Mechanical Systems

Year and Campus:	2016
Coordinator:	Associate Professor Jason Monty, Mechanical Engineering
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Overview:	Students who have undertaken the Mechanical Systems major will be able to rigorously integrate fundamental science in mechanics with engineering principles to solve practical problems involving mechanical systems. Core skills and knowledge that will be developed include: fundamental scientific comprehension that will lead to accurate mathematical modelling of mechanical systems, analytical and abstract thinking, problem-solving and design skills, and the ability to carry out laboratory experiments to confirm possible solutions to complex problems. In all levels of this major, we will ensure the development of excellent communication skills that will enable our graduates to deliver complex scientific information in a clear and concise fashion. The Mechanical Systems major will open up various pathways for students, which will include accredited professional or scientific research careers in mechanical and mechatronics engineering (through further study in the Masters in Engineering (ME) or PhD programs), teaching, management and also careers in the finance industry.
Learning Outcomes:	The objective of the mechanical systems major is to contribute to the academic preparation of graduates who embody University of Melbourne graduate attributes, as well as additional attributes more specific to the Bachelor of Science.
Structure & Available Subjects:	Completion of 50 points of study at Level 3.
Subject Options:	All four of:

Subject	Study Period Commencement:	Credit Points:
MCEN30017 Mechanics & Materials	Semester 1	12.50
MCEN30018 Thermodynamics and Fluid Mechanics	Semester 1, Semester 2	12.50
MCEN30014 Mechanical Design	Semester 2	12.50
MCEN30020 Systems Modelling and Analysis	Semester 2	12.5

Notes:	In addition to these four core subjects, students must complete either MAST20029 Engineering Mathematics OR both of MAST20009 Vector Calculus AND MAST20030 Differential Equations at Level 2.
Related Course(s):	Bachelor of Science