

988EC Graduate Certificate in Engineering (Environmental Engineering)

Year and Campus:	2010 - Parkville																				
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees																				
Level:	Graduate/Postgraduate																				
Duration & Credit Points:	100 credit points taken over 12 months full time. This course is available as full or part time.																				
Coordinator:	Engineering Student Services																				
Contact:	<p>Melbourne School of Engineering Office Building 173, Grattan Street The University of Melbourne VIC 3010 Australia</p> <p>General telephone enquiries: + 61 3 8344 6703 + 61 3 8344 6507</p> <p>Facsimiles: + 61 3 9349 2182 + 61 3 8344 7707</p> <p>Email: eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au)</p>																				
Course Overview:	This course is no longer taking admissions, please contact Engineering Student Services if course advice is required.																				
Objectives:	<p>This course has as its objectives that graduates should:</p> <ul style="list-style-type: none"> # Have a sound fundamental understanding of the scientific principles underlying technology; # Possess analytical, problem-solving and, where relevant, design skills, including those appropriate for sustainable development; # Have verbal and written communication skills that enable them to make a meaningful contribution to the changes facing our society; # Understand the social, cultural, global and environmental responsibilities of the professional engineer, and the need for sustainable development. 																				
Course Structure & Available Subjects:	Students may choose any four subjects (50 credit points) from the list of postgraduate subjects offered in Specialised Masters courses within the Melbourne School of Engineering provided they have the prerequisites to do so and upon approval by the Course Coordinator.																				
Majors/Minors/ Specialisations	Discipline areas and related subjects within the Graduate Certificate in Engineering (Environmental Engineering)																				
Subject Options:	<p>Discipline and subjects available in the Graduate Certificate in Engineering (Environmental Engineering)</p> <p>The following subjects are available in the Graduate Certificate in Engineering (Environmental Engineering) by discipline</p> <p>Environmental Engineering</p> <p>The following subjects are available in the Postgraduate Certificate in Engineering in the environmental engineering discipline</p> <table border="1" data-bbox="386 1720 1484 2089"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ENGR90010 Mineral Economics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>ENGR90011 Mineral Processing and Waste Management</td> <td>March</td> <td>12.50</td> </tr> <tr> <td>ENGR90012 Soil Rock and Tailings Mechanics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>ENGR90013 Surface Mine Planning and Mining Methods</td> <td>March</td> <td>12.50</td> </tr> <tr> <td>ENGR90014 Underground Mining and Planning Methods</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	ENGR90010 Mineral Economics	Semester 1	12.50	ENGR90011 Mineral Processing and Waste Management	March	12.50	ENGR90012 Soil Rock and Tailings Mechanics	Semester 1	12.50	ENGR90013 Surface Mine Planning and Mining Methods	March	12.50	ENGR90014 Underground Mining and Planning Methods	Semester 2	12.50
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ENGR90015 Mining Geotechnics and Mine Design	Semester 2	12.50
ENGR90016 Mine Dewatering, Ventilation and Power	Semester 2	12.50
ENGR90017 Risk and Safety Management	Semester 2	12.50
421-505 Engineering Hydraulics	Not offered 2010	
421-516 Hydraulics and Hydrology	Not offered 2010	
ENEN90025 Design of Environmental Systems	Semester 2	12.50
421-522 Environmental Engineering Design	Not offered 2010	
421-523 Occupational Health and Safety Basics	Not offered 2010	
421-525 Field Data Acquisition and Analysis	Not offered 2010	
CVEN90027 Geotechnical Applications	Semester 2	12.50
421-567 Resources Applications & Environment (M)	Not offered 2010	
CVEN90012 Hydrological Processes 1	Semester 1	12.50
CVEN90014 Hydrological Processes 2	Semester 1	12.50
421-602 Air Quality Control	Not offered 2010	
ENEN90005 Environmental Management ISO 14000	Semester 2	12.50
421-605 Managing Water Borne Risks	Not offered 2010	
ENEN90006 Solid Wastes to Sustainable Resources	Semester 1	12.50
CVEN90017 Earthquake Resistant Design of Buildings	Semester 1	12.50
CVEN90016 Concrete Design and Technology	Semester 2	12.50
CVEN90018 Structural Dynamics and Modelling	Semester 2	12.50
421-616 Technology Assessment	Not offered 2010	
421-626 Design of Energy Systems	Not offered 2010	
CVEN90019 Sustainable Water Resources Systems	July	12.50
ENEN90011 Energy Efficiency Technology	Semester 2	12.50
BMEN90005 Neuroimaging Methods and Applications	Semester 1	12.50
CVEN90035 Design in Steel & Other Materials	Semester 2	12.50
421-640 Water Supply and Waste Water Management	Not offered 2010	
421-692 Biological Systems Engineering	Not offered 2010	
BMEN90007 Anatomy & Physiology for Engineers	Semester 2	12.50
CVEN90024 Design of High Rise Structures	Semester 1	12.50
CVEN90026 Extreme Loading of Structures	Semester 1	12.50
421-697 Heating, Ventilation and Airconditioning	Not offered 2010	
421-699 Forces, Fields and Flows in Bio Systems	Not offered 2010	
421-711 Solar Energy	Not offered 2010	

	421-668 Sustainable Irrigation System Management	Not offered 2010	
	ENEN90014 Sustainable Buildings	September	12.50
	ENEN90016 Engineering for Sustainable Environments	February	12.50
Entry Requirements:	<p>Entry Requirements 3 year degree at honours level in engineering, science or related discipline</p> <p>Language Requirements International students and students whose prior qualifications are from a university overseas where English is not the official language of instruction and examination need to supply proof of academic English language competency. Proof acceptable to the University includes: Original evidence of an English Language test score at a sitting within the last 24 months of either - TOEFL - at least 577 and a TWE of at least 4.5 (paper based) or a TOEFL of at least 233 with an Essay Rating of at least 4.5 (computer based) or IELTS - at least 6.5. (A minimum band score of 6 is required in the Academic Writing module). Entry under a slightly lower Engineering alternative* English Language entry requirement is available as follows: TOEFL - at least 550, with a TWE of 4 or the computer based TOEFL of at least 213 with an Essay Rating Score of at least 4 and agreeing in writing to undertake and pass an ESL subject in the first semester of study at The University of Melbourne or IELTS - at least 6 and agreeing in writing to undertake and pass an ESL subject in the first semester of study at The University of Melbourne. * The Faculty of Engineering's English Language alternative may affect the duration and cost of your course.</p>		
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 Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/		
Further Study:	Successful completion of the Postgraduate Certificate in Engineering may allow you to enrol in some Masters by Coursework programs within the Melbourne School of Engineering		
Graduate Attributes:	Demonstrate some knowledge and understanding of selected areas of a specialisation or across discipline areas. Access and appreciate national and international debates in their specialised areas of study or across discipline areas. Qualify for further graduate study in related areas to the area of specialisation.		
Professional Accreditation:	None		
Generic Skills:	<ul style="list-style-type: none"> # Strong analytical skills # Practical ingenuity and creativity # Understanding of global issues # Communication # Creativity # Lifelong learners 		
Links to further information:	http://www.eng.unimelb.edu.au/Postgrad/		
Notes:	None		