

# COMP30019 Graphics and Interaction

<b>Credit Points:</b>	12.50						
<b>Level:</b>	3 (Undergraduate)						
<b>Dates &amp; Locations:</b>	This subject is not offered in 2011.						
<b>Time Commitment:</b>	Contact Hours: 24 one-hour lectures (two per week) and one-hour tutorials (one per week) Total Time Commitment: 120 hours						
<b>Prerequisites:</b>	<p>The prerequisites are:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP20003 Algorithms and Data Structures</td> <td>Not offered 2011</td> <td>12.50</td> </tr> </tbody> </table> <p>OR</p> <p>433-253 Algorithms and Data Structures</p>	Subject	Study Period Commencement:	Credit Points:	COMP20003 Algorithms and Data Structures	Not offered 2011	12.50
Subject	Study Period Commencement:	Credit Points:					
COMP20003 Algorithms and Data Structures	Not offered 2011	12.50					
<b>Corequisites:</b>	None						
<b>Recommended Background Knowledge:</b>	None						
<b>Non Allowed Subjects:</b>	433-380 Graphics and Computation, 433-371 Interactive System Design						
<b>Core Participation Requirements:</b>	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: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>						
<b>Contact:</b>	Associate Professor Tim Baldwin email: <a href="mailto:tbaldwin@unimelb.edu.au">tbaldwin@unimelb.edu.au</a> ( <a href="mailto:tbaldwin@unimelb.edu.au">mailto:tbaldwin@unimelb.edu.au</a> )						
<b>Subject Overview:</b>	This subject introduces the technologies of computer graphics and human-computer interaction along with the biological, psychological and social aspects of human perception and action that inform the application of those technologies. Topics covered include: 2D and 3D computer graphics, colour and illumination models, raster and vector graphics; geometric modelling, rendering (shading) and visualisation; geometric transformations (including projection), computational matrix geometry and/or animation (kinematics); interaction categories and styles (particularly graphical user interfaces); usability, accessibility (interaction for people with disabilities) and/or internationalisation (design for different countries and cultures); and at least one additional topic such as virtual reality, computer games, augmented reality, telepresence, or other modalities such as interaction through the sense of touch (haptics), audio or image processing and analysis.						
<b>Objectives:</b>	<p>On completion of this subject, students should be able to:</p> <ul style="list-style-type: none"> <li># Evaluate, design, and implement software for human-computer interaction making use of computer graphics and other appropriate technologies; and</li> <li># Apply principles of computer graphics to specific problems in a variety of domains</li> </ul>						
<b>Assessment:</b>	Project work during semester, expected to take about 36 hours (40%); a mid-semester test (10%); and a 2-hour end-of-semester written examination (50%). To pass the subject, students must obtain at least 50% overall and 30/60 in the mid-semester test and end-of-semester written examination combined.						
<b>Prescribed Texts:</b>	TBA						

<b>Breadth Options:</b>	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> <li># <b>Bachelor of Arts</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-ARTS">https://handbook.unimelb.edu.au/view/2011/B-ARTS</a>)</li> <li># <b>Bachelor of Commerce</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-COM">https://handbook.unimelb.edu.au/view/2011/B-COM</a>)</li> <li># <b>Bachelor of Environments</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-ENVS">https://handbook.unimelb.edu.au/view/2011/B-ENVS</a>)</li> <li># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-MUS">https://handbook.unimelb.edu.au/view/2011/B-MUS</a>)</li> </ul> <p>You should visit <b>learn more about breadth subjects</b> (<a href="http://breadth.unimelb.edu.au/breadth/info/index.html">http://breadth.unimelb.edu.au/breadth/info/index.html</a>) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>On completion of this subject, students should have developed the following generic skills:</p> <ul style="list-style-type: none"> <li># Ability to undertake problem identification, formulation and solution</li> <li># Ability to utilise a systems approach to complex problems and to design and operational performance</li> <li># 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</li> <li># Understanding of professional and ethical responsibilities, and commitment to them</li> </ul>
<b>Related Course(s):</b>	<p>Bachelor of Engineering (Mechatronics) and Bachelor of Computer Science          Bachelor of Engineering (Software Engineering)          Bachelor of Science</p>
<b>Related Majors/Minors/Specialisations:</b>	<p>B-ENG Software Engineering stream          Computer Science          Master of Engineering (Software)          Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses          Software Systems</p>