

# MS MECHANICAL ENGINEERING

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## Program Learning Outcomes

Upon completing the requirements of the Master of Science in Mechanical Engineering, students should be able to:

1. Devise a plan to research issues relevant to the problem at hand and to conduct experiments or develop a computer model.
2. Formulate solutions to advanced engineering problems.
3. Analyze the collected or generated data and draw conclusions from the results.
4. Analyze and synthesize advanced engineering solutions.

### Required Courses

ME 599	Design Project (Thesis)	9
	Or 9 units of approved Technical Electives and a Comprehensive Examination <sup>1</sup>	
	Approved MATH/STAT/CSC Courses <sup>2</sup>	8
	Select from the following:	12
ME 501	Continuum Mechanics and Elasticity	
ME 503	Inelastic Stress Analysis	
ME 504	Finite Element Analysis	
ME 506	System Dynamics	
ME 507	Mechanical Control System Design	
ME 517	Advanced Vibrations	
ME 518	Machinery Vibration and Rotor Dynamics	
ME 540	Viscous Flow	
ME 541	Advanced Thermodynamics	
ME 542	Dynamics and Thermodynamics of Compressible Flow	
ME 552	Advanced Heat Transfer I	
ME 553	Advanced Heat Transfer II	
ME 554	Computational Heat Transfer	
ME 579	Fluid Power Control	
	<b>Approved Technical Electives</b>	
	400 or 500-level ME or non-ME courses; maximum of 12 units of 400-level courses allowed	16
	<b>Total units</b>	<b>45</b>

<sup>1</sup> Must be at 500 level.

<sup>2</sup> 4 units required at 500 level.