

421-322 Environmental Engineering Design 1

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: A one-day excursion (four hours), eight hours of lectures and thirty six hours of tutorial/practical classes. Total Time Commitment: Not available
Prerequisites:	431-202 Engineering Analysis B and 421-210 Environmental Engineering
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><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.</p> <p>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</p></p>
Coordinator:	Graham Moore
Subject Overview:	<p>The objective of this subject is to have students experience solving a substantial and realistic environmental engineering design problem working in groups and as individuals.</p> <p>Topics covered include general issues relating to environmental engineering design including engineering design methodology; systems and optimisation; application of economic analysis; environmental and social considerations; sustainable development; environmental impact statements and assessments; public participation; international protocols, eg. Ramsar, Kyoto, Rio; and design projects, analysis and presentation of large data sets.</p>
Assessment:	One end-of-semester written report not exceeding 50 pages (60%). Up to six minor reports, assignments or multimedia presentations not exceeding 20 pages equivalent spread throughout the first 8 weeks of semester (35%). Four contributions to a reflective journal (5%)
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:	<ul style="list-style-type: none"> # ability to apply knowledge of basic science and engineering fundamentals # ability to communicate effectively, not only with engineers but also with the community at large # ability to undertake problem identification, formulation and solution # ability to utilise a systems approach to design and operational performance # ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a leader or manager as well as an effective team member

	<ul style="list-style-type: none"> # understanding of the social, cultural, global and environmental responsibilities of the professional engineer, and the need for sustainable development # understanding of the principles of sustainable design and development # expectation of the need to undertake lifelong learning, capacity to do so # capacity for independent critical thought, rational inquiry and self-directed learning # intellectual curiosity and creativity, including understanding of the philosophical and methodological bases of research activity # openness to new ideas and unconventional critiques of received wisdom # profound respect for truth and intellectual integrity, and for the ethics of scholarship
Related Course(s):	<p> Bachelor of Engineering (EngineeringManagement) Environmental Bachelor of Engineering (Environmental Engineering) Bachelor of Engineering (Environmental) and Bachelor of Arts Bachelor of Engineering (Environmental) and Bachelor of Commerce Bachelor of Engineering (Environmental) and Bachelor of Laws Bachelor of Engineering (Environmental) and Bachelor of Science </p>