

# SWEN20003 Object Oriented Software Development

<b>Credit Points:</b>	12.50												
<b>Level:</b>	2 (Undergraduate)												
<b>Dates &amp; Locations:</b>	This subject is not offered in 2013.												
<b>Time Commitment:</b>	Contact Hours: 36 hours, comprising of two 1-hour lectures and one 2-hour workshop per week Total Time Commitment: 120 hours												
<b>Prerequisites:</b>	<p><b>One of the following:</b></p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP20007 Design of Algorithms</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>COMP20006 Programming the Machine</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>COMP20005 Engineering Computation</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	COMP20007 Design of Algorithms	Not offered 2013	12.50	COMP20006 Programming the Machine	Not offered 2013	12.50	COMP20005 Engineering Computation	Semester 1	12.50
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COMP20007 Design of Algorithms	Not offered 2013	12.50											
COMP20006 Programming the Machine	Not offered 2013	12.50											
COMP20005 Engineering Computation	Semester 1	12.50											
<b>Corequisites:</b>	None												
<b>Recommended Background Knowledge:</b>	None												
<b>Non Allowed Subjects:</b>	<p>433-254 Software Design</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP90041 Programming and Software Development</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	COMP90041 Programming and Software Development	Not offered 2013	12.50						
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<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt; &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>												
<b>Contact:</b>	Associate Professor Shanika Karunasekera email: <a href="mailto:karus@unimelb.edu.au">karus@unimelb.edu.au</a> ( <a href="mailto:karus@unimelb.edu.au">mailto:karus@unimelb.edu.au</a> )												
<b>Subject Overview:</b>	Developing medium and large scale software systems requires analysis and design prior to implementation. This subject introduces students to software design, with specific focus on object-oriented design, and the implementaiton of designs using an object-oriented programming language. Topics include: software design principles; object-oriented design concepts and modelling; design patterns and their applications; object-oriented programming and frameworks.												
<b>Objectives:</b>	<p>On completion of this subject, students should be able to:</p> <ul style="list-style-type: none"> <li># Apply software design principles to object-oriented design</li> <li># Develop object-oriented models for a medium-sized software system</li> <li># Evaluate design trade-off of different designs</li> </ul>												

	<ul style="list-style-type: none"> <li># Implement an object-oriented design in a suitable language</li> <li># Use commonly available object-oriented design frameworks for application development</li> <li># Apply knowledge of basic science and engineering fundamentals</li> <li># Develop simple programs that require concurrent execution</li> </ul>
<b>Assessment:</b>	Project work during semester, expected to take about 36 hours (30%) A mid-semester test (10%) 2-hour end-of-semester written examination (60%) To pass the subject, students must obtain at least 50% overall 15/30 in project work And 35/70 in the mid-semester test and end-of-semester written examination combined.
<b>Prescribed Texts:</b>	None
<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><u>Bachelor of Arts</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-ARTS">https://handbook.unimelb.edu.au/view/2013/B-ARTS</a>)</li> <li># <b><u>Bachelor of Commerce</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-COM">https://handbook.unimelb.edu.au/view/2013/B-COM</a>)</li> <li># <b><u>Bachelor of Environments</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-ENVS">https://handbook.unimelb.edu.au/view/2013/B-ENVS</a>)</li> <li># <b><u>Bachelor of Music</u></b> (<a href="https://handbook.unimelb.edu.au/view/2013/B-MUS">https://handbook.unimelb.edu.au/view/2013/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:</p> <ul style="list-style-type: none"> <li># An ability to apply knowledge of basic science and engineering fundamentals</li> <li># In-depth technical competence in at least one engineering discipline</li> <li># An ability to undertake problem identification, formulation and solution</li> <li># An expectation of the need to undertake lifelong learning, and the capacity to do so</li> </ul>
<b>Notes:</b>	<p>This subject is available as breadth in the following Bachelors courses: Arts, Commerce, Environments and Music.</p> <p>This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BAsc or a combined BSc course.</p>
<b>Related Course(s):</b>	Bachelor of Computer Science and Bachelor of Laws
<b>Related Majors/Minors/Specialisations:</b>	<p>B-ENG Software Engineering stream          Computer Science          Science credit subjects* for pre-2008 BSc, BAsc and combined degree science courses          Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.</p>
<b>Related Breadth Track(s):</b>	Computing