ENEN90029 Water and Waste Water Management

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 2 hours lecture/week. 1 hour workshop/week. Total 36 hours Total Time Commitment: 120 hours for the semester
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	Admission to post graduate studies in engineering OR

Subject	Study Period Commencement:	Credit Points:
CVEN30010 Systems Modelling and Design	Semester 2	12.50

Non Allowed Subjects: 421-640 Public Health in Hot Climates OR

Subject	Study Period Commencement:	Credit Points:
421-640 Water Supply and Waste Water Management	Not offered 2010	

OR

Subject	Study Period Commencement:	Credit Points:
421-605 Managing Water Borne Risks	Not offered 2010	

Core Participation Requirements:	For the purposes of considering requests 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/
Coordinator:	Prof Hector Malano
Contact:	Melbourne School of Engineering Ground Floor Old Engineering Building #173 The University of Melbourne VIC 3010 AUSTRALIA General telephone enquiries + 61 3 8344 6703 + 61 3 8344 6507 Facsimiles + 61 3 9349 2182 + 61 3 8344 7707 Email: **eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au)**
Subject Overview:	In this subject topics selected from the following will be examined: water supply for urban and rural communities; quality criteria; patterns of water usage; sources; extraction; storage and delivery methods; treatment processes; cost analysis, including cost recovery. Waste disposal for urban and rural communities; processes using and not using reticulation; effluent and sludge disposal; agricultural wastes. Introduction to microbiology and biochemistry of liquid wastes and liquid-borne pollutants. Sewerage; avoidance, minimisation, recycling and reuse; physical, chemical and biological treatments.

Objectives:	On successful completion students should be able to: # Identify and recognise the common measures of water quality and the associated standards and criteria # Recognise the major diseases whose incidence is much affected by water quality # Identify and describe the means of controlling those diseases through quality of water supply # Describe a wide range of technologies for the safe disposal of human waste # Identify and describe the role of microbiology in modifying water systems # Apply principles of sustainable development to the management of water borne wastes # Conduct conceptual designs to enable the avoidance, minimization, recycling, re-use and treatment of water borne pollutants
Assessment:	2-hour end of semester examination (50%)3 x assignments, totalling 4000 words due at regular intervals throughout the semester (50%)
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	# Ability to undertake problem identification, formulation, and solution # Understanding of social, cultural, global, and environmental responsibilities and the need to employ principles of sustainable development # Capacity for creativity and innovation # Understanding of professional and ethical responsibilities, and commitment to them # Capacity for lifelong learning and professional development
Related Course(s):	Master of Environment Master of Environmental Engineering Master of Environmental Engineering Master of Water Resource Management Master of Water Resource Management Postgraduate Certificate in Environment Postgraduate Diploma in Environment
Related Majors/Minors/ Specialisations:	Waste Management