Civil (Engineering) Systems

Year and Campus:	2009
Coordinator:	Professor Graham Hutchinson
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Overview:	Civil Engineering involves the planning, design and construction of the build environment and the provision of essential services and infrastructure. Civil Engineers use their sophisticated understanding of these concepts to create solutions to improve quality of life. Construction of the built environment, which includes structures such as buildings, bridges and tunnels, requires engineers at the forefront of technology with a breath of knowledge and experience. Similarly, our transport systems, water supply, drainage systems, ports and harbours are all examples of essential services where civil engineers are vital in providing the most effective way of interacting with the natural environment. **Careers and Further Study:** Students pursuing a career in civil engineering will complete the Bachelor of Environments with a major in Civil Systems, followed by the two-year Master of Engineering (Civil or Structural). The five-year Bachelor-Masters Combination leads to professional accreditation by Engineers Australia, The Institution of Engineers. For more information about the Master of Engineering and graduate careers, please visit the Melbourne School of Engineering web site: **www.eng.unimelb.edu.au (http://www.eng.unimelb.edu.au/)**
Objectives:	By the end of a three year Bachelor of Environments degree with a Civil (Engineering) Systems major, you will have breadth of knowledge across a wide range of Engineering issues. For more information visit: **www.benvs.unimelb.edu.au (http://www.benvs.unimelb.edu.au/)**
Subject Options:	**Recommended first year elective subjects** It is highly recommended that students majoring in Civil Systems take the following first year electives and breadth subjects as they form prerequisite for subjects offered in later years. Please note the following regarding the Mathematical stream of subjects that are essential to the Civil Systems Major (students must check the prerequisite requirements of subjects before enrolling to ensure it is appropriate and should consult a course advisor if they are unsure): # Students who have completed VCE Mathematical Methods 3 and 4 with a study score of 25 or more should enrol in Calculus 1 in Semester 1 of first year and Calculus 2 in second semester of first year, followed by Linear Algebra in their second year. # Students who have completed VCE Specialist Maths with a study score of at least 27 are not permitted to enrol in Calculus 1 but should enrol in Calculus 2 in first semester and follow on to enrol in Linear Algebra in second semester. For more details on the most appropriate maths subjects please view the subject pages by clicking on the links below.

Subject	Study Period Commencement:	Credit Points:
880-103 Constructing Environments	Semester 1, Semester 2	12.50
620-154 Calculus 1	Semester 1, Semester 2	12.50
620-155 Calculus 2	Semester 1, Semester 2	12.50
620-156 Linear Algebra	Summer, Semester 1, Semester 2	12.50

Core second year subjects for the Civil Systems major
Students majoring in Civil Systems must complete the following second year (200-level) core subjects:

Subject	Study Period Commencement:	Credit Points:
436-291 Engineering Mechanics	Semester 1, Semester 2	12.50
421-289 Earth Processes for Engineering	Semester 2	12.50
421-290 Engineering Materials	Semester 2	12.50
620-293 Engineering Mathematics	Summer, Semester 1, Semester 2	12.50

Core third year subjects for the Civil Systems major

Students majoring in Civil Systems must complete the following third year (300-level) core subjects:

Please note these subjects will be available to Bachelor of Environments students from 2010.

Fluid Mechanics
Risk Analysis
Managment Tools
Systems Modelling and Design
Structural Theory and Design

Breadth Subjects

All Bachelor of Environments Students must complete **75 credit points** of subjects selected from those available as breadth for Bachelor of Environments students; including at least one subject at 300-level. For a complete listing of available subjects please see:

https://app.portal.unimelb.edu.au/CSCApplication/faces/htdocs/user/breadth/BreadthSearch.jsp (user/breadth/BreadthSearch.jsp)

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Bachelor of Environments Electives

All Bachelor of Environments students must complete **37.5 credit points** of Bachelor of Environments electives. For a complete listing of available subjects please see:

http://www.benvs.unimelb.edu.au/electives (http://www.benvs.unimelb.edu.au/electives) /

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For more information on this major and to view a sample course plan please visit:

http://www.benvs.unimelb.edu.au/about/fields-of-study/civil-systems.html (http://www.benvs.unimelb.edu.au/about/fields-of-study/civil-systems.html)

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Links to further information:	www.benvs.unimelb.edu.au
Related Course(s):	Bachelor of Environments