Mechanical Engineering Curriculum
Flow Chart
(Effective January 2019)

Created: 2014NOV14
Modified: 2018NOV29

University of Maine

Year 1
Fall
MAT 126 (4 cr)
Calculus I

PHY 121 (4 cr)
General Physics I

MEE 101 (1 cr)
Intro to Mechanical Engineering

Spring
MAT 127 (4 cr)
Calculus II

PHY 122 (4 cr)
General Physics II

MEE 125* (3 cr)
Computational Tools for Mech. Engineers

Year 2
Fall
MAT 228 (4 cr)
Calculus III

PHY 121 or

CHY 121 (or

CHY 131 (3 cr)
Chemistry

MEE 120 (2 cr)
Engineering Graphics and CAD

ENG 101 (3 cr)
College Composition

Spring
MAT 229 (4 cr)
Differential Equations & Linear Alg.

PHY 122 (4 cr)
General Physics II

MEE 150 (3 cr)
Chemistry Lab

Year 3
Fall
STS 332 (3 cr)
Statistics for Engineers

ECP 487 (4 cr)
Mechanical Lab II

Year 4
Fall
MEE 442 (2 cr)
Mechanical Lab II

Spring
ECP 488 (3 cr)
Capstone Design I

See Back Side for Legend

(c) = Credit Hours

*COS 220 or ECE 177 may substitute for MEE 125
### 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.

Notes:
- C “C or better” grade required to use as prerequisite.
- ^ ECE 177 may be substituted for COS 220
- + Substitutional courses for non-MEE majors not listed.

### MEE Technical Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
<th>Pre-requisite(s)</th>
</tr>
</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 445</td>
<td>Aeronautics</td>
<td>MEE 270&lt;sup&gt;C&lt;/sup&gt;, MAT 258, COS 220&lt;sup&gt;^&lt;/sup&gt;</td>
</tr>
<tr>
<td>MEE 446</td>
<td>Astronautics</td>
<td>MEE 270&lt;sup&gt;C&lt;/sup&gt;, MAT 258, COS 220&lt;sup&gt;^&lt;/sup&gt;</td>
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<tr>
<td>MEE 447</td>
<td>Flight Dynamics, Modeling &amp; Control of Aircraft and Space Vehicles</td>
<td>MEE 270&lt;sup&gt;C&lt;/sup&gt;, MAT 258, COS 220&lt;sup&gt;^&lt;/sup&gt;, MEE 360 or 445, MEE 370 or 444 or 446</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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<tr>
<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 475</td>
<td>Fuel Cell Science &amp; Tech.</td>
<td>MEE 230&lt;sup&gt;C&lt;/sup&gt;, CHY 121 +</td>
</tr>
</tbody>
</table>
| MEE 480  | Wind Energy Engineering                           | MAT 258, MEE 251<sup>C</sup>  
Co-req: MEE 360 + |
| MEE 483  | Turbomachine Design                               | MEE 230<sup>C</sup>, MEE 360 |
| MEE 484  | Power Plant Design & Eng.                         | MEE 230<sup>C</sup>, MEE 231 |
| MEE 486  | Refrigeration & A/C Syst. Design                  | MEE 231            |
| MEE 489  | Offshore Floating System Dsgn.                    | MEE 360, MEE 380   |