433-380 Graphics and Computation

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Twenty-four hours of lectures and approximately 11 hours of tutorial classes Total Time Commitment: Not available
Prerequisites:	433-252 Software Engineering Principles and Tools, 433-253 Algorithms and Data Structures, 433-254 Software Design and two subjects (25 points) of first year mathematics.
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 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. 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
Coordinator:	Dr Adrian Pearce
Subject Overview:	Topics covered will include 2-D and 3-D analytic geometry for graphics, representation of 3-D objects, computational techniques for realistic graphic rendering, robot configuration and kinematics, and associated numerical methods.
Objectives:	On completion of this subject students should have knowledge of computational approaches and methods for robotics, graphics and related areas.
Assessment:	Project work during semester, expected to take about 36 hours (30%); and a 3-hour end-of-semester written examination (70%). To pass the subject, students must obtain at least 50% overall, and 35/70 in the written examination.
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:	On completion of this subject, students should have: # an ability to apply knowledge of basic science and engineering fundamentals; # an in-depth technical competence in at least one engineering discipline; and # an ability to undertake problem identification, formulation and solution.
Notes:	Students enrolled in the BSc (pre-2008 BSc), BASc or a combined BSc course will receive science credit for the completion of this subject.

Related Course(s):	Bachelor of Engineering (Computer Engineering) Bachelor of Engineering (Electrical Engineering) Bachelor of Engineering (Mechatronics) and Bachelor of Computer Science Bachelor of Engineering (Software Engineering)
Related Majors/Minors/ Specialisations:	Computer Science Computer Science Major