

MECHANICAL ENGINEERING - MASTER OF ENGINEERING IN MECHANICAL ENGINEERING

The Mechanical Engineering Masters of Engineering degree is a coursework-based graduate degree that requires neither a thesis nor a project.

(30 credits)

Prefix	Title	Credits
Requirements		
M E 570	Engineering Analysis I	3
Core Courses		
Select one course from each of the following 4 topic areas: ¹		12
<i>Solid Mechanics</i>		
Select one from the following:		
M E 502	Elasticity I	
M E 504	Continuum Mechanics	
<i>Thermal Science</i>		
Select one from the following:		
M E 503	Thermodynamics	
M E 540	Intermediate Heat Transfer	
<i>Fluids</i>		
Select one from the following:		
M E 530	Intermediate Fluid Mechanics	
M E 533	Numerical Methods for Fluid Mechanics and Heat Transfer	
<i>Dynamics and Vibrations</i>		
Select one from the following:		
M E 511	Dynamics	
M E 512	Vibrations	
<i>Engineering Analysis and Control</i>		
Select one from the following:		
M E 518	Finite Element Analysis	
M E 527	Linear Systems Theory	
Additional Requirements		
Select three courses (500 level or above) from any departments and two courses (500 level or above) from any college: ^{2,3}		12
M E 598	Integrative Learning Experience ⁴	3
Total Credits		30

¹ Graduate A E courses may be substituted for M E courses with the approval of the Graduate Program Coordinator.

² If course is not in A E or M E program, approval of the Graduate Program Coordinator is required.

³ If M E 510 Special Topics or A E 510 Special Topics is taken, it must be a regular course with a proper course title taught in class. Any 510 course as an independent study would never be counted.

⁴ Professional degree students must complete an Integrative Learning Experience that allows them to demonstrate a synthesis of foundational and concentration competencies. M E 598 Integrative Learning Experience serves that purpose as the final exam for Graduate School Requirements.

Academic Advisor and Final Exit Survey

Newly admitted Mechanical Engineering Masters of Engineering students will be assigned the Graduate Program Coordinator as an academic advisor.

All students must take Professional Master's Degree Exit Survey to graduate, which will be conducted by the Graduate Program Coordinator and will be taken after completing all coursework.

New Mexico State University master's accelerated program provides **the opportunity for academically qualified undergraduate students** to begin working on a master's degree **during their junior and senior years** while completing a bachelor's degree. Typically, a bachelor's degree requires four years to complete, and a master's degree requires an additional two years. The master's accelerated programs allow students the opportunity to complete a graduate program in an accelerated manner. You can also check NMSU's catalog for additional information about our programs.

Please talk to an MAE faculty advisor about your MAP plan and develop a course plan in consultation with the advisor. The faculty advisor should preferably be from the MAE area of your interest.

MAP Requirements

- The Graduate School allows qualified junior or senior students to substitute its graduate courses for required or elective courses in an undergraduate degree program and then subsequently count those same course as fulfilling graduate requirements in a related graduate program.
- Undergraduate students may apply for acceptance to the accelerated master's program after completing 60 semester hours of undergraduate coursework of which a minimum of 25 semester credit hours must be completed at NMSU.
- The grade point average must be at a minimum of 2.75.
- Students must receive a grade of B or higher in this coursework to be counted for graduate credit. If a grade of B- or lower is earned, it will not count toward the graduate degree.

Accepted MAP Courses

The following courses are accepted for use in the MAP program, any other courses may be considered after a consultation with an advisor. An exception will need to be made to the degree audit in order for the additional course(s) to be included on both the Undergraduate and Graduate degrees.

Prefix	Title	Credits
M E 452	Control System Design	3
M E 456	Experimental Modal Analysis	3
M E 457	Engineering Failure Analysis	3
M E 458	Properties and Mechanical Behavior of Materials	3
M E 460	Applied Finite Elements	3
M E 481	Alternative and Renewable Energy	3
M E 483	Introduction to Combustion	3
M E 486	Introduction to Robotics	3
M E 487	Mechatronics	3
A E 451	Aircraft Design	3
A E 464	Advanced Flight Dynamics and Controls	3
A E 469	Hypersonic Aerothermodynamics	3
M E 502	Elasticity I	3
M E 503	Thermodynamics	3

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M E 510	Special Topics ¹	1-6
M E 511	Dynamics	3
M E 512	Vibrations	3
M E 530	Intermediate Fluid Mechanics	3
M E 533	Numerical Methods for Fluid Mechanics and Heat Transfer	3
M E 540	Intermediate Heat Transfer	3
A E 510	Special Topics ¹	1-6
A E 575	Propulsion	3

¹ A E 510 Special Topics must be a regular course with a proper course title taught in class, usually cross-listed with A E 405 Special Topics. Any 510 course as an independent study would never be counted.