

GEOM90016 Advanced Topics in GIScience

Credit Points:	12.5															
Level:	9 (Graduate/Postgraduate)															
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.															
Time Commitment:	Contact Hours: 24 hours of lectures per semester Total Time Commitment: 200 hours															
Prerequisites:	Successful completion of the following subject is required: <table border="1" data-bbox="387 544 1485 689"> <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									
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GEOM90008 Foundations of Spatial Information	Semester 1	12.50														
Corequisites:	None															
Recommended Background Knowledge:	None															
Non Allowed Subjects:	Students are not allowed to have completed another research training subject, including: <table border="1" data-bbox="387 913 1485 1234"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CVEN90022 IE Research Project 1</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>CVEN90047 IE Research Project 2</td> <td>Semester 1, Semester 2</td> <td>25</td> </tr> <tr> <td>CVEN90056 IE Research Project 3</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>COMP90044 Research Methods</td> <td>Semester 2</td> <td>12.5</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	CVEN90022 IE Research Project 1	Semester 1, Semester 2	12.50	CVEN90047 IE Research Project 2	Semester 1, Semester 2	25	CVEN90056 IE Research Project 3	Semester 1, Semester 2	12.50	COMP90044 Research Methods	Semester 2	12.5
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COMP90044 Research Methods	Semester 2	12.5														
Core Participation Requirements:	<p><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: http://services.unimelb.edu.au/disability</p> </p>															
Coordinator:	Prof Stephan Winter															
Contact:	Professor Stephan Winter winter@unimelb.edu.au (mailto:winter@unimelb.edu.au)															
Subject Overview:	<p>AIMS</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, and they receive a rich training in research, methodologically and practically.</p>															

	<p>INDICATIVE CONTENT</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, by carrying out hands-on research project development, realization and reporting.</p>
<p>Learning Outcomes:</p>	<p>INTENDED LEARNING OUTCOMES (ILO)</p> <p>On completion of this subject the student is expected to:</p> <ol style="list-style-type: none"> 1 Identify and define fundamental theories of geographic space and geographic information 2 Classify and interpret current research in Geographic Information Science 3 Read and discuss critically research papers and research methodologies 4 Develop a research proposal, conduct and experiment, and present the findings.
<p>Assessment:</p>	<p>One-page research proposal (15%) 500 words, requiring 20 hours of work. Due approx. week 4. Intended Learning Outcomes (ILOs) 1 to 4 are addressed in the proposal An oral presentation of this proposal (10%) of maximal 5 minutes, requiring 12 hours of work. ILOs 1 to 4 are addressed in the presentation A peer-review of proposals (7.5%) requiring 8 hours of work. Due approx. week 5. ILOs 1 to 3 are addressed in the proposals Four weekly reports (20%) approximately 7.5 hours of work per report, or 500 words each, on sections of a research project; some in group work, some individually. Due week 8 - 11. ILOs 1 to 4 are addressed in the reports A group presentation of the research (7.5%) requiring 10 hours of work. Due week 12. ILOs 1 to 3 are addressed in the presentation of research End of semester 24 hour take-home exam essay (40%) maximal 3000 words. ILOs 1 to 4 are addressed in the exam essay Hurdle requirement: To pass this subject, students must obtain a pass in the examination Attendance in at least 8 seminars is required to pass the subject.</p>
<p>Prescribed Texts:</p>	<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>
<p>Breadth Options:</p>	<p>This subject is not available as a breadth subject.</p>
<p>Fees Information:</p>	<p>Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees</p>
<p>Generic Skills:</p>	<p>On successful completion students should have the:</p> <ul style="list-style-type: none"> # Ability to communicate effectively, with the engineering team and with the community at large # Ability to manage information and documentation # Understanding of professional and ethical responsibilities, and commitment to them # Capacity for lifelong learning and professional development.
<p>Notes:</p>	<p>LEARNING AND TEACHING METHODS</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>INDICATIVE KEY LEARNING RESOURCES</p> <p>Access to all papers is provided through the university library (searching for resources is part of the learning experience).</p> <p>CAREERS / INDUSTRY LINKS</p> <p>In one week a panel is invited to present and discuss academic and industry perspectives on research.</p>
<p>Related Course(s):</p>	<p>Doctor of Philosophy - Engineering Master of Geographic Information Technology Master of Information Systems Master of Information Systems</p>

	Master of Information Systems Master of Information Technology Master of Information Technology Master of Philosophy - Engineering Master of Spatial Information Science
Related Majors/Minors/ Specialisations:	MIS Professional Specialisation MIS Research Specialisation MIT Spatial Specialisation