

Master of Engineering (Software)

Year and Campus:	2010
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Overview:	<p>Software engineers combine an understanding of computer science, design, engineering management, mathematics and psychology to manage the development, maintenance and production of large scale software systems.</p> <p>This specialisation focuses on team-based projects, in which students must conceive, design, implement and operate software engineering solutions. Students develop technical skills and the ability to apply engineering principles to solving real-world problems.</p> <p>A year-long industry project provides the opportunity to work closely with ICT professionals, and many graduates find roles in this field, in addition to those in other service-oriented and software development areas.</p>
Objectives:	To produce graduates who are both skilled in software engineering principles and have the ability to apply them to complex, open-ended engineering tasks and problems.
Structure & Available Subjects:	<p>The Master of Engineering (Software) consists of:</p> <ul style="list-style-type: none"> # <i>Preliminary year:</i> A foundation year generally tailored to individual students required only for students entering from non-Engineering backgrounds. Two computer science and software engineering electives are chosen in this year. Graduates from corresponding University of Melbourne New Generation degree pathways enter at second year. # <i>Second year:</i> generally the entry point for graduates of New Generation degrees (Bachelor of Commerce or Bachelor of Science) and graduates with up to 100 points of credit (see entry requirements) if continuing within a discipline in the Master of Engineering. Consists of Engineering subjects at a significant level of depth in the chosen discipline. Students will undertake a software engineering project, a computer science foundation elective and two computer science and software engineering advanced electives. # <i>Final year:</i> Consists of Engineering subjects at a significant level of depth to ensure that students are eligible to practice as engineers upon graduation. An advanced software project, two software engineering electives, two approved electives and two advanced computer science and software engineering electives feature as the final year. <p>As the Master of Engineering commences in 2010, only the first year of the structure and available subjects are shown. For further information about structures and subjects see: http://www.eng.unimelb.edu.au/Postgrad/MEng/me_software.html (http://www.eng.unimelb.edu.au/Postgrad/MEng/me_biomedical.html)</p>
Subject Options:	<p>Core and elective requirements in the Master of Engineering (Software)</p> <p>Students must complete the following in the Master of Engineering (Software):</p> <ul style="list-style-type: none"> # 162.5 credit points (eleven subjects) of core subjects # 25 credit points (two subjects) of computer science and software engineering electives # 12.5 credit points (one subject) of computer science foundation electives # 37.5 credit points (three subjects) of computer science and software engineering advanced electives

25 points (two subjects) of software engineering advanced electives

25 points (two subjects) of approved electives

First year core subjects in the Master of Engineering (Software) for students commencing March (Semester 1) 2010

The following core subjects must be taken in the first year of the Master of Engineering (Software) for students commencing in March (Semester 1) 2010

Subject	Study Period Commencement:	Credit Points:
ENGR90021 Engineering Communication	Semester 1, Semester 2	12.50
COMP20006 Programming the Machine	Semester 1, Semester 2	12.50
COMP90038 Algorithms and Complexity	Semester 1, Semester 2	12.50
COMP90041 Programming and Software Development	Semester 1, Semester 2	12.50
SWEN30006 Software Modelling and Design	Semester 1	12.50
COMP20004 Discrete Structures	Semester 2	12.50

First year computer science and software engineering elective subjects in the Master of Engineering (Software) for students commencing March (Semester 1) 2010

Students must select two of the following computer science and software engineering elective subjects from the list below in the first year of the Master of Engineering (Software) if the student commences in March (Semester 1) 2010

Subject	Study Period Commencement:	Credit Points:
COMP30017 Operating Systems and Network Services	Semester 1	12.50
COMP30019 Graphics and Interaction	Semester 2	12.50
COMP30021 Theoretical Computer Science	Semester 2	12.50
COMP30020 Declarative Programming	Semester 1	12.50
COMP30018 Knowledge Technologies	Semester 2	12.50
COMP90015 Distributed Systems	Semester 1, Semester 2	12.50

First year core subjects in the Master of Engineering (Software) for students commencing July (Semester 2) 2010

The following core subjects must be taken in the first year of the Master of Engineering (Software) for students commencing in July (Semester 2) 2010

Subject	Study Period Commencement:	Credit Points:
ENGR90021 Engineering Communication	Semester 1, Semester 2	12.50
COMP90041 Programming and Software Development	Semester 1, Semester 2	12.50
COMP90038 Algorithms and Complexity	Semester 1, Semester 2	12.50
COMP20006 Programming the Machine	Semester 1, Semester 2	12.50

Links to further information:

http://www.eng.unimelb.edu.au/Postgrad/MEng/me_software.html

Related Course(s):

Master of Engineering