

# Computer Science

<b>Year and Campus:</b>	2014																		
<b>Coordinator:</b>	Dr Aaron Harwood																		
<b>Contact:</b>	<p><b>Melbourne Graduate School of Science</b>  Faculty of Science  The University of Melbourne  Victoria 3010</p> <p>Tel: + 61 3 8344 6128  Fax: +61 3 8344 3351</p> <p>Web: <a href="http://graduate.science.unimelb.edu.au/">http://graduate.science.unimelb.edu.au/</a> (<a href="http://graduate.science.unimelb.edu.au/">http://graduate.science.unimelb.edu.au/</a>)</p>																		
<b>Overview:</b>	The Graduate Diploma allows students who have completed an undergraduate degree to re-focus or expand their body of knowledge by completing the requirement of one of the undergraduate majors (or equivalent) in the Bachelor of Science not already completed. The Graduate Diploma provides a pathway to the Master of Science Streams.																		
<b>Learning Outcomes:</b>	<p>Students who complete the graduate diploma should:</p> <ul style="list-style-type: none"> <li># Demonstrate an independent approach to knowledge that uses rigorous methods of inquiry and appropriate theories and methodologies that are applied with intellectual honesty and a respect for ethical values;</li> <li># Apply critical and analytical skills and methods to the identification and resolution of problems</li> <li># Act as informed and critically discriminating participants within the community of scholars, as citizens and in the work force;</li> <li># Communicate effectively;</li> <li># Commit to continuous learning;</li> <li># Be proficient in the use of appropriate modern technologies, such as the computer and other information technology systems, for the acquisition, processing and interpretation of data.</li> </ul>																		
<b>Structure &amp; Available Subjects:</b>	<p>Completion of 100 points:</p> <ul style="list-style-type: none"> <li># 50 points of study at Level 3;</li> <li># 50 points of study at Level 2 or above.</li> </ul>																		
<b>Subject Options:</b>	<p><b>Subject prerequisites:</b> <i>at least 25 points of level 1 or above Computer Science subjects, or equivalent and 25 points of level 1 or above mathematics or statistics subjects, or equivalent.</i></p> <p><b>Level 2</b></p> <p>Students should select 50 points of level 2 options to meet the pre-requisites for their level 3 choices.</p> <p>Students must take:</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>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>Plus three of:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP20004 Discrete Structures</td> <td>Not offered 2014</td> <td>12.50</td> </tr> <tr> <td>COMP20005 Engineering Computation</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>COMP20006 Programming the Machine</td> <td>Not offered 2014</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	COMP20003 Algorithms and Data Structures	Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	COMP20004 Discrete Structures	Not offered 2014	12.50	COMP20005 Engineering Computation	Semester 1, Semester 2	12.50	COMP20006 Programming the Machine	Not offered 2014	12.50
Subject	Study Period Commencement:	Credit Points:																	
COMP20003 Algorithms and Data Structures	Semester 2	12.50																	
Subject	Study Period Commencement:	Credit Points:																	
COMP20004 Discrete Structures	Not offered 2014	12.50																	
COMP20005 Engineering Computation	Semester 1, Semester 2	12.50																	
COMP20006 Programming the Machine	Not offered 2014	12.50																	

	COMP20007 Design of Algorithms	Semester 1	12.50
	SWEN20003 Object Oriented Software Development	Semester 2	12.50
	<b>Level 3</b>		
	Both of:		
	<b>Subject</b>	<b>Study Period Commencement:</b>	<b>Credit Points:</b>
	COMP30023 Computer Systems	Semester 1	12.50
	COMP30022 IT Project	Semester 2	12.50
	Plus two of:		
	<b>Subject</b>	<b>Study Period Commencement:</b>	<b>Credit Points:</b>
	COMP30021 Theoretical Computer Science	Not offered 2014	12.50
	COMP30019 Graphics and Interaction	Semester 2	12.50
	COMP30018 Knowledge Technologies	Semester 1, Semester 2	12.50
	COMP30020 Declarative Programming	Semester 2	12.50
	SWEN90006 Software Engineering Methods	Semester 2	12.50
	SWEN30006 Software Modelling and Design	Semester 1, Semester 2	12.50
	SWEN90008 Software Processes and Management	Not offered 2014	12.50
<b>Links to further information:</b>	<a href="http://graduate.science.unimelb.edu.au">http://graduate.science.unimelb.edu.au</a>		
<b>Related Course(s):</b>	Graduate Diploma in Science		