B.S./M.S. - MECHANICAL ENGINEERING

Overview

The five-year BS/MS program leads to both the B.S. degree and the M.S. degree in Mechanical Engineering in five years. The program is intended for exceptional students who are admitted to the graduate program in their junior year. Students applying for this program must have a grade point average of at least 3.0. The two degrees are awarded simultaneously when the combined requirements have been met for both degrees.

- Juniors who have maintained at least a 3.0 GPA have the option to apply for admission to the 5-year BS-MS in Mechanical Engineering program.
- Those who are accepted into this accelerated program must maintain at least a 3.0 GPA and a minimum of a 3.0 GPA for the final 31 credit hours.
- Up to 6 credit hours of Technical electives earned during the fourth year can be counted toward the 30 credit hours required for the MS degree.
- Students must register for a minimum of 12 undergraduate credit hours per semester in their fourth year.
- Students can register for a maximum of 6 graduate credit hours in each semester of their fourth year.
- If a student needs to withdraw from the BS/MS Mechanical Engineering program then all the requirements for the specific BS Concentration must be completed for graduation with the BS degree.

Admission Requirements

Juniors in the Mechanical and Aerospace Engineering department of the University of Miami who have maintained at least a 3.0 GPA may apply to the dual degree program.

Curriculum Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
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<td>Principles of Electrical Engineering-I</td>
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<tr>
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<td>Applied Probability and Statistics</td>
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<td>Design of Fluid and Thermal Systems</td>
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**Additional Requirements**

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<td>WRS 107</td>
<td>First-Year Writing II: STEM</td>
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**Arts and Humanities Cognate**

9 credits

**People and Society Cognate**

9 credits

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**MS IN MECHANICAL ENGINEERING REQUIREMENTS (30 CREDIT HOURS)**

<table>
<thead>
<tr>
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<tr>
<td>MAE 601</td>
<td>Methods of Engineering Analysis</td>
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**Graduate Level Courses**

24 credits

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<tr>
<td>MAE 751</td>
<td>Master's Project</td>
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</table>

**Total Credit Hours**

153 credits

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**Plan of Study**

**Freshman Year**

### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>MAE 111</td>
<td>Introduction to Engineering I</td>
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<td>First-Year Writing I</td>
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<tr>
<td>PHY 221</td>
<td>University Physics I</td>
<td>3</td>
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**Credit Hours**

14 credits

### Spring

<table>
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<td>PHY 224</td>
<td>University Physics II Lab</td>
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**Credit Hours**

16 credits

**Sophomore Year**

### Fall

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**Credit Hours**

16 credits

### Spring

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<td>CHM 151</td>
<td>Chemistry for Engineers</td>
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<td>CHM 153</td>
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<td>ECE 205</td>
<td>Principles of Electrical Engineering–I</td>
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<td>HA Cognate (HA Elective)</td>
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**Credit Hours**

16 credits
# B.S./M.S. - Mechanical Engineering

## Junior Year

### Fall

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<tr>
<td>HA Cognate (HA Elective)</td>
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**Credit Hours**  
18

### Spring

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<tr>
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**Credit Hours**  
17

## Senior Year

### Fall

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<td>Graduate Level Course</td>
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**Credit Hours**  
18

### Spring

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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MAE 415</td>
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<td>MAE 443</td>
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**Credit Hours**  
14

## Fifth Year (Graduate)

### Fall

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**Credit Hours**  
12

### Spring

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**Credit Hours**  
12

**Total Credit Hours**  
153

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1. You must complete a minimum of 1 PS cognate and 1 HA cognate to be selected from the list of available cognates. Each cognate should be a minimum of three courses (9 credit hours).

2. Technical Electives are advanced courses in mathematics, science or engineering, approved by the Faculty Advisor, as appropriate for individual objectives.
At least two must be at 700 Level courses in mathematics, science or engineering, approved by the Faculty Advisor, as appropriate for individual objectives.