

# Materials Science and Engineering 2018-2019

## Undergraduate Curriculum

<b>1st Year</b>	FALL 16 Credits	<b>MATH 171</b> <b>[3-3-4] (C)*</b> Calculus I {ALEKS Placement = 83%}	<b>CHEM 105</b> <b>[3-3-4] (C) *</b> Principles of Chemistry I {ALEKS Placement = 80%}	<b>MSE 110</b> <b>[2-0-2]</b> Innovation in Design {Calc. I Ready}	<b>ENGL 101</b> <b>[3-0-3]</b> College Composition {Writing Placement}	<b>[ARTS]</b> <b>[3-0-3]</b> {Any course under 'ARTS' from UCORE <sup>1</sup> }
	SPRING 18 Credits	<b>MATH 172</b> <b>[3-3-4] (C) *</b> Calculus II {MATH 171}	<b>CHEM 106</b> <b>[3-3-4] (C) *</b> Principles of Chemistry II {CHEM 105}	<b>PHYSICS 201</b> <b>[3-3-4] (C) *</b> Physics for Scientists & Engineers {MATH 171, MATH 172 or c//}	<b>HISTORY 105</b> <b>[3-0-3]</b> Roots of Contemporary Issues	<b>[BSCI]</b> <b>[3-0-3]</b> Any course under 'BSCI' from UCORE <sup>1</sup>

<b>2nd Year</b>	FALL 17 Credits	<b>MATH 220</b> <b>[2-0-2] (C) *</b> Linear Algebra {MATH 171 or c//}	<b>MATH 273</b> <b>[2-0-2] (C) *</b> Calculus III {MATH 172}	<b>PHYSICS 202</b> <b>[3-3-4] (C) *</b> Physics for Scientists & Engineers {PHYSICS 201}	<b>CE 211</b> <b>[3-0-3] (C) *</b> Statics {MATH 172 or c//, PHYSICS 201 or c//}	<b>MSE 201</b> <b>[3-0-3] *</b> Materials Science {CHEM 105, PHYSICS 201 or c//}	<b>[HUM]</b> <b>[3-0-3]</b> Any course under 'HUM' from UCORE <sup>1</sup>
	SPRING 15/17 Credits	<b>MATH 315</b> <b>[3-0-3] (C) *</b> Differential Equations {MATH 273, MATH 220 or c//}	<b>[DIVR]</b> <b>[3-0-3] *</b> 'DIVR' from UCORE <sup>1</sup>	<b>CE 215</b> <b>[3-0-3] *</b> Mechanics of Materials {CE 211}	<b>EE 221 [2-0-2] *</b> Numerical Computing for Engineers <b>/CPT_S 121 [3-3-4] *</b> Program Design & Development C/C++ (see catalog)	<b>ECONS 102</b> <b>[3-0-3]</b> Macro-Economics {ALEKS Placement = 40%}	<b>ME 220</b> <b>[0-3-1] *</b> Materials Lab {CE 215 or c//}

<b>3rd Year</b>	FALL 17 Credits	<b>STAT 370</b> <b>[3-0-3] *</b> Statistics for Engineers {MATH 172}	<b>ME 310</b> <b>[2-0-2]</b> Manufacturing Processes {MSE 201, MIE}	<b>MSE 302</b> <b>[3-0-3] *</b> Electronic Materials {CHEM 105, PHYSICS 202 or c//}	<b>MSE 316</b> <b>[3-0-3] &lt;FALL&gt;*</b> Thermodynamics & Kinetics of Materials {MSE 201}	<b>MSE 320</b> <b>[1-6-3] &lt;FALL&gt;*</b> Materials Structure- Properties Lab {MSE 201 or c//}	<b>MSE 402</b> <b>[3-0-3] &lt;FALL&gt;*</b> Polymeric Materials {MSE 201}
	SPRING 15 Credits	<b>EE 261</b> <b>[3-0-3] (C) *</b> Electrical Circuits I {MATH 315 or c//, PHYSICS 202}	<b>EE 262</b> <b>[1-6-1] *</b> Electrical Circuits Lab I {EE 261 or c//}	<b>MSE 321</b> <b>[3-0-3] &lt;SPRING&gt;*</b> Materials Characterization {MSE 201}	<b>MSE 323</b> <b>[1-3-2] &lt;SPRING&gt;</b> Materials Characterization Lab {MSE 321 or c//}	<b>MSE 401</b> <b>[3-0-3] &lt;SPRING&gt;*</b> Metallic Materials {MSE 201}	<b>MSE 403</b> <b>[3-0-3]</b> Ceramic Materials {MSE 201}

<b>4th Year</b>	FALL 12 Credits	<b>ME 416</b> <b>[1-6-3]</b> Mechanical Systems Design {Certified Major in MME}	<b>ME 413</b> <b>[3-0-3] &lt;FALL&gt;*</b> Mechanics of Solids {CE 215, MSE 201}	<b>MSE 425</b> <b>[0-9-3]</b> Senior Thesis I {MSE 320, MSE 323, Certified MSE}	<b>ENGINEERING &amp; SCIENCE ELECTIVE [3-0-3] *</b> BIOLOGY 301, BIO ENG 481, CE 341, EE 214, ME 116 and ME 216 combined, ME 212, 301, 303, 304, 313, 316, 348, 449, 461, 472, CHEM 331, 332, 345, 347, PHYSICS 303, 304, 463, MBIOS 303, any 400 or 500-level MSE, or any 500-level ME (except Integrated Capstone course in MSE)
	SPRING 12 Credits	<b>ENGL 402</b> <b>[3-0-3]</b> Technical Writing {ENGL 101, Junior Standing [60 credits]}	<b>MSE ELECTIVE</b> <b>[3-0-3]</b> Any 400 or 500 level MSE Course	<b>TECHNICAL ELECTIVE [3-0-3]</b> Upper-division CE, CHE, CHEM, CPTS, EE, MATH, MSE, ME, PHYSICS, or STAT course (except ME 416)	<b>ENGINEERING &amp; SCIENCE                      ELECTIVE                      [3-0-3]*</b> See Above

Total Credits: **122/124**

<sup>1</sup>[WSU Undergraduate Education UCORE](#)

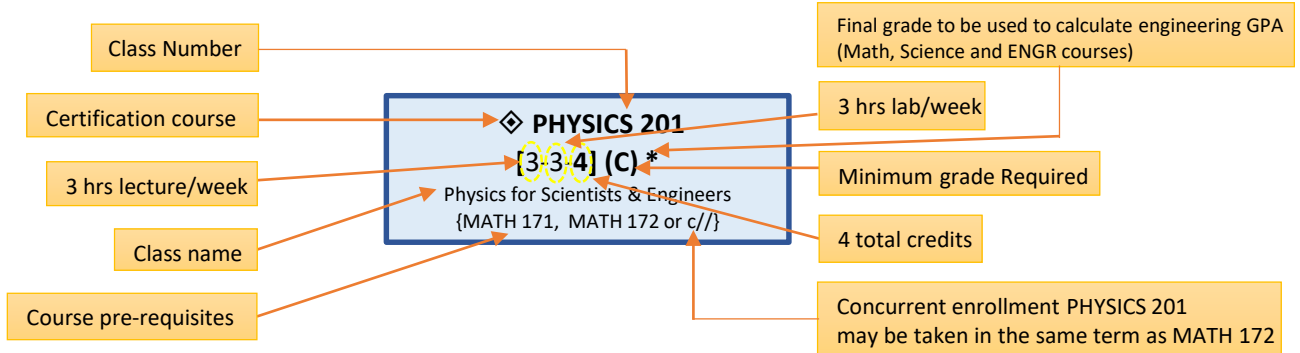
Review [Washington State University Catalog](#) for course pre-requisites and grade requirements.

MME students are required to complete the Senior Exit Survey

This document is for unofficial planning purposes.

## KEY

◇ = Certification Course; \* = Grade calculated for ENGR GPA; [ ] = Lecture Hours – Lab Hours – **Total Credits**  
( ) = Minimum Grade Required; { } = Course pre-requisites; c// = Concurrent Enrollment; MIE = Certified Major in Mechanical Engineering; <FALL> = Course typically offered during Fall; <SPRING> = Course typically offered during Spring



### Criteria for Certification – Materials Science & Engineering Program

The School of Mechanical and Materials Engineering will establish the total number of students to be certified into the Materials Science and Engineering program.

1. Students should apply for certification in the semester after they have completed the following five courses: MATH 171, MATH 172, CHEM 105, CHEM 106, and PHYSICS 201. Students must have a minimum 2.5 cumulative GPA and a C or better grade for each of the five courses listed above to be considered for certification. Transfer students who meet the aforementioned minimum requirements may apply during their first semester at WSU, but no decision will be made until the end of the semester when the final grades become available.
2. Certification Guarantee: Students who have completed the certification courses noted above with an average GPA of at least 3.2, who have an overall GPA of at least 3.2 in the completed courses required in the major, and who have not repeated any required courses, are guaranteed certification.
3. Students need to submit an application for certification electronically on the MME website: <https://mme.wsu.edu/>. The application deadline is the Monday after finals week in December and May for the fall and spring semester respectively. The applicants will be ranked based on the average GPA of the math, science, and engineering courses completed. For those who are borderline, the semester and cumulative GPA will be considered and used as a reference. In addition to GPA, other factors may also be taken into consideration, such as the number of math science, and engineering courses taken at WSU. The committee has the authority to weigh these factors in its decision for certification.
4. Students who are deficient under the University's Academic Regulations are subject to decertification. The undergraduate studies committee will determine the eligibility and probation conditions for decertified students who will be permitted to apply for recertification.
5. Any further questions should be addressed to the academic coordinators whose contact information can be found in the following website: <https://mme.wsu.edu/undergraduate/>