

Mechanical Engineering 2018-2019

Undergraduate Curriculum

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|-----------------|----------------------|--|--|---|--|--|
| 1st Year | FALL 16 Credits | ◇ MATH 171 [3-3-4] (C)* Calculus I <small>{ALEKS Placement = 83%}</small> | ◇ CHEM 105 [3-3-4] (C) * Principles of Chemistry I <small>{ALEKS Placement = 80%}</small> | ENGR 120 [1-3-2] Innovation in Design <small>{Calc. I Ready}</small> | ENGL 101 [3-0-3] College Composition <small>{Writing Placement}</small> | [ARTS] [3-0-3] <small>{Any course under 'ARTS' from UCORE¹}</small> |
| | SPRING 16 Credits | ◇ MATH 172 [3-3-4] (C) * Calculus II <small>{MATH 171}</small> | CHEM 106 [3-3-4] * Principles of Chemistry II <small>{CHEM 105}</small> | ME 116 [0-6-2] (C) * Engineering CAD & Visualizations <small>{Calc. I Ready}</small> | HISTORY 105 [3-0-3] Roots of Contemporary Issues | [BSCI] [3-0-3] <small>Any course under 'BSCI' from UCORE¹</small> |

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| 2nd Year | FALL 16/18 Credits | MATH 220 [2-0-2] (C) * Linear Algebra <small>{MATH 171}</small> | MATH 273 [2-0-2] (C) * Calculus III <small>{MATH 172}</small> | ◇ PHYSICS 201 [3-3-4] (C) * Physics for Scientists & Engineers <small>{MATH 171, MATH 172 or c//}</small> | ◇ CE 211 [3-0-3] (C) * Statics <small>{MATH 172 or c//, PHYSICS 201 or c//}</small> | EE 221 [2-0-2] * Numerical Computing for Engineers /CPT_S 121 [3-3-4] * Program Design & Development <small>C/C++ {see catalog}</small> | ECONS 102 [3-0-3] Macro-Economics <small>{ALEKS Placement = 40%}</small> |
| | SPRING 16 Credits | MATH 315 [3-0-3] (C) * Differential Equations <small>{MATH 273, MATH 220 or c//}</small> | PHYSICS 202 [3-3-4] * Physics for Scientists & Engineers <small>{PHYSICS 201}</small> | CE 215 [3-0-3] * Mechanics of Materials <small>{CE 211}</small> | ME 212 [3-0-3] * Dynamics <small>{CE 211}</small> | ME 216 [0-6-2] * Integrated CAD Design <small>{ME 116, CE 215 or c//}</small> | ME 220 [0-3-1] * Materials Lab <small>{CE 215 or c//}</small> |

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| 3rd Year | FALL 18 Credits | STAT 370 [3-0-3] * Statistics for Engineers <small>{MATH 172}</small> | EE 261 [3-0-3] * Electrical Circuits I <small>{MATH 315 or c//, PHYSICS 202}</small> | MSE 201 [3-0-3] * Materials Science <small>{CHEM 105, PHYSICS 201 or c//}</small> | ME 301 [3-0-3] * Fundamentals of Thermodynamics <small>{PHYSICS 201}</small> | ME 303 [3-0-3] * Fluid Mechanics <small>{ME 212}</small> | ME 313 [2-3-3] * Engineering Analysis <small>{MATH 315 or c//, ME 116, EE 221 or CPT_S 121}</small> | |
| | SPRING 18 Credits | ENGL 402 [3-0-3] Technical Writing <small>{Junior Standing [60 credits]}</small> | EE 262 [0-3-1] * Electrical Circuits Lab I <small>{EE 261 or c//}</small> | ME 304 [3-0-3] Heat Transfer <small>{ME 301, ME 303, MIE}</small> | ME 306 [1-3-2] Thermal & Fluids Lab <small>{ME 301, ME 303, STAT 370 or c//, MIE}</small> | ME 310 [2-0-2] Manufacturing Processes <small>{MSE 201, MIE}</small> | ME 311 [0-3-1] Manufacturing Processes Lab <small>{ME 310 or c//, MIE}</small> | ME 316 [3-0-3] Mech. Comp. Analysis & Design <small>{CE 215, ME 216, ME 220 or c//, MIE}</small> |

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| 4th Year | FALL 15 Credits | [DIVR] [3-0-3] Any course under 'DIVR' from UCORE ¹ | ME 401 [2-3-3] Mechatronics <small>{EE 262, ME 348, MIE}</small> | ME 405 [3-0-3] Thermal Systems Design <small>{ME 304, MIE}</small> | ME 415 [3-0-3] Engineering Design <small>{ME 310, ME 311, ME 316 or c//, MIE}</small> | ME Technical Elective [3-0-3] ME or MSE (400-500) or BE 425 <small>See List Below²</small> |
| | SPRING 12 Credits | [HUM] [3-0-3] Any course under 'HUM' from UCORE ¹ | ME 406 [1-6-3] Experimental Design Lab <small>{ENGL 402 or c//, ME 220, ME 304, ME 306, ME 348, MIE}</small> | ME Technical Elective [3-0-3] ME or MSE (400-500) or BIO_ENG 425 <small>See List Below²</small> | ME 416 [1-6-3] Mechanical Systems Design <small>{ME 304, ME 348, ME 415, MIE}</small> | |

Total Credits: **127/129**

¹[WSU Undergraduate Education UCORE](#)

²ME Technical Electives: [ME](#) or [MSE](#) (400-500 level), or [BIO_ENG](#) 425

ME 407, 413, 419, 431, 436, 439, 449, 461, 474, 475, 481, 501, 502, 503, 507, 509, 513, 514, 515, 516, 517, 520, 521, 525, 526, 527, 530, 531, 532, 534, 537, 540, 556, 565, 574, 575, 581

MSE 401, 404, 406, 413, 505, 506, 507, 508, 509, 513, 514, 515, 516, 517, 520, 521, 523, 530, 531, 534, 544, 545, 546, 547, 548, 592

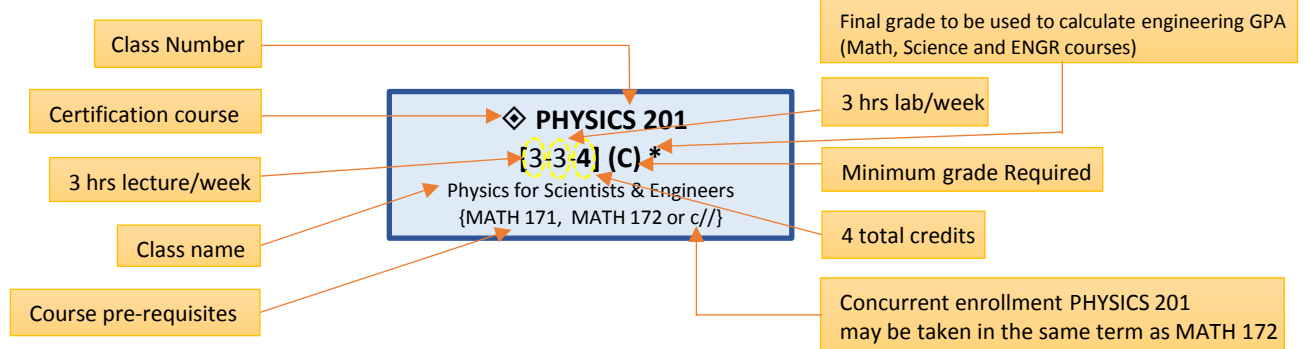
Review [Washington State University Catalog](#) for course pre-requisites and grade requirements.

ME Majors are required to complete the [Fundamentals of Engineering Exam](#). 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;



Criteria for Certification – Mechanical Engineering Program

- Students may certify in the Mechanical Engineering degree program in either the School of Mechanical and Materials Engineering (Bremerton, Everett, and Pullman), or in the School of Engineering and Applied Sciences (Tricities). To be eligible for certification students must complete CE 211, CHEM 105, MATH 171, MATH 172, PHYSICS 201, each with a C or better grade, and a minimum cumulative GPA of 2.5.
- Transfer students who have completed or are about to complete CE 215, CHEM 106, MATH 220, MATH 273, MATH 315, ME 212, PHYSICS 202, and computer programming before starting at WSU, and have at least a 3.2 average GPA for the math, science, and engineering courses completed can be certified at the time of admission.
- Certification requirements are the same on all campuses, but the application process may vary. Students should consult with their advisor about their readiness for certification and then apply for certification as early as possible in their studies after completion of the needed certification courses.

Certification Process

1. The School of Mechanical and Materials Engineering and the School of Engineering and Applied Science will establish the total number of students to be certified into the Mechanical Engineering program for each location.
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 all completed engineering, math, and science courses, and who have not repeated any required courses, are guaranteed certification.
3. If the number of students who meet minimum certification requirements exceeds the number of available spaces, students will be ranked based on the GPA of the engineering, math, and science courses completed. 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 engineering, math, and science courses taken at WSU. The independent committee for each school has the authority to weigh these factors in its decision for certification.
4. The certification is only valid for the current campus of residence. Should a student decide to change campus after certification, they will need to reapply for certification for the campus to which they will transfer.
5. 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.
6. 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.
7. 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/>