355AR Bachelor of Engineering (Environmental Engineering)

Year and Campus:	2010 - Parkville
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Undergraduate
Duration & Credit Points:	400 credit points taken over 48 months full time. This course is available as full or part time.
Coordinator:	Dr Graham Moore
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Course Overview:	The Environmental Engineering degree course is underpinned by a 40-year tradition of teaching and research in land and water management and environmental issues. The objective of the course in environmental engineering is to graduate professional engineers with leadership qualities in engineering aspects of land and water management and environmental assessment, and skills in surface and groundwater hydrology, hydrogeology, irrigation engineering and water supply, land reclamation and sediment, nutrient and solute transport. Such engineers should be able to converse scientifically with biologists, ecologists and resource managers, have analytical, synthesis and numerical skills, and have experience in computing, field and laboratory techniques relating to natural resources. With these skills, graduates will be able to play a leading role in developing engineering solutions to a wide range of problems and opportunities within an ecologically sustainable context. The first year of the environmental engineering stream is flexible, but contains a solid grounding in mathematics, chemistry and basic engineering science. Engineering projects are introduced as a vehicle to discover the diverse nature of engineering inputs and the relationship of engineering to the natural environment and a sustainable world. A feature of first year is a field trip to assist the cohort of students to develop social links as well as discover a range of environmental engineering issues. Second year develops themes from first year to introduce basic engineering science and design. Links between environmental engineering and the natural sciences are developed in the areas of biology, earth sciences and chemistry. Management principles applicable to the natural environment are also introduced. In third year the course has an emphasis on hydraulics, hydrology and design. A practical course, including a one-week field trip covering techniques for gathering the data required for design, appears at this level. Analysis of spatial systems is introduced, while management and political aspects and interactions are further developed. At fourth-year level, in addition to design and a major research project, four themes are developed in management and communication, hydrology, water management and land management. Advanced learning in analysis and modeling of the physical processes provides students with an exclusive skill set to take to the workforce or postgraduate education.
Objectives:	-
Course Structure & Available Subjects:	The course structure below represents the core content for the BE degree. All students should check that they have taken the listed subjects, or equivalent. Students should regularly check the Melbourne School of Engineering website for additional information and up-to-date course advice: http://www.eng.unimelb.edu.au/ When setting the timetable every effort will be made to avoid clashes between the times of classes associated with these sets of subjects. Students should be aware however, that if it proves to be impossible to achieve a timetable without clashes in these sets of subjects, the Faculty reserves the right to modify course structures in order to eliminate the conflicts. Students will be advised during the enrolment period of the semester if the recommended courses need to be varied. Where the courses include elective subjects these

should be chosen so that departmental guidelines on electives are satisfied (see http://www.civenv.unimelb.edu.au/undergraduate). Moreover, electives should be chosen so as to develop a specialisation, while ensuring a logical progression of year level and prerequisites. Students should also avoid timetable clashes in choosing their electives. In particular, students in combined degrees should plan their courses so that the subjects chosen in the other faculty do not clash with those recommended for the engineering component.

Subject Options:

THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLILNG STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008

Note: Students who commenced 2nd year in 2008 who have not completed, (or who have failed), the second year subjects required in the Bachelor of Engineering degree please see a course adviser.

Fourth Year

Subjects listed below **MUST** be taken in this approved order, regardless of semester availability.

Semester 1

Subject	Study Period Commencement:	Credit Points:
ENGM40001 Management for Engineers 3	Semester 1	12.50
CVEN90012 Hydrological Processes 1	Semester 1	12.50
CVEN90014 Hydrological Processes 2	Semester 1	12.50

Elective (12.5 points) - check the handbook for a list of Engineering subjects. Students requiring to take subjects in addition should seek specific advice from the Engineering Student Centre (see contact details above)

Semester 2

Subject	Study Period Commencement:	Credit Points:
CVEN40017 Analysis & Design-Environmental Systems	Semester 2	12.50
CVEN40009 Integrated Design	Semester 2	12.50
CVEN90020 Research Topic	Semester 1, Semester 2	12.50

Elective (12.5 points) - check the handbook for a list of Engineering subjects. Students requiring to take subjects in addition should seek specific advice from the Engineering Student Centre (see contact details above)

Entry Requirements:

There is no further entry into this combined course.

Core Participation Requirements:

For the purposes of considering request 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/

Further Study:

On completion of a Bachelor of Engineering, students may choose to apply for candidature in a Masters by research or PhD degree. They may also apply to undertake a one year Advanced Masters coursework degree.

Graduate Attributes:

The Bachelor of Engineering is a professional degree. Graduates can obtain professional recognition by joining Engineers Australia who has accredited these programs. The Bachelor of Engineering also delivers on the University graduate attribute http://www.unimelb.edu.au/about/attributes.html

Generic Skills:

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