GEOM30010 Programming Geomatics Applications

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 2 h lecture and 2 h practical per week Total Time Commitment: 120 hours
Prerequisites:	Surveying and Mapping, Applications of GIS
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
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Subject Overview:	Using practical case studies in Geomatics, this subject will enable students to develop software programs that address specific Geomatics problems. It starts with learning the syntax, program structure, and data types of an Object Oriented Programming language. Course projects involve many aspects of the software development life cycle, from algorithm design to software implementation and maintenance.
Objectives:	On completion of this subject students should be able to: # Design and generate an algorithmic solution to a specified Geomatics problem # Use an object oriented programming language to design, implement and test solutions # Document and maintain software programs.
Assessment:	One 3-hour computer-based exam at the end of semester (60%) Two written programs (one set at the beginning of semester and due mid semester, the other set mid semester and due at the end of semester) and the relevant documentation to support the program. Each worth 20%, equivalent of 3000 words.
Prescribed Texts:	TBA

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:	The following generic skills will be strengthened as a result of this course of study: # 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 # Understanding of professional and ethical responsibilities, and commitment to them # Capacity for lifelong learning and professional development
Related Course(s):	Bachelor of Science
Related Majors/Minors/ Specialisations:	Geomatics Geomatics Physical (Environmental Engineering) Systems