

# Master of Engineering (Mechanical with Business)

Year and Campus:	2016
Coordinator:	A/Prof Jason Monty Email: montyjp@unimelb.edu.au
Contact:	<p><b>Melbourne School of Engineering</b></p> <p>Current students:</p> <ul style="list-style-type: none"> <li># General information: <a href="https://ask.unimelb.edu.au">https://ask.unimelb.edu.au</a> (<a href="https://ask.unimelb.edu.au">https://ask.unimelb.edu.au</a>)</li> <li># <b>Contact Stop 1</b> (<a href="http://students.unimelb.edu.au/stop1">http://students.unimelb.edu.au/stop1</a>)</li> </ul> <p>Future students:</p> <ul style="list-style-type: none"> <li># Further information: <a href="https://futurestudents.unimelb.edu.au/">https://futurestudents.unimelb.edu.au/</a> (<a href="https://futurestudents.unimelb.edu.au/">https://futurestudents.unimelb.edu.au/</a>)</li> <li># Email: <a href="http://www.eng.unimelb.edu.au/study/degrees/master-engineering-mechanical-business/overview">course information and email link for queries</a> (<a href="http://www.eng.unimelb.edu.au/study/degrees/master-engineering-mechanical-business/overview">http://www.eng.unimelb.edu.au/study/degrees/master-engineering-mechanical-business/overview</a>)</li> </ul>
Overview:	<p>Mechanical engineers focus on turning energy into power and motion. More specifically, this specialisation looks at the generation, conversion and use of energy, as well as the design, construction and operation of devices and systems. Students in this course learn from staff with world-leading expertise in fluid mechanics, turbulence, thermodynamics, control and biomechanics, and have the chance to undertake an industry project that is both research and industrially based. Group activities and site visits help to consolidate theoretical knowledge and prepare students to undertake careers in fields from automotive design and manufacturing to software programming; and in non-engineering roles in organisations such as banks and consulting firms.</p>
Learning Outcomes:	<p>To produce graduates who are both skilled in mechanical engineering principles and have the ability to apply them to complex, open-ended engineering tasks and problems.</p>
Structure & Available Subjects:	<p>The Master of Engineering (Mechanical) consists of 300 points of study - 300 points core subjects as detailed below.</p> <p>Advanced standing will be awarded for equivalent subjects taken in prior study on the following basis:</p> <ul style="list-style-type: none"> <li># A maximum of 100 points for applicants with a 4 year Bachelor of Engineering or equivalent.</li> <li># A maximum of 100 points for applicants with a 3 year undergraduate degree. Students entering with a three year bachelor degree must complete at least 200 points of study within the Masters of Engineering. In cases where applicants have completed the equivalent of more than 100 points of core masters subjects, discipline specific electives must be taken to fulfil the 200 minimum masters study requirement.</li> </ul> <p>Note: applicants from the University of Melbourne with:</p> <ul style="list-style-type: none"> <li># An appropriate "Engineering System" major will receive 100 points of advanced standing. Applicants who have completed more than 100 points of core subjects in their undergraduate degree will obtain exemption for the cores taken but will need to replace the points in excess of 100 points with approved MC-ENG Mechanical Engineering elective subjects.</li> <li># Engineering breadth sequences (including those in the Bachelor of Commerce) will receive advanced standing to a maximum of 100 points.</li> </ul>
Subject Options:	<p>Total 300 points core (compulsory).</p> <p>Students must complete all 300 points of subjects, or have advanced standing or exemption.</p> <p>If possible, students should complete MCEN90013 Design for Integration before enrolling in the Capstone Project.</p>

The order of subjects below is one way of progressing through the course - students who meet subject requisites may tailor their individual study plan to take into account advanced standing and their study load. Students can plan their study online.

**Suggested first 100 points:**

Suggested study plan for the first 100 points:

# 100 points Core

Core (Total 100 points)

Subject	Study Period Commencement:	Credit Points:
ENGR20004 Engineering Mechanics	Summer Term, Semester 1, Semester 2	12.50
MAST20029 Engineering Mathematics	Summer Term, Semester 1, Semester 2	12.50
ELEN20005 Foundations of Electrical Networks	January, Semester 2	12.50
ENGR90021 Engineering Practice and Communication	Semester 1, Semester 2	12.50
MCEN30017 Mechanics & Materials	Semester 1	12.50
MCEN30014 Mechanical Design	Semester 2	12.50
MCEN30018 Thermodynamics and Fluid Mechanics	Semester 1, Semester 2	12.50
MCEN30020 Systems Modelling and Analysis	Semester 2	12.5

**Suggested second 100 points:**

Suggested study plan for the second 100 points:

# 100 points Core

Core (Total 100 points)

Subject	Study Period Commencement:	Credit Points:
MCEN90012 Design for Manufacture	Semester 1	12.50
MCEN90014 Materials	Semester 1	12.50
MCEN90015 Thermodynamics	Semester 1	12.50
ENGM90012 Marketing Management for Engineers	Semester 2	12.50
MCEN90013 Design for Integration	Semester 2	12.50
MCEN90026 Solid Mechanics	Semester 2	12.50
ENGM90014 The World of Engineering Management	Semester 1, Semester 2	12.50
ENGM90006 Engineering Contracts and Procurement	Semester 2	12.50

**Suggested third 100 points:**

Suggested study plan for the second 100 points:

# 100 points Core

Core (Total 100 points)

Subject	Study Period Commencement:	Credit Points:
MCEN90022 Capstone Project	Year Long, Semester 1	25

	COMP20005 Engineering Computation	Semester 1, Semester 2	12.50
	ELEN90055 Control Systems	Semester 1, Semester 2	12.50
	MCEN90038 Dynamics	Semester 1	12.5
	ENGM90011 Economic Analysis for Engineers	Semester 1	12.50
	MCEN90008 Fluid Dynamics	Semester 2	12.50
	ENGM90013 Strategy Execution for Engineers	Semester 1, Semester 2	12.50
<b>Links to further information:</b>	<a href="http://www.eng.unimelb.edu.au/Postgrad/MEng/me_mechanical.html">http://www.eng.unimelb.edu.au/Postgrad/MEng/me_mechanical.html</a>		
<b>Notes:</b>	NOTE: Credit may not be obtained for both ENGR30001 Fluid Mechanics & Thermodynamics/ ENGR30002 Fluid Mechanics and MCEN30018 Thermodynamics and Fluid Mechanics, OR for MCEN90010 Finance & HR for Engineers and ENGM90011 Economic Analysis for Engineers.		
<b>Related Course(s):</b>	Master of Engineering		