INDUSTRIAL ENGINEERING AND MANAGEMENT, BSIE

Requirements for Students Matriculating in or before Academic Year 2022-2023. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 123

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGR 1111</td>
<td>Introduction to Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 1322</td>
<td>Engineering Design with CAD</td>
<td>2</td>
</tr>
<tr>
<td>or ENGR 1332</td>
<td>Engineering Design with CAD for MAE</td>
<td></td>
</tr>
<tr>
<td>ENGR 1412</td>
<td>Introductory Engineering Computer Programming</td>
<td>2</td>
</tr>
</tbody>
</table>

**General Education Requirements**

All General Education coursework requirements are satisfied upon completion of this degree plan

**English Composition**

ENGL 1113  Composition I  3
or ENGL 1313  Critical Analysis and Writing I  3

ENGL 3323  Technical Writing  3

**American History & Government**

POLS 1113  American Government  3

Select one of the following:  3

HIST 1103  Survey of American History  
HIST 1483  American History to 1865 (H)  
HIST 1493  American History Since 1865 (DH)  

**Analytical & Quantitative Thought (A)**

MATH 2144  Calculus I (A)  4
MATH 2153  Calculus II (A)  3
MATH 2163  Calculus II (A)  3
or MATH 2233  Differential Equations  3

**Humanities (H)**

Courses designated (H)  6

**Natural Sciences (N)**

Must include one Laboratory Science (L) course

CHEM 1414  General Chemistry for Engineers (LN)  4
or CHEM 1515  Chemistry II (LN)  3

PHYS 2014  University Physics I (LN)  4
PHYS 2114  University Physics II (LN)  4

**Social & Behavioral Sciences (S)**

SPCH 2713  Introduction to Speech Communication (S)  3

**Diversity (D) & International Dimension (I)**

May be completed in any part of the degree plan

Select at least one Diversity (D) course

Select at least one International Dimension (I) course

**College Requirements**

**Basic Science**

**Engineering**

**Industrial Engineering & Management**

ENSC 2113  Statics  3
Select two of the following:  6

ENSC 2123  Elementary Dynamics  
ENSC 2143  Strength of Materials  
ENSC 2213  Thermodynamics  
ENSC 2613  Introduction to Electrical Science  
ENSC 3233  Fluid Mechanics  

**Total Hours Subtotal**  14

**Major Requirements**

**Mathematics**

MATH 3013  Linear Algebra (A)  3

**Engineering Science**

ENSC 3313  Materials Science  3

ENSC 2113  Statics  3

ENSC 2123  Elementary Dynamics  3

ENSC 2143  Strength of Materials  3

ENSC 2213  Thermodynamics  3

ENSC 2613  Introduction to Electrical Science  3

ENSC 3233  Fluid Mechanics  3

**Total Hours Subtotal**  66

**Total Hours**  123
If a "B" or higher is not earned in ENGL 1113 Composition I or ENGL 1313 Critical Analysis and Writing I, then ENGL 1213 Composition II or ENGL 1413 Critical Analysis and Writing II is also required (per Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/)).

Other Graduation Requirements

a. A minimum Technical GPA of 2.00. The Technical GPA is calculated from all courses counting in the curriculum with an IEM prefix, or substitutions for these courses.

b. A grade of "C" or better is required in each course that is a prerequisite to another required course and also in MATH 2163/MATH 2233 and PHYS 2114.

These courses include:

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<tr>
<td>CHEM 1414 or CHEM 1515</td>
<td>General Chemistry for Engineers (LN)</td>
<td>4-5</td>
</tr>
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<td>MATH 2144</td>
<td>Calculus I (A)</td>
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</tr>
<tr>
<td>MATH 2153</td>
<td>Calculus II (A)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2163</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3013</td>
<td>Linear Algebra (A)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2014</td>
<td>University Physics I (LN)</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2114</td>
<td>University Physics II (LN)</td>
<td>4</td>
</tr>
<tr>
<td>IEM 2903</td>
<td>Introduction to Industrial Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IEM 3103</td>
<td>Probability and Statistics for Engineers I</td>
<td>3</td>
</tr>
<tr>
<td>IEM 3403</td>
<td>Engineering Project Management</td>
<td>3</td>
</tr>
<tr>
<td>IEM 3503</td>
<td>Engineering Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>IEM 3703</td>
<td>Probability and Statistics for Engineers II</td>
<td>3</td>
</tr>
<tr>
<td>IEM 4013</td>
<td>Operations Research</td>
<td>3</td>
</tr>
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c. The major engineering design experience is satisfied by IEM 4913 Senior Design Projects.

Additional State/OSU Requirements

• At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.

• Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.

• Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.

• Degrees that follow this plan must be completed by the end of Summer 2028.