ENEN90029 Water and Waste Water Management

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2011.
Time Commitment:	Contact Hours: 36 hours (Lecures: 2 hours per week. Workshops: 1 hour workshop per week) Total Time Commitment: 120 hours
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	Not offered 2011	12.50

Non Allowed Subjects:

Credit will not be given for the following subjects:

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/
Contact:	Dr Graham Moore **grahamam@unimelb.edu.au (mailto:grahamam@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 completion of this subject students should be able to: # Identify and recognise the common measures of water quality and the associated standards and criteria # Recognise the major risks whose incidence is much affected by water quality # Identify and describe the means of controlling those risks 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:	One 2-hour examination, end of semester (50%)Three 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 Environmental Engineering Master of Environmental Engineering
Related Majors/Minors/ Specialisations:	B-ENG Civil Engineering stream Master of Engineering (Civil) Master of Engineering (Environmental) Waste Management