

2011-13 Cal Poly Catalog**Mechanical Engineering Department****MS MECHANICAL ENGINEERING****General Characteristics**

The Master of Science in Mechanical Engineering prepares students to design and develop advanced products and systems; to conduct research and analysis; to work in industry; or to continue study toward a Ph.D. Graduate students enjoy the same flavor of learn-by-doing as other Cal Poly students. Students may choose their technical electives in the area that interests them, including thermo-sciences, controls and robotics, mechanics and stress analysis, composite materials.

Prerequisites

For admission as a classified graduate student, in addition to the University requirements, an applicant should hold a BS degree in Mechanical Engineering with a grade point average of 3.0. Other closely related majors may be accepted as conditionally classified graduate students until they take necessary prerequisite mechanical engineering courses as approved by the graduate advisor. For additional information on University requirements, please refer to the Graduate Programs of this catalog.

Two program options are available:

Thesis option. 36 units of advisor-approved coursework, 9 units of thesis research/design, and an oral thesis defense examination.

Non-thesis option. 45 units of advisor-approved coursework and a written comprehensive examination.

MS MECHANICAL ENGINEERING*Units*

Core Courses	17
ME 599 Design Project (Thesis) (9) <i>or</i> 9 units of approved technical electives <i>and</i> a comprehensive examination Approved MATH/STAT/CSC courses (8)	
Select a minimum of 12 units from the following:	12
ME 501 Continuum Mechanics and Elasticity (4)	
ME 503 Inelastic Stress Analysis (4)	
ME 504 Finite Element Analysis I (4)	
ME 506 System Dynamics (4)	
ME 507 Mechanical Control System Design (4)	
ME 517 Advanced Vibrations (4)	
ME 518 Machinery Vibration and Rotor Dynamics (4)	
ME 531 Acoustics and Noise Control (4)	
ME 540 Viscous Flow (4)	
ME 541 Advanced Thermodynamics (4)	
ME 542 Dynamics of Compressible Flow (4)	
ME 551 Mechanical Systems Analysis (4)	
ME 552 Advanced Heat Transfer I (4)	
ME 553 Advanced Heat Transfer II (4)	
ME 554 Computational Heat Transfer (4)	
ME 579 Fluid Power Control (4)	
Approved technical electives	16
(400 or 500-level ME or non-ME courses; maximum of 12 units of 400-level courses allowed)	
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