

GEOM90039 Advanced Surveying and Mapping

Credit Points:	12.50									
Level:	9 (Graduate/Postgraduate)									
Dates & Locations:	This subject is not offered in 2013. Lectures from 18th February - Friday 1st March 2013 May require overnight stays. Students need to be available for the duration of the teaching period.									
Time Commitment:	Contact Hours: An intensive 14 day course with 20 hours of lectures and 60 hours practical, problem based learning exercises Total Time Commitment: 90 hours									
Prerequisites:	<p>Successful completion of the following subjects are required to enrol:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GEOM90040 Geomatics Problem Solving and Analysis</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>GEOM90033 Satellite Positioning Systems</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	GEOM90040 Geomatics Problem Solving and Analysis	Not offered 2013	12.50	GEOM90033 Satellite Positioning Systems	Not offered 2013	12.50
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GEOM90040 Geomatics Problem Solving and Analysis	Not offered 2013	12.50								
GEOM90033 Satellite Positioning Systems	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 Allison Kealy a.kealy@unimelb.edu.au (mailto:a.kealy@unimelb.edu.au)</p>									
Subject Overview:	<p>Note: This subject is taught as an intensive subject to provide students with access to a real-world surveying environment. Details of the specific survey site will be provided on the first day of teaching. As the site selection may require overnight stays, students should make arrangements to be available for the duration of the teaching period.</p> <p>In this subject students will be faced with a real world surveying problem which they will be required to solve through the integration, application and advancement of the theoretical and practical knowledge they have acquired throughout their study. The intensive learning period will full immerse the students in a significant practical surveying exercise through which they will focus on the following core subjects:</p> <ol style="list-style-type: none"> 1 Advance survey network design and adjustment. 2 High precision GPS surveying and Network RTK GPS. 3 Quality control considerations of survey measurements and ground control. 4 Geoids computations and modeling 5 Selection of the appropriate survey field methodology, instrumentation and processing techniques for an application. 									
Objectives:	<p>Upon completion of this subject students will be able to:</p> <ul style="list-style-type: none"> # Undertake an advanced, high precision survey job. 									

	<ul style="list-style-type: none"> # Critically assess and apply the appropriate field methodology, equipment and processing techniques for a specific survey task. # Use a range of techniques for managing survey errors and biases including results verification, quality control. # Design and develop innovative techniques and approaches to solving complex survey problems # Maintain a balance between survey accuracy and the overall cost of the work. # Manage a large survey project.
Assessment:	A presentation summarising the results of the survey task (20%) One 1500 word scientific report outlining the technical merits of the methodology and results achieved (70%) Level and quality of contributions made to discussions (10%)
Prescribed Texts:	None
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:	<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 communicate effectively, with the engineering team and with the community at large • Ability to manage information and documentation • Ability to function effectively as an individual and in multidisciplinary and multicultural teams, as a team leader or manager as well as an effective team member
Related Course(s):	Master of Philosophy - Engineering Ph.D.- Engineering
Related Majors/Minors/Specialisations:	Master of Engineering (Geomatics)