

GEOM90006 Spatial Analysis

Credit Points:	12.50						
Level:	9 (Graduate/Postgraduate)						
Dates & Locations:	This subject is not offered in 2013.						
Time Commitment:	Contact Hours: 48 hours, comprising of two hours of lectures per week and 24 hours of laboratories per semester Total Time Commitment: 120 hours						
Prerequisites:	<p>Successful completion of the following is required to enrol in this subject:</p> <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>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	GEOM90008 Foundations of Spatial Information	Not offered 2013	12.50
Subject	Study Period Commencement:	Credit Points:					
GEOM90008 Foundations of Spatial Information	Not offered 2013	12.50					
Corequisites:	None						
Recommended Background Knowledge:	None						
Non Allowed Subjects:	None						
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>						
Contact:	<p>Dr Saeid (Moshen) Kalantari Soltanieh saeidks@unimelb.edu.au (mailto:saeidks@unimelb.edu.au)</p>						
Subject Overview:	<p>Spatial analysis focuses on foundations of spatial data and their analysis. We will study methods to characterise spatial patterns and processes of different spatial dimensions and in geographic scale. The subject will cover topics such as spatial autocorrelation, spatial data structures and algorithms, point patterns, measures of dispersion, measures of arrangements, line and network analysis, patterns of areas and in fields, and the role of spatial scale and spatial aggregation problems. These types of analysis are fundamental for all applications of geographic information technology</p>						
Objectives:	<p>On successful completion students will have the ability to:</p> <ul style="list-style-type: none"> # Describe and discuss data structures and analysis procedures to analyse spatial data # Design and run a spatial analysis appropriate to a given phenomenon # Distinguish and characterise patterns and processes in geographic space # Apply GIS software for spatial analysis 						
Assessment:	<p>A 30 minute written mid-semester exam (10%) A 2-hour written examination, end of semester (45%) Four practical assignment reports of approximately 5 pages length each, due evenly throughout the semester (45%)</p>						
Prescribed Texts:	O'Sullivan and Unwin, Geographic Information Analysis. Wiley						

Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>On successful completion students should have the:</p> <ul style="list-style-type: none"> # Ability to apply knowledge of science and engineering fundamentals # Ability to undertake problem identification, formulation, and solution # Ability to conduct an engineering project # Ability to communicate effectively, with the engineering team and with the community at large # Ability to manage information and documentation
Related Course(s):	<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 Postgraduate Certificate in Engineering</p>
Related Majors/Minors/ Specialisations:	Master of Engineering (Geomatics)