421-482 Analysis & Design-Environmental Systems

Credit Points:	12.50
Level:	4 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: Twelve hours of lectures, thirty-six hours of design classes and three-hours of site visits. Total Time Commitment: Not available
Prerequisites:	421-490 Quantification of Physical Processes A, 421-491 Quantification of Physical Processes B and 421-322 Environmental Engineering Design 1 or equivalent
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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
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Subject Overview:	At the conclusion of this subject students should be able to identify the processes in the environment that impinge on a range of practical problems they will encounter in their career. With this skill and foundation theory of physical hydrology, design and management, they will be able to develop solutions to these problems. Typical problems may include irrigation and drainage design, hydro-geological problems such as landfill containment, catchment management, stream rehabilitation and rehabilitation of degraded land such as mine sites. Particular emphasis will be placed on how projects are managed/implemented within each working group and how group members are making coordinated efforts to achieve the design goals
Objectives:	This subject aims to provide students with training and experience of problem solving and resources management by assigning them to a range of engineering problems that require group-based work.
Assessment:	Three written group reports and participation (30% each due at end of weeks 4, 8 and 12), and one assignment (10% due in week 12) not exceeding 20 pages each inclusive of diagrams, tables, computations and computer output). Students must attend the site visit and achieve a pass on each report in order to pass the subject.
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 apply knowledge of basic science and engineering fundamentals. # In-depth technical competence in at least one engineering discipline. # Ability to undertake problem identification, formulation and solution. # Capacity for independent critical thought, rational inquiry and self-directed learning. # Ability to make coordinated efforts with group members to achieve project goals.
Related Course(s):	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