MECHANICAL ENGINEERING, BSME

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.50
Total Hours: 121

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I (^1)</td>
<td>3</td>
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<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
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<td>Select one of the following:</td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II (^1)</td>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II (^1)</td>
<td></td>
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<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
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American History & Government
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)                                      |       |
- POLS 1113 | American Government                                                   | 3     |

Analytical & Quantitative Thought (A)
- MATH 2144 | Calculus I (A) \(^1\)                                               | 4     |
- MATH 2153 | Calculus II (A) \(^1\)                                              | 3     |
- MATH 2163 | Calculus III \(^1\)                                                 | 3     |

Humanities (H)
Courses designated (H) 6

Natural Sciences (N)
Must include one Laboratory Science (L) course
- CHEM 1414 | General Chemistry for Engineers (LN) \(^1\)                           | 4     |
- CHEM 1515 | Chemistry II (LN)                                                   |       |
- PHYS 2014 | University Physics I (LN) \(^1\)                                     | 4     |

Social & Behavioral Sciences (S)
Course designated (S) 6

Hours Subtotal 42

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/Departmental Requirements

Math and Basic Science
- MATH 2233 | Differential Equations \(^1\)                                         | 3     |
- PHYS 2114 | University Physics II (LN) \(^1\)                                    | 4     |
Select one of the following: 3

Engineering Science
- ENGR 1111 | Introduction to Engineering \(^1\)                                   | 1     |
- ENGR 1332 | Engineering Design with CAD for MAE \(^1\)                          | 2     |
- ENGR 1412 | Introductory Engineering Computer Programming \(^1\)                | 2     |

Engineering
- ENGR 1111 | Introduction to Engineering \(^1\)                                   | 1     |
- ENGR 1332 | Engineering Design with CAD for MAE \(^1\)                          | 2     |
- ENGR 1412 | Introductory Engineering Computer Programming \(^1\)                | 2     |

Specific Professional School
- MAE 3013 | Engineering Analysis and Methods I                                  | 3     |
- MAE 3113 | Measurements and Instrumentation                                    | 3     |
- MAE 3233 | Heat Transfer                                                       | 3     |
- MAE 3324 | Mechanical Design I                                                 | 4     |
- MAE 3403 | Computer Methods in Analysis and Design                             | 3     |
- MAE 3524 | Thermal Fluids Design                                               | 4     |
- MAE 3724 | Dynamic Systems Analysis and Introduction to Control                | 4     |

IEM 3503 | Engineering Economic Analysis                                       | 3     |
Select 7 hours of the following 2 categories, selecting one course from each category so that both categories are represented:

Category I (Realization):
- MAE 4243 | Aerospace Propulsion and Power                                      |       |
- MAE 4263 | Energy Conversion Systems                                           |       |
- MAE 4353 | Mechanical Design II                                                |       |
- MAE 4363 | Advanced Methods in Design                                          |       |
- MAE 4513 | Aerospace Structures I                                              |       |
- MAE 4623 | Biomechanics                                                        |       |
- MAE 4703 | Design of Indoor Environmental Systems                              |       |
- MAE 4713 | Thermal Systems Realization                                         |       |

Category II (Capstone Design):
- MAE 4344 | Design Projects                                                      |       |
- MAE 4354 | Aerospace Systems Design for Mechanical Engineers                   |       |

ASTR 1013 | The Solar System (N)                                                |       |
ASTR 1023 | Stars, Galaxies, Universe (N)                                       |       |
Biol 1114 | Introductory Biology (LN)                                           |       |
CHEM 3053 | Organic Chemistry I                                                 |       |
GEOL 1114 | Physical Geology (LN)                                               |       |
GEOL 3413 | Petroleum Geology for Engineers                                     |       |
PHYS 3213 | Optics                                                              |       |
PHYS 3313 | Introduction to Semiconductor Device Physics                        |       |
PHYS 3713 | Modern Physics                                                      |       |
Admission to Professional School (required)

- Refer to the OSU Catalog corresponding to your matriculation date for detailed admissions requirements.

Graduation Requirements

1. A minimum GPA of 2.50 is required in all MAE prefix Courses.
2. A minimum overall GPA of 2.50 is required in 4000-level MAE prefix courses.
3. A ‘C’ or better is required in each course that is a prerequisite for a major course taken.
4. The major engineering design experience, capstone course, is satisfied by MAE 4344 Design Projects or MAE 4354 Aerospace Systems Design for Mechanical Engineers.

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 2025.