

Computing and Software Systems

Year and Campus:	2012																																						
Coordinator:	Dr Shanika Karunasekera																																						
Contact:	Email: karus@unimelb.edu.au (mailto:karus@unimelb.edu.au)																																						
Overview:	<p>This major will be offered from 2014.</p> <p>The Computing and Software Systems major will focus on providing students with considerable technical expertise in computer science and software engineering, including exposure to a variety of programming paradigms, an understanding of the systematic processes underpinning the software development lifecycle, and an appreciation of advanced topics in computing. Graduates from the Computing and Software Systems major will attract ACS accreditation and this major will be a natural pathway to the Master of Engineering (Software) and the Master of Science (Computer Science). Graduates with a management orientation will also consider the Master of Information Systems (MIS).</p>																																						
Objectives:	<p>The objectives of this major are to</p> <ul style="list-style-type: none"> # Give the students a solid background in the theory and practice of computer science and software engineering, through a range of topics available as core and elective subjects. # Prepare students to work in the IT industry if they wish to do so upon completing the major. # Provide the necessary prerequisite knowledge and skills for students who wish to continue with research pathways through an MSc (Computer Science) degree leading to a PhD. # Provide the necessary prerequisite knowledge and skills for students who wish to continue professional pathways through an ME (Software) degree. 																																						
Structure & Available Subjects:	Completion of 50 points of study at Level 3.																																						
Subject Options:	<p>(N.B. A number of these Level 3 subjects will not be offered until after 2012. Refer to Notes, below)</p> <p>Both of</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>SWEN30006 Software Modelling and Design</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>COMP30022 IT Project</td> <td>Not offered 2012</td> <td>12.50</td> </tr> </tbody> </table> <p>Plus one of</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP30023 Computer Systems</td> <td>Not offered 2012</td> <td>12.50</td> </tr> <tr> <td>COMP30024 Artificial Intelligence</td> <td>Not offered 2012</td> <td>12.50</td> </tr> </tbody> </table> <p>Plus one of</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP30018 Knowledge Technologies</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>COMP30020 Declarative Programming</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>COMP30023 Computer Systems</td> <td>Not offered 2012</td> <td>12.50</td> </tr> <tr> <td>COMP30024 Artificial Intelligence</td> <td>Not offered 2012</td> <td>12.50</td> </tr> <tr> <td>COMP30025 Theory of Computation</td> <td>Not offered 2012</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	SWEN30006 Software Modelling and Design	Semester 1	12.50	COMP30022 IT Project	Not offered 2012	12.50	Subject	Study Period Commencement:	Credit Points:	COMP30023 Computer Systems	Not offered 2012	12.50	COMP30024 Artificial Intelligence	Not offered 2012	12.50	Subject	Study Period Commencement:	Credit Points:	COMP30018 Knowledge Technologies	Semester 2	12.50	COMP30020 Declarative Programming	Semester 1	12.50	COMP30023 Computer Systems	Not offered 2012	12.50	COMP30024 Artificial Intelligence	Not offered 2012	12.50	COMP30025 Theory of Computation	Not offered 2012	12.50
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	INFO30004 Usability Engineering	Semester 1	12.50
	INFO30005 Web Information Technologies	Semester 1	12.50
Notes:	<p>Students who intend to undertake this major in 2014 should ensure they have completed either one of the following sequences of Level 1 and Level 2 subjects:</p> <p>Sequence 1 - Pathway for students seeking to keep Informatics and other non-Engineering System majors as possible options</p> <ul style="list-style-type: none"> # COMP10001 Foundations of Computing # COMP10002 Foundations of Algorithms # MAST10006 Calculus 2 # MAST10007 Linear Algebra # COMP20007 Design of Algorithms (offered for the first time in 2013) # SWEN20003 Object Oriented Software Development # INFO20003 Database Systems <p>Sequence 2 - Alternative pathway for students seeking to keep Engineering System majors as possible options</p> <ul style="list-style-type: none"> # ENGR10004 Engineering Systems Design 1 # ENGR10003 Engineering Systems Design 2 # MAST10006 Calculus 2 # MAST10007 Linear Algebra # COMP20005 Engineering Computation # COMP20003 Algorithms and Data Structures # SWEN20003 Object Oriented Software Development <p>Subjects not offered in 2012</p> <p>The following Level 3 subjects within this major will be offered for the first time in 2014:</p> <ul style="list-style-type: none"> # COMP30023 Computer Systems # COMP30024 Artificial Intelligence # COMP30025 Theory of Computation # INFO30004 Usability Engineering # INFO30005 Web Information Technologies 		
Related Course(s):	Bachelor of Science		