

# GEOM30012 Integrated Spatial Systems

<b>Credit Points:</b>	12.50																																						
<b>Level:</b>	3 (Undergraduate)																																						
<b>Dates &amp; Locations:</b>	2013, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.																																						
<b>Time Commitment:</b>	Contact Hours: 48 hours, comprising of two hours of lectures and two hours of practicals per week Total Time Commitment: 120 hours																																						
<b>Prerequisites:</b>	<p>Successful completion of the following subjects are required to enroll:  <b>Note</b> : GEOM20015 and GEOM30013 may be completed concurrently</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST10007 Linear Algebra</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table> <p>OR:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST10005 Calculus 1</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table> <p>OR:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST10006 Calculus 2</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table> <p>and:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GEOM20015 Surveying and Mapping</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>GEOM20013 Applications of GIS</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>GEOM30009 Imaging the Environment</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>COMP20005 Engineering Computation</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GEOM30013 Land Administration Systems</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	MAST10007 Linear Algebra	Not offered 2013	12.50	Subject	Study Period Commencement:	Credit Points:	MAST10005 Calculus 1	Not offered 2013	12.50	Subject	Study Period Commencement:	Credit Points:	MAST10006 Calculus 2	Not offered 2013	12.50	Subject	Study Period Commencement:	Credit Points:	GEOM20015 Surveying and Mapping	Not offered 2013	12.50	GEOM20013 Applications of GIS	Not offered 2013	12.50	GEOM30009 Imaging the Environment	Not offered 2013	12.50	COMP20005 Engineering Computation	Semester 1	12.50	GEOM30013 Land Administration Systems	Not offered 2013	12.50
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<b>Corequisites:</b>	None																																						
<b>Recommended Background Knowledge:</b>	Students will need to acquaint themselves with project management techniques, scientific communication strategies (written and verbal) and various techniques of resource assessment																																						
<b>Non Allowed Subjects:</b>	<p>Students cannot enrol in and gain credit for this subject and:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>EVSC30007 Integrated Landscape Problem Solving</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	EVSC30007 Integrated Landscape Problem Solving	Not offered 2013	12.50																														
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<b>Core Participation Requirements:</b>	<p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: <a href="http://services.unimelb.edu.au/disability">http://services.unimelb.edu.au/disability</a></p>
<b>Coordinator:</b>	Mr Clifford Ogleby
<b>Contact:</b>	Email: <a href="mailto:cogleby@unimelb.edu.au">cogleby@unimelb.edu.au</a> ( <a href="mailto:cogleby@unimelb.edu.au">mailto:cogleby@unimelb.edu.au</a> )
<b>Subject Overview:</b>	<p>Solutions to environmental dilemmas that face us in the 21st century require an integrated, multi-disciplinary approach. This subject, delivered in the final semester of the Bachelor of Environments, provides a basis for students to integrate and apply the knowledge they have gained throughout their studies in different disciplines to solve real world problems.</p> <p>The subject is co-taught with EVSC30007 (Integrated Landscape Problem Solving). The subject will be structured around a project in which Geomatics students will work in teams with Landscape Management students to develop solutions for and find answers to questions that require a combination of spatial information and landscape management skills.</p> <p>The project will provide opportunities to apply knowledge of fundamental concepts, theory, and applications in core areas of positioning technologies and measurement integration, GIS, distributed spatial computing and mapping, web mapping, and location-based services. Study sites may be off-campus. Solutions to environmental dilemmas that face us in the 21st century require an integrated, multi-disciplinary approach. This subject, delivered in the final semester of the Bachelor of Environments, provides a basis for students to integrate and apply the knowledge they have gained throughout their studies in different disciplines to solve real world problems</p> <p>The subject will be structured around a project in which students will work in teams to develop spatial information supporting a landscape management project (in collaboration with landscape management students)</p> <p>The project will provide opportunities to apply knowledge of fundamental concepts, theory, and applications in core areas of positioning technologies and measurement integration, GIS, distributed spatial computing and mapping, web mapping, and location-based services. Study sites may be off-campus</p>
<b>Objectives:</b>	<p>On completion of this subject students should be able to:</p> <ul style="list-style-type: none"> <li># Access, collect, organize and present data in ways that support landscape management planning</li> <li># Critically evaluate the strengths and limitations of traditional and non traditional positioning and location technologies</li> <li># Integrate appropriate components of spatial technologies to meet the requirements of specific industry problems</li> <li># Contribute spatial information to enhancing the ecological, economic and social value of the study site</li> <li># Communicate these enhancements effectively using appropriate spatial formats</li> </ul>
<b>Assessment:</b>	<p>Group project proposal (5000 words), due in week 5 (30%) Group project report (5000 words), due in week 12 (40%) Individual project evaluation report (blog, 500 words overall, at least 4 entries), continuing, ends in examination period (10%) Group project seminar presentation, examination period (20%)</p>
<b>Prescribed Texts:</b>	TBA
<b>Breadth Options:</b>	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> <li># <b>Bachelor of Arts</b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-ARTS">https://handbook.unimelb.edu.au/view/2013/B-ARTS</a>)</li> </ul>

	<p># <b><u>Bachelor of Commerce</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-COM">https://handbook.unimelb.edu.au/view/2013/B-COM</a>)</p> <p># <b><u>Bachelor of Environments</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-ENVS">https://handbook.unimelb.edu.au/view/2013/B-ENVS</a>)</p> <p># <b><u>Bachelor of Music</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-MUS">https://handbook.unimelb.edu.au/view/2013/B-MUS</a>)</p> <p>You should visit <b>learn more about breadth subjects</b> (<a href="http://breadth.unimelb.edu.au/breadth/info/index.html">http://breadth.unimelb.edu.au/breadth/info/index.html</a>) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>On completion of the subject the students will have the:</p> <ul style="list-style-type: none"> <li># Ability to apply knowledge of science and engineering fundamentals</li> <li># Ability to undertake problem identification, formulation, and solution</li> <li># Ability to communicate effectively, with the engineering team and with the community at large</li> <li># Ability to manage information and documentation</li> <li># Understanding of professional and ethical responsibilities, and commitment to them</li> <li># Capacity for lifelong learning and professional development</li> </ul>
<b>Related Majors/Minors/Specialisations:</b>	<p>Environmental Engineering Systems major          Environments Discipline subjects          Geomatics          Geomatics (Geomatic Engineering) major          Master of Engineering (Geomatics)          Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.</p>