

Master of Engineering (Environmental)

Year and Campus:	2016
Coordinator:	Dr Marco Ghisalberti Email: marco.ghisalberti@unimelb.edu.au
Contact:	<p>Melbourne School of Engineering</p> <p>Current students:</p> <ul style="list-style-type: none"> # General information: https://ask.unimelb.edu.au (https://ask.unimelb.edu.au/) # Contact Stop 1 (http://students.unimelb.edu.au/stop1) <p>Future students:</p> <ul style="list-style-type: none"> # Further information: Degree Structure (http://www.eng.unimelb.edu.au/study/degrees/master-engineering-biochemical/overview) # Email: Enquiry Form
Overview:	<p>Environmental engineers create sustainable solutions to environmental challenges. Students in this specialisation learn from staff active in research areas specialisations such as hydrology, irrigation, water management, waste management and energy systems. The course has a strong focus on sustainability and project management.</p> <p>Guest lectures and seminars by industry professionals are available to students, along with community project work and site visits that combine theory with practice.</p> <p>Career opportunities exist with; agencies for conservation, natural resource management and environmental protection, in-house and external consultancy groups for the private and public sector on sustainability issues, and international sustainable development work.</p> <p>The Master of Engineering (Environmental) has full accreditation with Engineers Australia and EUR-ACE®.</p>
Learning Outcomes:	To produce graduates who are both skilled in environmental engineering principles and have the ability to apply them to complex, open-ended engineering tasks and problems.
Structure & Available Subjects:	<p>The Master of Engineering (Environmental) consists of 300 points - 212.5 points core, 12.5 points selective and 75 points elective subjects, as detailed below.</p> <p>Advanced standing will be awarded for equivalent subjects taken in prior study to applicants on the following basis:</p> <ul style="list-style-type: none"> # A maximum of 100 points for applicants with a 4 year Bachelor of Engineering or equivalent. # A maximum of 100 points for applicants with a 3 year undergraduate degree. Students entering with a three year bachelor degree must complete at least 200 points of study within the Masters of Engineering. In cases where applicants have completed the equivalent of more than 100 points of core masters subjects, discipline specific electives must be taken to fulfill the 200 minimum masters study requirement. <p>Note: applicants from the University of Melbourne with:</p> <ul style="list-style-type: none"> # An appropriate "Engineering System" major will receive 100 points of advanced standing. Applicants who have completed more than 100 points of core subjects in their undergraduate degree will obtain exemption for the cores taken but will need to replace the points in excess of 100 points with elective subjects. Elective/s may be either discipline specific or approved (as defined in <i>Suggested second hundred points</i> of the course structure). # Engineering breadth sequences (including those in the Bachelor of Commerce) will receive advanced standing to a maximum of 100 points.
Subject Options:	<p>Total 300 points - 212.5 points core, 12.5 points selective and 75 points elective subjects from the list below. Students must complete all 300 points of subjects, including all core subjects, or have advanced standing or exemption.</p> <p>The core and elective subjects are those listed below. The order of subjects below is one way of progressing through the course - students who meet subject requisites may tailor their individual</p>

study plan to take into account advanced standing and their study load. Students plan their study online, however Melbourne School of Engineering course advisors are available to assist students with individual study plans.

Suggested first 100 points

100 points core

Subject	Study Period Commencement:	Credit Points:
ENGR20004 Engineering Mechanics	Summer Term, Semester 1, Semester 2	12.50
MAST20029 Engineering Mathematics	Summer Term, Semester 1, Semester 2	12.50
ENGR90021 Engineering Practice and Communication	Semester 1, Semester 2	12.50
ENGR30002 Fluid Mechanics	Semester 1, Semester 2	12.50
CVEN30008 Engineering Risk Analysis	Semester 1	12.50
ENEN20002 Earth Processes for Engineering	Semester 2	12.50
ENGR20003 Engineering Materials	Semester 2	12.50
CVEN30010 Systems Modelling and Design	Semester 2	12.50

Suggested second 100 points:

87.5 points Core

12.5 points Approved Elective

An Approved Elective is: Subject to approval by the specialisation coordinator - any graduate subject. For subjects outside of Engineering, students may also require approval of the other faculty. No approval is required for Environmental Engineering Electives.

Core (Total 87.5 points)

Subject	Study Period Commencement:	Credit Points:
ENEN90031 Quantitative Environmental Modelling	Semester 1	12.50
CVEN90043 Sustainable Infrastructure Engineering	Semester 1	12.50
CVEN90044 Engineering Site Characterisation	Semester 1	12.50
CVEN90045 Engineering Project Implementation	Semester 2	12.50
CVEN90051 Civil Hydraulics	Semester 2	12.50
ENEN90032 Environmental Analysis Tools	Semester 2	12.50
ENEN90028 Monitoring Environmental Impacts	Semester 2	12.50

Suggested 100 points in Year 3:

12.5 points Environmental Engineering Selective

25 points from the Research Component (core) listed below

62.5 points from the Environmental Engineering Electives listed below

Environmental Engineering Selective: Total 12.5 points. Students must choose **one** of the following subjects:

Subject	Study Period Commencement:	Credit Points:
CVEN90059 Integrated Design - Infrastructure	Semester 1	12.50
CVEN90060 Integrated Design - Civil	Semester 2	12.50

Research component: Total 25 points

Students must choose only one of the subjects listed below:

Note: CVEN90022 IE Research Project 1 is of year-long duration, students may commence in either Semester 1 or Semester 2 and continue in the consecutive semester. CVEN90047 IE Research Project 2 is completed over one semester only and is the preferred way of completing the project.

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

Environmental Engineering Electives: Total 62.5 points

Subject	Study Period Commencement:	Credit Points:
CVEN90019 Sustainable Water Resources Systems	Semester 2	12.50
CVEN90050 Geotechnical Engineering	Semester 1	12.50
CVEN90058 Construction Engineering	Semester 2	12.50
CVEN90061 Freight Systems	Semester 1	12.5
CVEN90063 Transport System Modelling	Not offered 2016	12.5
ENEN90005 Environmental Management ISO 14000	Semester 2	12.50
ENEN90006 Solid Wastes to Sustainable Resources	Semester 1	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
ENEN90029 Water and Waste Water Management	Semester 1	12.50
ENEN90030 Groundwater Hydrology	Semester 2	12.50
ENEN90033 Solar Energy	Semester 1	12.50
ENEN90034 Environmental Applied Hydrology	Semester 1	12.50
GEOM90005 Remote Sensing	Semester 2	12.50
GEOM90033 Satellite Positioning Systems	Semester 2	12.50
EVSC90025 Water Sensitive Urban Design	February	12.5
ENGR90033 Internship	January, Semester 1, Semester 2	25
ENEN90037 International River Basin Management	June	12.5

Links to further information:

http://www.eng.unimelb.edu.au/Postgrad/MEng/me_environmental.html

Notes:

Please note: In 2013 ENGR30001 Fluid Mechanics & Thermodynamics was replaced with ENGR30002 Fluid Mechanics. Students who have completed ENGR30001 are not required to complete ENGR30002.

Related Course(s):	Master of Engineering
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