

Civil Systems

Year and Campus:	2012																	
Coordinator:	Dr Lihai Zhang Department of Civil and Environmental Engineering																	
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Overview:	<p>Students who have undertaken the Civil Systems major will be able to rigorously integrate fundamental science to provide accurate information and optimum solutions to practical problems involving civil infrastructure. More specifically, core skills and knowledge that will be developed include: fundamental scientific comprehension that will lead to accurate computer modelling of civil systems, analytical and abstract thinking, problem-solving and design skills, ability to carry out laboratory experiments to eliminate or confirm possible solutions to complex problems. In all levels of this major, we will ensure the development of excellent communication skills that will enable our graduates to deliver complex scientific information in a clear and concise fashion.</p> <p>The Civil Systems major will provide various pathways for students. These include accredited professional or scientific research careers in civil engineering through further study in the Masters in Engineering (ME) or PhD programs. Professional masters courses in other disciplines such as education, law, or business will be available. Students may also choose to enter the workforce at the completion of their undergraduate degree with employers who value the range of scientific, technical and problem solving skills graduates will have developed.</p>																	
Objectives:	The objective of the civil systems major is to contribute to the academic preparation of graduates who embody the University of Melbourne graduate attributes, as well as additional attributes more specific to the Bachelor of Science.																	
Structure & Available Subjects:	Completion of 50 points of study at Level 3.																	
Subject Options:	All four of:																	
	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ENGR30001 Fluid Mechanics & Thermodynamics</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>CVEN30008 Risk Analysis</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CVEN30010 Systems Modelling and Design</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>CVEN30009 Structural Theory and Design</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ENGR30001 Fluid Mechanics & Thermodynamics	Semester 1, Semester 2	12.50	CVEN30008 Risk Analysis	Semester 1	12.50	CVEN30010 Systems Modelling and Design	Semester 2	12.50	CVEN30009 Structural Theory and Design	Semester 2	12.50		
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Notes:	In addition to these four core subjects, the Level 3 subject, MAST30023 Differential Equations for Engineers (not offered after 2011), will also be required in this major for students who have taken MAST20009 Vector Calculus instead of MAST20029 Engineering Mathematics at Level 2.																	
Related Course(s):	Bachelor of Science																	