Semester 2	25
ENST90026 Environmental Industry Research: 25 Long	Semester 1, Semester 2	12.50
ENST90020 Environmental Industry Research (50)	Semester 1, Semester 2	50
ENST70002 Environmental Industry Research: 50 Long	Semester 1, Semester 2	25
DEVT90002 Internship in Development	January, Semester 1, Semester 2	12.50

### Elective Subjects

Students should make up the balance of their award from the elective subject choices below:

Subject	Study Period Commencement:	Credit Points:
ABPL90032 Building Services and Operations	Semester 1	12.50
ABPL90049 Environmental Design	Semester 1	12.50
ABPL90268 Building Envelopes	September	12.50
ACCT90031 Sustainability Accounting	Semester 2	12.50

	CHEM90007 Environmental Chemistry	Semester 1	12.50
	DEVT90009 Development Theories	Semester 1	12.50
	ECON90016 Environmental Economics and Strategy	Semester 1	12.50
	ENEN90031 Quantitative Environmental Modelling	Semester 1	12.50
	ENEN90032 Environmental Analysis Tools	Semester 2	12.50
	ENST90002 Social Impact Assessment and Evaluation	Semester 2	12.50
	ENGR90030 Non-Renewable Energy	Semester 2	12.50
	EVSC90014 Environmental Risk Assessment	November	12.50
	EVSC90015 Environmental Impact Assessment	Semester 1	12.50
	GEOM90005 Remote Sensing	Semester 2	12.50
	GEOM90006 Spatial Analysis	Semester 2	12.50
	GEOM90008 Foundations of Spatial Information	Semester 1	12.50
	LAWS70068 Environmental Law	September	12.50
	MAST90007 Statistics for Research Workers	July	12.50
	SCIE90014 Renewable Energy	Semester 2	12.50
<b>Related Course(s):</b>	Master of Environment		