Mechanical Engineering Curriculum
Flow Chart
(For students starting in Fall 2019)

Year 1
Fall
MAT 126 (4 cr) Calculus I
PHY 121 (4 cr) General Physics I
MEE 101 (1 cr) Intro to Mechanical Engineering
MEE 120 (2 cr) Engineering Graphics and CAD
ENG 101 (3 cr) College Composition
HVSC General Education Elective (3 cr)

Spring
MAT 127 (4 cr) Calculus II
PHY 122 (4 cr) General Physics II
MEE 125* (3 cr) Computational Tools for Mech. Engineers
MEE 150 (3 cr) Statics

* COS 220 or ECE 177 may substitute for MEE 125

Year 2
Fall
MAT 228 (4 cr) Calculus III
CHY 121 or CHY 131 (3 cr) Chemistry
MEE 230 (3 cr) Thermo I
MEE 251 (3 cr) Strength of Materials
ENG 320 (3 cr) Technical Comm. for Engineering

Spring
MAT 258 (4 cr) Differential Equations & Linear Alg.
ECE 209 (3 cr) Fund of Electric Circuits
MEE 231 (3 cr) Thermo II
MEE 370 (3 cr) Controls

Year 3
Fall
MEE 270 (3 cr) Dynamics
MEE 360 (3 cr) Fluid Mechanics
MEE 270 (3 cr) Dynamics

Spring
STS 332 (3 cr) Statistics for Engineers
MEE 320 (3 cr) Materials
MEE 380 (3 cr) Design I
MEE Technical Elective (3 cr)

Year 4
Fall
MEE 432 (2 cr) Mechanical Lab II
MEE 427 (4 cr) General Physics II
MEE Technical Elective (3 cr)

Spring
MEE 442 (2 cr) Mechanical Engineering
MEE 456 (3 cr) Finite Element Analysis
MEE 487 (4 cr) Heat Transfer
MEE 488 (3 cr) Capstone Design II

See Back Side for Legend

(cr) = Credit Hours
**Flow Chart Legend**

**Pre-requisite:**
- Courses with upper-right notes must be passed prior to taking courses with lower-left notes of the same letter.

**“C or better” pre-requisite**: 
- Courses with upper-right notes must be passed, with a **C or better**, prior to taking courses with "double-bubbled", lower-left notes of the same letter.

**Courses taken together:**
- Courses connected with vertical lines are taken within the same semester.

**Co-requisite:**
- Courses with upper-left notes cannot be taken prior to courses with bottom-right notes of the same letter.

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**MEE Technical Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
<th>Pre-requisite(s)</th>
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</thead>
<tbody>
<tr>
<td>MEE 433</td>
<td>Solar-Thermal Engineering</td>
<td>MEE 230&lt;sup&gt;C&lt;/sup&gt;</td>
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<tr>
<td>MEE 434</td>
<td>Thermo Design of Engines</td>
<td>MEE 231</td>
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<tr>
<td>MEE 444</td>
<td>Robot Dynamics and Control</td>
<td>MEE 270&lt;sup&gt;C&lt;/sup&gt;, MEE 380</td>
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<tr>
<td>MEE 448</td>
<td>Fixed Wing Aircraft Design</td>
<td>MEE 120, MEE 251&lt;sup&gt;C&lt;/sup&gt;, MEE 270&lt;sup&gt;C&lt;/sup&gt;, MEE 360</td>
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<tr>
<td>MEE 450</td>
<td>Intro to Mechanics of Composite Materials</td>
<td>MEE 251&lt;sup&gt;C&lt;/sup&gt;</td>
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<tr>
<td>MEE 452</td>
<td>Aircraft and Automobile Structures</td>
<td>MEE 251&lt;sup&gt;C&lt;/sup&gt;</td>
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<tr>
<td>MEE 453</td>
<td>Experimental Mechanics</td>
<td>MEE 251&lt;sup&gt;C&lt;/sup&gt;</td>
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<tr>
<td>MEE 455</td>
<td>Advanced Strength of Materials</td>
<td>MEE 251&lt;sup&gt;C&lt;/sup&gt;</td>
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<td>MEE 459</td>
<td>Engineering Optimization</td>
<td>MAT 228, MAT 258</td>
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<tr>
<td>MEE 462</td>
<td>Fluid Mechanics II</td>
<td>MEE 360</td>
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<tr>
<td>MEE 463</td>
<td>Applied Computational Fluid Dynamics</td>
<td>MEE 360</td>
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<tr>
<td>MEE 475</td>
<td>Fuel Cell Science &amp; Tech.</td>
<td>MEE 230&lt;sup&gt;C&lt;/sup&gt;, CHY 121 +</td>
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<tr>
<td>MEE 480</td>
<td>Wind Energy Engineering</td>
<td>MAT 258, MEE 251&lt;sup&gt;C&lt;/sup&gt; Co-req: MEE 360 +</td>
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<tr>
<td>MEE 483</td>
<td>Turbomachine Design</td>
<td>MEE 230&lt;sup&gt;C&lt;/sup&gt;, MEE 360</td>
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<tr>
<td>MEE 484</td>
<td>Power Plant Design &amp; Eng.</td>
<td>MEE 230&lt;sup&gt;C&lt;/sup&gt;, MEE 231</td>
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<tr>
<td>MEE 486</td>
<td>Refrigeration &amp; A/C Syst. Design</td>
<td>MEE 231</td>
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<tr>
<td>MEE 489</td>
<td>Offshore Floating System Dsgn.</td>
<td>MEE 360, MEE 380</td>
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<tr>
<td>MEE 490</td>
<td>Modern Control Theory and Applications</td>
<td>MEE 370</td>
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**Notes:**
- **C** “C or better” grade required to use as prerequisite.
- + Substitutional courses for non-MEE majors not listed.