

## Master of Engineering (Structural)

<b>Year and Campus:</b>	2010
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<b>Overview:</b>	<p>Structural engineers apply mathematical and scientific principles to the design, development and evaluation of materials and systems used in building load-bearing structures like roads, buildings, rail lines, dams and offshore platforms. It is the objective of this course that graduates have acquired a sound fundamental understanding of the scientific principles underlying a number of sub-disciplines that are associated with structural engineering. Great emphasis is also placed on the development of generic skills with management, communication, problem-solving and design and innovation in structural engineering. Students in this specialisation learn from high quality researchers recognised internationally for their expertise in high-rise structures, and wind, waves, earthquake, impact and blast resistant technologies. Design seminars, field work and workshops provide students with opportunities to work with industry professionals in their final year. Career opportunities exist in a variety of roles related to the design of structures, their longevity, and their ability to withstand extremes such as earthquake, high winds, blast or fire.</p>
<b>Objectives:</b>	To produce graduates who have acquired the educational and professional standards of Engineers Australia with which the course is accredited, and are both skilled in structural engineering principles and have the ability to apply them to complex, open-ended engineering tasks and problems.
<b>Structure &amp; Available Subjects:</b>	<p>The Master of Engineering (Structural) consists of 300 points of study, typically across six semesters. This includes:</p> <ul style="list-style-type: none"> <li># 100 points of foundation study tailored to individual students who enter from non-Engineering backgrounds; and</li> <li># 200 points of mainly engineering discipline specific study at the level of depth required to practice as a professional engineer upon graduation, including a 25-point capstone project completed in the final year of study.</li> </ul> <p>From 2011, students entering with appropriate engineering background may be granted up to 150 point of credit. For example, students entering from the University of Melbourne new generation Bachelor of Science with an 'Engineering Systems' major will be granted 100 points of credit for the foundation year. Credit will also be granted to students who have completed a specified breadth sequence in the new generation Bachelor of Commerce or appropriate electives as part of any major in the new generation Bachelor of Science. Students entering from another institution may also be awarded credit in this way.</p> <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: <a href="http://www.eng.unimelb.edu.au/Postgrad/MEng/me_structural.html">http://www.eng.unimelb.edu.au/Postgrad/MEng/me_structural.html</a> (<a href="http://www.eng.unimelb.edu.au/Postgrad/MEng/me_structural.html">http://www.eng.unimelb.edu.au/Postgrad/MEng/me_structural.html</a>)</p>
<b>Subject Options:</b>	<p>Core and elective requirements in the Master of Engineering (Structural)          Students must complete 100 credit points (eight subjects) of core subjects in the first year of the Master of Engineering (Structural).</p> <p><b>First year core subjects in the Master of Engineering (Structural) for students commencing March (Semester 1) 2010</b>          Students who commence the Master of Engineering (Structural) in March (Semester 1) 2010, must select the following core subjects in the first year of the Master of Engineering (Structural)</p>

Subject	Study Period Commencement:	Credit Points:
ENGR90021 Engineering Communication	Semester 1, Semester 2	12.50
ENGR20004 Engineering Mechanics	January, Semester 1, Semester 2	12.50
CVEN30008 Risk Analysis	Semester 1	12.50
MAST20029 Engineering Mathematics	Summer Term, Semester 1, Semester 2	12.50
ENEN20002 Earth Processes for Engineering	Semester 2	12.50
ENGR20003 Engineering Materials	Semester 2	12.50
ENGR30001 Fluid Mechanics	Semester 1, Semester 2	12.50
CVEN30009 Structural Theory and Design	Semester 2	12.50

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

Students who commence the Master of Engineering (Structural) in July (Semester 2) 2010, must select the following core subjects in the first year of the Master of Engineering (Structural)

Subject	Study Period Commencement:	Credit Points:
ENGR90021 Engineering Communication	Semester 1, Semester 2	12.50
ENGR20004 Engineering Mechanics	January, Semester 1, Semester 2	12.50
ENEN20002 Earth Processes for Engineering	Semester 2	12.50
MAST20029 Engineering Mathematics	Summer Term, Semester 1, Semester 2	12.50

**Links to further information:**

[http://www.eng.unimelb.edu.au/Postgrad/MEng/me\\_structural.html](http://www.eng.unimelb.edu.au/Postgrad/MEng/me_structural.html)

**Related Course(s):**

Master of Engineering