Civil (Engineering) Systems

Year and Campus:	2011
Coordinator:	Professor Graham Hutchinson
Contact:	**Eastern Precinct Student Centre** The Eastern Precinct (building 138) (between Doug McDonell building and Eastern Resource Centre) *Enquiries* Phone: 13 MELB (13 6352) Email: **13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)**
Overview:	Civil Engineering involves the planning, design and construction of the built 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 breadth 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/)**
Structure & Available Subjects:	Please see details below.
Majors/Minors/ Specialisations	Course Planning for a Civil Systems Major A major in Civil Systems in the Bachelor of Environment consists of: # 112.5 points (9 subjects) of Civil Systems subjects; # 25 points (2 subjects) of core first year subjects (Natural Environments and Reshaping Environments); # 12.5 points (1 subject) of first year subjects that are core to the major (Constructing Environments); # 25-37.5 points (2-3 subjects) of breadth subjects required for the major (see below under 1st year breadth subjects). This is in addition to electives and breadth to make up the 300 points required for the degree. Specific details of the Bachelor of Environments course structure can be found at: **https://handbook.unimelb.edu.au/view/2011/B-ENVS (../../view/2011/B-ENVS)** In order to complete a major in Civil Systems, you will undertake the following subjects:
Subject Options:	**1st year level subjects**

Subject	Study Period Commencement:	Credit Points:
ENVS10001 Natural Environments	Not offered 2011	12.50
ENVS10002 Reshaping Environments	Not offered 2011	12.50
ENVS10003 Constructing Environments	Not offered 2011	12.50

Required 1st year breadth subjects

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 1 and 2 only, should enrol in 620-173 (MAST10012) Introduction to Maths, followed by 620-154 (MAST10005) Calculus 1, 620-155 (MAST10006) Calculus 2, and 620-156 (MAST10007) Linear Algebra.
Students who have completed VCE Mathematical Methods 3 and 4 with a study score of 25 or more should enrol in 620-154 (MAST10005) Calculus 1, 620-155 (MAST10006) Calculus 2, and 620-156 (MAST10007) Linear Algebra.
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 620-155 (MAST10006) Calculus 2, and 620-156 (MAST10007) Linear Algebra.

For more details on the most appropriate maths subjects please view the subject pages by clicking on the links below. You can also view sample course plans to help you determine the most appropriate maths subjects for you at: **http://www.benvs.unimelb.edu.au/current-students/course-info/civil-systems.html (http://www.benvs.unimelb.edu.au/current-students/course-info/civil-systems.html)**

Subject	Study Period Commencement:	Credit Points:
MAST10012 Introduction to Mathematics	Semester 1	12.50
MAST10005 Calculus 1	Semester 1, Semester 2	12.50
MAST10006 Calculus 2	Semester 1, Semester 2	12.50
MAST10007 Linear Algebra	Summer Term, Semester 1, Semester 2	12.50

2nd year level subjects

Subject	Study Period Commencement:	Credit Points:
ENGR20004 Engineering Mechanics	January, Semester 1, Semester 2	12.50
ENEN20002 Earth Processes for Engineering	Not offered 2011	12.50
ENGR20003 Engineering Materials	Not offered 2011	12.50
MAST20029 Engineering Mathematics	Summer Term, Semester 1, Semester 2	12.50

3rd year level subjects

Subject	Study Period Commencement:	Credit Points:
ENGR30001 Fluid Mechanics & Thermodynamics	Semester 1, Semester 2	12.50
CVEN30008 Risk Analysis	Not offered 2011	12.50
CVEN30009 Structural Theory and Design	Not offered 2011	12.50
CVEN30010 Systems Modelling and Design	Not offered 2011	12.50

AND one of the following subjects

Subject	Study Period Commencement:	Credit Points:
ABPL20047 Site Tectonics	Semester 2	12.50
ABPL30039 Construction Contract Administration	Semester 2	12.50

GEOM20015 Surveying and Mapping	Not offered 2011	12.50

Bachelor of Environments elective subjects

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/breadth/elective-subjects.html (http://www.benvs.unimelb.edu.au/breadth/elective-subjects.html)

Breadth subjects

Bachelor of Environments students must complete between 50 and 75 credit points of subjects selected from those available as breadth for Bachelor of Environments students; with no more than 37.5 points at Level 1. For a complete listing of available subjects please click the 'Find breadth subjects' link on the **Handbook homepage (../..//)** and perform a search.

The breadth requirements for the Bachelor of Environments include the restriction of some subjects as breadth options, depending on a individual student's choice of major. Refer to the **Breadth Requirements for the Bachelor of Environments (http://breadth.unimelb.edu.au/breadth/info/Environments.html)** for additional information.

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

http://www.benvs.unimelb.edu.au/current-students/course-info/civil-systems.html (http://www.benvs.unimelb.edu.au/current-students/course-info/civil-systems.html)