

Geomatics

Year and Campus:	2010																	
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Contact:	<p>Environments and Design Student Centre</p> <p>T: +61 3 8344 6417/9862 F: +61 3 8344 5532 Email: envs-courseadvice@unimelb.edu.au (mailto:envs-courseadvice@unimelb.edu.au)</p>																	
Overview:	<p>Geomatic Engineering is the study of the science and technologies of 3D measurement, mapping and visualisation. This course provides the opportunity to acquire skills in modern, sophisticated technologies such as global positioning system (GPS), three dimensional computer visualisations, geographic information systems (GIS), surveying, and satellite and photographic image processing.</p> <p>Careers and Further Study</p> <p>Students pursuing a career in Geomatics will complete the Bachelor of Environments with a major in Geomatics, followed by the two-year Master of Engineering (Geomatics). The five-year Bachelor-Master combination leads to professional accreditation by Engineers Australia and the Institution of Surveyors, Australia. For more information on the Masters of Engineering and graduate careers, please visit the Melbourne school of Engineering web site: http://eng.unimelb.edu.au (http://eng.unimelb.edu.au/)</p>																	
Objectives:	<p>By the end of a three year Bachelor of Environments degree with a Geomatics major, you will have developed a sound understanding of technologies used in one of the fastest growing IT industries in the world today. For more information visit: www.benvs.unimelb.edu.au (http://www.benvs.unimelb.edu.au)</p>																	
Structure & Available Subjects:	See details below.																	
Majors/Minors/Specialisations	<p>Course Planning for a Geomatics Major</p> <p>A major in Geomatics in the Bachelor of Environments consists of:</p> <ul style="list-style-type: none"> # 112.5 points (9 subjects) of Geomatics subjects; # 25 points (2 subjects) of core first year subjects (Natural Environments and Reshaping Environments); # 25 points (2 subjects) of breadth subjects required for the major (Calculus 1 and Linear Algebra). <p>This is in addition to elective subjects and breadth subjects to make up the 300 points required for the degree. Specific details of the Bachelor of Environments course structure can be found at:</p> <p>https://app.portal.unimelb.edu.au/view/2010/A04-AA (/view/2010/A04-AA)</p> <p>In order to complete a major in Geomatics, you will undertake the following subjects:</p>																	
Subject Options:	<p>1st year level subjects</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ENVS10001 Natural Environments</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>ENVS10002 Reshaping Environments</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>1st year breadth subjects</p> <p>In the first year of the Bachelor of Environments, students intending to major in Geomatics must take the following two subjects as their breadth subjects (please note there are pre-requisite maths subjects that need to be met).</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	ENVS10001 Natural Environments	Semester 1, Semester 2	12.50	ENVS10002 Reshaping Environments	Semester 1, Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:			
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MAST10005 Calculus 1	Semester 1, Semester 2	12.50
MAST10007 Linear Algebra	Summer Term, Semester 1, Semester 2	12.50

2nd year level subjects

Please note, 620-159 Data Analysis 1 is a 1st year level subject, but should be taken during your 2nd year of study.

Subject	Study Period Commencement:	Credit Points:
GEOM20013 Applications of GIS	Semester 1	12.50
GEOM20015 Surveying and Mapping	Semester 2	12.50
GEOM20014 Residential Field Course	November	12.50
MAST10010 Data Analysis 1	Semester 2	12.50

3rd year level subjects

Subject	Study Period Commencement:	Credit Points:
GEOM30009 Imaging the Environment	Semester 1	12.50
GEOM30010 Programming Geomatics Applications	Semester 1	12.50
GEOM30011 Computational Methods in Geomatics	Semester 2	12.50
GEOM30012 Integrated Spatial Systems	Semester 2	12.50
GEOM30008 Land, People and Sustainability	Semester 2	12.50

Bachelor of Environments electives

All Bachelor of Environments students must complete **37.5 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 **75 credit points** of subjects selected from those available as breadth for Bachelor of Environments students; including at least one subject at 300-level (3rd year level). For a complete listing of available subjects please see:

<http://handbook.unimelb.edu.au/breadth/info/index.html> (<http://handbook.unimelb.edu.au/breadth/info/index.html>)

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/geomatics.html> (<http://www.benvs.unimelb.edu.au/current-students/course-info/geomatics.html>)