

SWEN30006 Software Modelling and Design

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 one-hour lectures (two per week) and 12 one hour workshops (one per week) Total Time Commitment: Not available
Prerequisites:	433-294 Object Oriented Software Development OR 433-520 Programming and Software Development OR 433-254 Software Design 433-298 Algorithms and Data Structures OR 433-521 Algorithms and Complexity OR 433-253 Algorithms and Data Structures
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	433-341 Software Engineering Process & Practice
Core Participation Requirements:	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: http://www.services.unimelb.edu.au/disability/
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Contact:	Engineering Student Centre elbourne School of Engineering Office Building 173, Grattan Street The University of Melbourne VIC 3010 Australia General telephone enquiries + 61 3 8344 6703 + 61 3 8344 6507 Facsimiles + 61 3 9349 2182 + 61 3 8344 7707 Email eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au)
Subject Overview:	Software Systems must be carefully designed and analysed before they are constructed; this subject teaches the knowledge and skills needed for this. Topics include requirements analysis, including use-cases; the Unified Modelling Language (UML); software design processes and principles; some common design patterns and architectural styles; software tools for analysis and design. The emphasis will be on techniques appropriate for object-oriented programming.
Objectives:	On completion of this subject, students should be able to: <ul style="list-style-type: none"> # Analyse systems requirements # Carry out an architectural and detailed design for medium sized software systems # Select appropriate design patterns for a design, and # Choose an implementation platform and framework to suit a design.

Assessment:	Project work during semester, expected to take about 36 hours (30%); a mid-semester test (10%); and a 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.
Prescribed Texts:	TBA
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2010/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2010/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/B-MUS) <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>On completion of this subject students should have developed the following generic skills:</p> <ul style="list-style-type: none"> # Ability to undertake problem identification, formulation and solution # Proficiency in engineering design # Ability to utilise a systems approach to design and operational performance.
Related Course(s):	<p>Bachelor of Computer Science Bachelor of Engineering Bachelor of Engineering (Biomedical) Bioinformatics Bachelor of Engineering (Computer Engineering) Bachelor of Engineering (Electrical Engineering) Bachelor of Engineering (IT) Computer Engineering Bachelor of Engineering (IT) Electrical Engineering Bachelor of Engineering (Mechatronics) and Bachelor of Computer Science Bachelor of Science</p>
Related Majors/Minors/Specialisations:	<p>Computer Science Computer Science Master of Engineering (Software) Software Systems</p>