## Materials Science and Engineering 2022–2023 Undergraduate Curriculum

### Total Credits: 123 (updated June 2022)

<table>
<thead>
<tr>
<th>1st Year</th>
<th>2nd Year</th>
<th>3rd Year</th>
<th>4th Year</th>
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<td>17 Credits</td>
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### 1st Year
- **ME 116** [0-0-2] (C) * Engineering CAD & Visualizations (MATH 171 or c/)
- **MATH 171** [3-3-4] (C) * Calculus I (ALEKS Placement = 83%)
- **CHEM 105** [3-3-4] (C) * Principles of Chemistry I (ALEKS Placement = 80%)
- **MSE 201** [3-0-3] (C) * Materials Engineering Fundamentals (CHEM 105 or c/)
- **ENGL 101** [3-0-3] College Composition (Writing Placement)
- **HIST 105** [3-0-3] Roots of Contemporary Issues

### 2nd Year
- **SPRING**
  - **MATH 220** [2-0-2] (C) * Linear Algebra (MATH 171 or c/)
  - **PHYSICS 201** [3-0-3] (C) * Physics for Scientists & Engineers I (MATH 172 or c/)

- **FALL**
  - **MATH 273** [2-0-2] (C) * Calculus III (MATH 172)
  - **PHYSICS 211** [3-0-3] (C) * Physics Lab for Scientists & Engineers I (MATH 172 or c/)
  - **MSE 202** [3-0-3] (C) * Materials Science Fundamentals (MSE 201, CHEM 106 or c/)

### 3rd Year
- **SPRING**
  - **MSE 321** [3-0-3] (C) * Materials Characterization (MSE 201)
  - **MSE 323** [3-0-3] (C) * Materials Characterization Lab (MSE 321 or c/)

- **FALL**
  - **MSE 320** [3-0-3] (C) * Electronic Materials (CHEM 105, PHYS 202 & 212)
  - **MSE 320** [1-6-3] (C) * Materials Structure-Properties Lab (MSE 202 or c/)

### 4th Year
- **SPRING**
  - **ENGL 402** [3-0-3] Technical Writing (ENGL 101, Junior Standing [60 credits])
  - **MSE 425** [0-0-3] (C) * Senior Thesis I (MSE 318, MSE 333, MIE)
  - **ME 416** [1-6-3] (C) * Mechanical Systems Design (MSE 202, MSE 318, MSE 413 or c/)

### Technical Elective
- **[3-0-3]** (C) * CE 211, CE 215, EE 261 & EE 262, ME 212, and ME 216. Any upper division CE, CHE E, CHEM, CPT S, EE, MATH, ME, MSE or PHYS not used to fulfill other requirements (exclude ME 416)

### Footnotes
- **Total Credits: 123**

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Admit to Major Requirements: MATH 171 ready (A minimum of 83% ALEKS, AP Calculus test score of 2, or MATH 106 and 108 with a C)

**Benchmarks to Stay in the Major:** Earn a C or higher in all major classes and maintain a 2.60 or higher major GPA

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See next page for footnotes and table key. This document is for unofficial planning purposes.
Notes

Review the [Washington State University Catalog](https://catalog.wsu.edu/) for course pre-requisites and grade requirements.

1. **WSU Undergraduate Education UCORE**

2. Technical Electives (Minimum of 9 credits, of which 3 must be upper division or 500 level): Any upper division CE, CH E, CHEM, CPT S, E E, MATH, ME, MSE, or PHYSICS course not used to fulfill other requirements (excluding ME 416), CE 211, and 215, EE 261, and 262, ME 212 and 216.

3. Major courses required for the MSE degree include all engineering, physics, chemistry, and math courses listed in the schedule of studies. Only one repeat of MME courses is allowed.

MME students are required to complete the senior exit survey.

**Key**

* = Grade calculated for ENGR GPA

[ ] = Lecture Hours – Lab Hours – **Total Credits**

( ) = Minimum Grade Required

( ) = Course Pre-requisites

c// = Concurrent Enrollment

MIE = Admitted to the Mechanical Engineering Major

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**PHY201**

Physics for Scientists & Engineers

(MATH 171, MATH 172 or c//)

Class Number

Final grade to be used to calculate engineering GPA (Math, Science and ENGR courses)

3 hrs lecture/week

3 hrs lab/week

Minimum grade Required

4 total credits

Concurrent enrollment PHYSICS 201 may be taken in the same term as MATH 172