

Energy Efficiency Modelling and Implementation

Year and Campus:	2013
Coordinator:	Dr Dominique Hes (ABP) Dr Lu Aye (Engineering)
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Overview:	<p>Energy Efficiency Modelling and Implementation is offered as a major field of study in the Master of Environment degree.</p> <p>Energy modelling and implementation for buildings has become an important area in the light of growing concerns about climate change, energy security and the general need to adopt more sustainable practices. Despite the obvious need for people with such knowledge, there is a severe shortage of people that are trained in energy modelling who have the capacity to interpret the modelling results to effective practice. The realms of energy knowledge required include heating and cooling requirements, as well as use of day lighting and natural lighting. These skills are crucial to being able to reduce the risk in the integration of innovative sustainability initiatives, this risk reduction centres on assurances of performance and delivery of desired sustainability outcomes.</p> <p>Energy modelling is a key tool for the development and adoption of energy efficiency in new and existing buildings. This course develops the skills of complex modelling informed by an understanding of the results ensuring the graduate has the ability to both interpret and communicate outcomes effectively. Units of study include a mix of building management, architecture, engineering, management, education and communication subjects.</p>
Objectives:	<p>Students who complete the Master of Environment will have:</p> <ul style="list-style-type: none"> • An advanced understanding of environmental issues • Advanced skills and techniques applicable to changing and managing the environment • An ability to evaluate and synthesise research and professional literature in the chosen stream or focus of study • An advanced understanding of the international context and sensitivities of environmental assessment <p>The graduate attributes for the Master of Environment are:</p> <ul style="list-style-type: none"> • Expertise in multidisciplinary understanding, analysis and research with an environmental focus • Collaborative approaches to environmental problem solving • Capacity to engage in critical social and sustainability questions <p>The Master of Environment generic skills are:</p> <ul style="list-style-type: none"> • Multidisciplinary and trans-disciplinary knowledge and research of environmental relevance • Collaborative environmental management skills • Capacity for independent learning across discipline boundaries <p>Upon successful completion of the Energy Efficiency Modelling and Implementation major, students will be able to:</p> <ul style="list-style-type: none"> • Work in multi-disciplinary groups; • Understand the outcome of modelling and be able to both communicate and integrate them into project development and management; • Use results as part of business case development; and • Carry out the modelling or interpret the modelling of complex building with innovative environmental initiatives from passive design, complex facades, natural lighting and heating and cooling systems.
Structure & Available Subjects:	<p>Students will be required to complete six core subjects and choose the remaining subjects from a recommended list of electives to make up the balance of the award. The selection of electives is made in consultation with the Energy Efficiency Modelling and Implementation major coordinators.</p>

For a current list of subjects offered in the Energy Efficiency Modelling and Implementation major, please refer to the course information page at: http://www.oep.unimelb.edu.au/currentstudents/master_of_environment/specialist_paths_of_study/energy_efficiency_modelling_and_implementation (http://www.oep.unimelb.edu.au/currentstudents/master_of_environment/specialist_paths_of_study/energy_efficiency_modelling_and_implementation)

Subject Options:**Core Subjects**

Students are required to complete the subjects:

Subject	Study Period Commencement:	Credit Points:
MULT90005 Interdisciplinarity and the Environment	Not offered 2013	12.50
MULT90004 Sustainability Policy and Management	Not offered 2013	12.50
ENEN90011 Energy Efficiency Technology	Not offered 2013	12.50
ABPL90153 Complex Building Energy Modelling	Not offered 2013	12.50
ABPL90086 Environmental Systems	Semester 2	12.50
ENEN90033 Solar Energy	Not offered 2013	12.50

Elective Subjects

and choose the remaining subjects from the list of:

Subject	Study Period Commencement:	Credit Points:
ENEN90014 Sustainable Buildings	Not offered 2013	12.50
ABPL90120 Building Sustainability	Not offered 2013	12.50
ABPL90152 Sustainable Tropical Housing	Not offered 2013	12.50
ABPL90032 Building Services and Operations	Not offered 2013	12.50
ABPL90049 Environmental Design	Not offered 2013	12.50
ENEN90031 Quantitative Environmental Modelling	Not offered 2013	12.50
ENEN90032 Environmental Analysis Tools	Not offered 2013	12.50
ABPL90283 Eco-Systems for Planning and Design	Not offered 2013	12.50

Additional Electives

Other electives (that may be taken with the advice of the major coordinator) include:

Subject	Study Period Commencement:	Credit Points:
ENST90002 Social Impact Assessment and Evaluation	Not offered 2013	12.50
ENST90017 Environmental Policy Instruments	Not offered 2013	12.50
EVSC90015 Environmental Impact Assessment	Not offered 2013	12.50
ANTH90001 Heritage and Cultural Environments	Not offered 2013	12.50
DEVT90009 Development Theories	Not offered 2013	12.50
NRMT90003 Social Research Methods	Not offered 2013	12.50
ECON90016 Environmental Economics and Strategy	Semester 1	12.50

	MGMT90022 Managing Organisational Change	Not offered 2013	12.50
	EVSC90010 Environmental Risk Assessment	Not offered 2013	12.50
	ENEN90027 Energy for Sustainable Development	Not offered 2013	12.50
	MAST90007 Statistics for Research Workers	Not offered 2013	12.50
	ABPL90016 Asset Management	Not offered 2013	12.50
	ABPL90030 Project Evaluation	Not offered 2013	12.50
	LAWS70068 Environmental Law	Not offered 2013	12.50
	EVSC90014 Environmental Risk Assessment	Not offered 2013	12.50
	ENST90006 Environmental Research Review	Not offered 2013	12.50
	ENST90007 Environmental Research Topic	Not offered 2013	25
	ENST90016 Environmental Research Project	Not offered 2013	50
	ENST70001 Environmental Research Proj (long) MYE	Semester 2	25
	ENST90020 Environmental Research - Industry C	Not offered 2013	50
	ENST70002 Environmental Research - Industry D	Not offered 2013	25
	ENST90024 Environmental Research Topic (Long)	Semester 2	12.50
	ENST90025 Environmental Research - Industry A	Not offered 2013	25
	ENST90026 Environmental Research - Industry B	Not offered 2013	12.50
Links to further information:	http://www.environment.unimelb.edu.au		
Notes:	Other subjects may be approved at the discretion of the coordinator.		
Related Course(s):	Master of Environment Master of Environment		