Mechanical Engineering M.S.M.E. (Non-Thesis)

Admission Requirements

Regular

1. Completed requirements for the bachelor’s degree or the equivalent in the proposed or closely related field of study in Mechanical Engineering.
2. A 2.75 (4.0 scale) cumulative grade point average or higher on courses in undergraduate work, or equivalent.
3. International students must meet College of Graduate Studies English Proficiency requirements (6.0 IELTS or 80 on TOFEL).

Provisional

A student may be granted provisional admission based upon the recommendation of the Master of Science in Mechanical Engineering Graduate Coordinator and department chair

Non-Degree

Non-degree students are accepted on an individual basis as space is available.

Degree Requirements

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>MENG 7137</td>
<td>Principles of Modeling and Simulation</td>
</tr>
<tr>
<td>TMAE 7136</td>
<td>Mechatronics I</td>
</tr>
<tr>
<td>TMAE 7530</td>
<td>Research in Applied Engineering</td>
</tr>
<tr>
<td>Restricted Elective courses at or above the 5000G level as contracted with the faculty advisor and degree coordinator</td>
<td>12</td>
</tr>
<tr>
<td>MENG 5134G</td>
<td>Vehicle Dynamics</td>
</tr>
<tr>
<td>MENG 5135G</td>
<td>Vibration and Preventive Maintenance</td>
</tr>
<tr>
<td>MENG 5136G</td>
<td>Introduction to Finite Element Analysis</td>
</tr>
<tr>
<td>MENG 5137G</td>
<td>Mechanical System Design</td>
</tr>
<tr>
<td>MENG 5138G</td>
<td>Composite Materials: Manufacturing, Analysis, and Design</td>
</tr>
<tr>
<td>MENG 5139G</td>
<td>Renewable Energy</td>
</tr>
<tr>
<td>MENG 5233G</td>
<td>Wind Energy</td>
</tr>
<tr>
<td>MENG 5234G</td>
<td>Heating, Ventilating, and Air Conditioning</td>
</tr>
<tr>
<td>MENG 5237G</td>
<td>Applied Combustion</td>
</tr>
<tr>
<td>MENG 5238G</td>
<td>Engine Development and Performance</td>
</tr>
<tr>
<td>MENG 5239G</td>
<td>Biofuels Development and Testing</td>
</tr>
<tr>
<td>MENG 5331G</td>
<td>Automation and Computer Integrated Manufacturing Systems</td>
</tr>
<tr>
<td>MENG 5333G</td>
<td>Robot Dynamics, Design and Analysis</td>
</tr>
<tr>
<td>EENG 5431G</td>
<td>Control Systems with Lab</td>
</tr>
<tr>
<td>MENG 5432G</td>
<td>Applied Computational Fluid Dynamics</td>
</tr>
<tr>
<td>MENG 5433G</td>
<td>Analysis of Energy Systems</td>
</tr>
<tr>
<td>MENG 5536G</td>
<td>Mechanical Controls</td>
</tr>
<tr>
<td>MENG 7136</td>
<td>Mechatronics I</td>
</tr>
<tr>
<td>MENG 7138</td>
<td>Mechatronics II</td>
</tr>
<tr>
<td>MENG 5434G</td>
<td>Heat Transfer Principles and Applications</td>
</tr>
<tr>
<td>MENG 7431</td>
<td>Mechanics of Deformable Solids</td>
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<table>
<thead>
<tr>
<th>Elective Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MENG 7432</td>
<td>Fracture Mechanics</td>
</tr>
<tr>
<td>MENG 7890</td>
<td>Selected Topics in Mechanical Engineering</td>
</tr>
<tr>
<td>MENG 7891</td>
<td>Special Problems in Mechanical Engineering</td>
</tr>
<tr>
<td>MFGE 5333G</td>
<td>Additive Manufacturing Studio</td>
</tr>
<tr>
<td>MFGE 5535G</td>
<td>NanoManufacturing</td>
</tr>
<tr>
<td>EENG 5341G</td>
<td>Robotic Systems Design w/Lab</td>
</tr>
<tr>
<td>EENG 5342G</td>
<td>Computer Systems Design w/Lab</td>
</tr>
<tr>
<td>MENG 5431G</td>
<td>Compressible Flow</td>
</tr>
<tr>
<td>EENG 5532G</td>
<td>Wireless Communications Wireless Communications</td>
</tr>
<tr>
<td>EENG 5540G</td>
<td>Communication Systems Communication Systems w/Lab</td>
</tr>
<tr>
<td>TMFG 5133G</td>
<td>Automated Manufacturing Systems</td>
</tr>
<tr>
<td>TMFG 5230G</td>
<td>International Manufacturing</td>
</tr>
<tr>
<td>TMFG 5233G</td>
<td>Manufacturing Applications in Information Technology</td>
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</tbody>
</table>

Capstone Activity

MENG 7895 Independent Study (AND) 3
A 6th Technical Elective 3

Other Non-Thesis Track Requirements:

Comprehensive Exam

Total Credit Hours 30

¹ A minimum of 50% of courses for the Master of Science in Mechanical Engineering degree must be taken above the 5000G level.