

# GEOM90016 Advanced Topics in GIScience

<b>Credit Points:</b>	12.50														
<b>Level:</b>	9 (Graduate/Postgraduate)														
<b>Dates &amp; Locations:</b>	This subject is not offered in 2014.														
<b>Time Commitment:</b>	Contact Hours: 24 hours of lectures per semester Total Time Commitment: 200 hours														
<b>Prerequisites:</b>	Successful completion of the following subject is required:														
	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GEOM90008 Foundations of Spatial Information</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	GEOM90008 Foundations of Spatial Information	Semester 1	12.50						
Subject	Study Period Commencement:	Credit Points:													
GEOM90008 Foundations of Spatial Information	Semester 1	12.50													
<b>Corequisites:</b>	None														
<b>Recommended Background Knowledge:</b>	None														
<b>Non Allowed Subjects:</b>	Students are not allowed to have completed another research training subject, including:														
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<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt; &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>														
<b>Contact:</b>	Professor Stephan Winter <a href="mailto:winter@unimelb.edu.au">winter@unimelb.edu.au</a> (mailto:winter@unimelb.edu.au)														
<b>Subject Overview:</b>	<p><b>AIMS</b></p> <p>Geographic Information Science (GIScience) is the science behind geographic information technology. It addresses fundamental questions of capturing, maintaining and communicating about space and time at geographic scale in an interdisciplinary manner, involving philosophy, cognitive psychology, linguistics, logics, geography and artificial intelligence. Students will gain an overview and significant insight into the way of thinking in GIScience, how to collaborate with researchers in this discipline, or about career pathways. Throughout the seminar the students will also receive a rich research methods training.</p> <p><b>INDICATIVE CONTENT</b></p> <p>Science and scientific methods (reading, excerpting, reviewing, drafting, use of literature) will be taught in lectures, along with an introduction into definitions and fundamental aspects of GIScience. Then students will apply these methods over the rest of the semester, discussing a reading list of prescribed (prominent but diverse) research papers of the discipline and developing related research proposals.</p>														

<b>Learning Outcomes:</b>	<p><b>INTENDED LEARNING OUTCOMES (ILO)</b></p> <p>Having completed this subject the student is expected to:</p> <ol style="list-style-type: none"> <li>1 Identify and define fundamental theories of geographic space and geographic information;</li> <li>2 Read and discuss critically research papers and research methodologies;</li> <li>3 Classify and interpret current research in Geographic Information Science.</li> </ol>
<b>Assessment:</b>	<p>Discussion document about one paper of about 1000 words during the semester (25%), associated with all three Intended Learning Outcome (ILOs) An oral introduction of this paper in a seminar session during the semester (10%), associated with all three ILOs Over the semester weekly written reviews of the class discussion of about 200 words (totals 25%), associated with all three ILOs End of semester take-home exam essay of 3000 words with a 24-hour turnaround (40%), associated with all three ILOs Hurdle requirement: Participation in at least 8 lectures is required to pass the subject.</p>
<b>Prescribed Texts:</b>	<p>Variable reading lists of research papers, handed out at the beginning of the semester. Access to all papers is provided through the university library (searching for resources is part of the learning experience).</p>
<b>Breadth Options:</b>	<p>This subject is not available as a breadth subject.</p>
<b>Fees Information:</b>	<p>Subject EFTSL, Level, Discipline &amp; Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a></p>
<b>Generic Skills:</b>	<p>On successful completion students should have the:</p> <ul style="list-style-type: none"> <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>Notes:</b>	<p><b>LEARNING AND TEACHING METHODS</b></p> <p>This subject will introduce into GIScience by studying selected advanced topics. It is run as a seminar, such that students will read and discuss during the semester some landmark papers of the discipline and focus on active research areas at the University of Melbourne. Attendance of research higher degree students will enrich the discussions by linking the topics to their current research.</p> <p><b>INDICATIVE KEY LEARNING RESOURCES</b></p> <p>Access to all papers is provided through the university library (searching for resources is part of the learning experience).</p> <p><b>CAREERS / INDUSTRY LINKS</b></p> <p>In one week a panel is invited to present and discuss academic and industry perspectives on research.</p>
<b>Related Course(s):</b>	<p>Master of Geographic Information Technology  Master of Information Technology  Master of Information Technology  Master of Information Technology  Master of Philosophy - Engineering  Master of Spatial Information Science  Ph.D.- Engineering</p>
<b>Related Majors/Minors/Specialisations:</b>	<p>Master of Engineering (Geomatics)</p>