206EC Master of Environmental Engineering

Year and Campus:	2016 - Parkville
CRICOS Code:	032293F
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:	Associate Professor Graham Moore grahamam@unimelb.edu.au
Contact:	Melbourne School of Engineering Currently enrolled students: # General information: **https://ask.unimelb.edu.au (https://ask.unimelb.edu.au/)** # **Contact Stop 1 (http://students.unimelb.edu.au/stop1)** Future students: # Further information: **Degree Structure** # Email: **Enquiry Form**
Course Overview:	The Graduate Program in Environmental Engineering is designed to meet the theoretical and practical skills of people working in environmental control authorities in industry and elsewhere. The program provides participants with a broad understanding of the practice of environmental management and provides experience in investigation. Participants are able to focus on skill development in the sectors relevant to them. Themes covered include: water and wastewater, municipal solid wastes, cleaner production, environment management systems, water resources management, and energy resources management.
Learning Outcomes:	On the successful completion of the Master of Environmental Engineering students should have: # Gained advanced knowledge of the principles of environmental engineering underpinning sustainable development # Had the opportunity to develop research principles and methods in the field of environmental engineering # Cognitive skills to demonstrate mastery of theoretical knowledge and to reflect critically on theory and professional practice of environmental engineering # Cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice in environmental engineering # Cognitive, technical and creative skills to generate and evaluate complex ideas concepts at an abstract level # Communication and technical research skills to justify and interpret theoretical propositions, methodologies, conclusions and professional decisions to engineering and non-engineering audiences # Technical and communication skills to design, evaluate, implement, analyse, theorise about developments that contribute to professional practice or scholarship in the field of environmental engineering Graduates of Master of Environmental Engineering will demonstrate the application of knowledge & skills in the fields of waste management, water resource management or energy studies: # With creativity and initiative to new situations in professional practice and/or for further learning # With high level personal autonomy and accountability

	# To plan and execute a substantial piece of scholarship
Course Structure & Available Subjects:	Students must complete 100 credit points in one of three themes. The course comprises four 12.5 point core subjects, two in each of semesters one and two. Students may choose ONE theme they wish to focus on, from: # Waste Management or # Energy or # Water Resources
Subject Options:	**Core (50 points)**

Subject	Study Period Commencement:	Credit Points:
ENEN90031 Quantitative Environmental Modelling	Semester 1	12.50
CVEN90043 Sustainable Infrastructure Engineering	Semester 1	12.50
ENEN90028 Monitoring Environmental Impacts	Semester 2	12.50
ENEN90032 Environmental Analysis Tools	Semester 2	12.50

Waste Management Focus

Selective Subjects: Choose 37.5 points.

Research subjects are subject to approval by the course coordinator.

Subject	Study Period Commencement:	Credit Points:
CVEN90022 IE Research Project 1	Semester 1, Semester 2	12.50
CVEN90047 IE Research Project 2	Semester 1, Semester 2	25
ENEN90006 Solid Wastes to Sustainable Resources	Semester 1	12.50
ENEN90029 Water and Waste Water Management	Semester 1	12.50
ENEN90005 Environmental Management ISO 14000	Semester 2	12.50
ENEN90030 Groundwater Hydrology	Semester 2	12.50

Energy Focus

Selective Subjects: Choose 37.5 points.

Research subjects are subject to approval by the course coordinator.

Subject	Study Period Commencement:	Credit Points:
CVEN90047 IE Research Project 2	Semester 1, Semester 2	25
CVEN90022 IE Research Project 1	Semester 1, Semester 2	12.50
ENEN90027 Energy for Sustainable Development	Semester 1	12.50
ENEN90033 Solar Energy	Semester 1	12.50
ENEN90011 Energy Efficiency Technology	Semester 2	12.50
ENEN90014 Sustainable Buildings	September	12.50

Water Resources Focus

Selective Subjects: Choose 37.5 points.

Research subjects subject to approval by the course coordinator.

Subject	Study Period Commencement:	Credit Points:
CVEN90047 IE Research Project 2	Semester 1, Semester 2	25
CVEN90022 IE Research Project 1	Semester 1, Semester 2	12.50
ENEN90034 Environmental Applied Hydrology	Semester 1	12.50
ENEN90029 Water and Waste Water Management	Semester 1	12.50
CVEN90019 Sustainable Water Resources Systems	Semester 2	12.50
ENEN90037 International River Basin Management	July	12.50

Suggested Approved Electives

Choose 12.5 points

Subject	Study Period Commencement:	Credit Points:
ENEN90034 Environmental Applied Hydrology	Semester 1	12.50
GEOM90008 Foundations of Spatial Information	Semester 1	12.50
CVEN90019 Sustainable Water Resources Systems	Semester 2	12.50
CVEN90027 Geotechnical Applications	Semester 2	12.50
CVEN90061 Freight Systems	Semester 1	12.5
ENEN90030 Groundwater Hydrology	Semester 2	12.50
ENGM90006 Engineering Contracts and Procurement	Semester 2	12.50
EVSC90025 Water Sensitive Urban Design	February	12.5
CVEN90063 Transport System Modelling	Not offered 2016	12.5

Entry Requirements:

1. In order to be considered for entry, applicants must have completed:
either;
– a four year degree in an engineering discipline with a weighted average mark of at least H3 (65%) or equivalent, or
– an undergraduate degree in a cognate discipline with a weighted average mark of at least H3 (65%) or equivalent and at least two years of documented relevant professional or work experience.
Meeting these requirements does not guarantee selection.
2. In ranking applications, the Selection Committee will consider:
• prior academic performance; and where relevant
• the professional experience.
3. The Selection Committee may seek further information to clarify any aspect of an application in accordance with the Academic Board **rules (http://about.unimelb.edu.au/__data/assets/pdf_file/0007/1413727/Use-of-Selection-Instruments-Rules-of-the-Acdemic-Board-23-March-2015.pdf)** on the use of selection instruments.
4. Applicants are required to satisfy the university's English language requirements for postgraduate courses. For those applicants seeking to meet these requirements by one of the standard tests approved by the Academic Board, **performance band 6.5 (http://about.unimelb.edu.au/academicboard/resolutions)** is required.
Additional notes for the Handbook
For more information on meeting the University's English language requirements, see: **http://futurestudents.unimelb.edu.au/info/international/english_and_foundation_programs (http://futurestudents.unimelb.edu.au/info/international/english_and_foundation_programs)**

Core Participation Requirements:

<p>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. 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: http://services.unimelb.edu.au/disability
Graduate Attributes:	The Melbourne School of Engineering closely maps subject level attributes and knowledge to align with the Australian Qualifications Framework (AQF), whilst also aligning with Attributes of the University of Melbourne Graduate, Engineers Australia competencies and its own School attributes.
Notes:	The Master of Environmental Engineering is offered by the Department of Infrastructure Engineering. Features of this Department are: # Excellent study infrastructure including dedicated computer laboratories. # Active student society for social, international and cultural exchange. # Industry involvement in many subjects. # Students with insufficient academic background for this degree may choose to take the **Master of Engineering (../../view/current/MC-ENG)** or the **Master of Environment (../../view/current/441ME)** .