

Materials Science and Engineering 2020–2021 Undergraduate Curriculum

Total Credits: 123/125

1st Year	FALL 16 Credits	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 110 [2-0-2] Introduction to Materials Science {CALC I Ready} <FALL>	ENGL 101 [3-0-3] College Composition {Writing Placement}	[ARTS] [3-0-3] Any Course Under "ARTS" from UCORE ¹	
	SPRING 18 Credits	MATH 172 [3-3-4] (C) * Calculus II {MATH 171}	CHEM 106 [3-3-4] (C) * Principles of Chemistry II {CHEM 105}	PHYS 201 [3-3-4] (C) * Physics for Scientists & Engineers I {MATH 172 or c//}	HIST 105 [3-0-3] Roots of Contemporary Issues	[BSCI] [3-0-3] Any Course Under "BSCI" from UCORE ¹	
2nd Year	FALL 17 Credits	MATH 220 [2-0-2] (C) * Linear Algebra {MATH 171 or c//}	MATH 273 [2-0-2] (C) * Calculus III {MATH 172}	PHYSICS 202 [3-3-4] (C) * Physics for Scientists & Engineers II {PHYSICS 201}	CE 211 [3-0-3] (C) * Statics {MATH 172 or c//, PHYSICS 201 or c//}	MSE 201 [3-0-3] (C) * Materials Science {CHEM 105, PHYSICS 201 or c//}	[HUM] [3-0-3] Any Course Under "HUM" from UCORE ¹
	SPRING 15/17 Credits	MATH 315 [3-0-3] (C) * Differential Equations {MATH 273, MATH 220 or c//}	[DIVR] [3-0-3] Any Course Under "DIVR" from UCORE ¹	CE 215 [3-0-3] (C) * Mechanics of Materials {CE 211}	ECONS 102 [3-0-3] Macro Economics {ALEKS Placement = 40%}	EE 221 [2-0-2] (C) * Numerical Computing for Engineers or CPT_S 121 [3-3-4] (C) * Program Design & Development C++ (See Catalog)	ME 220 [0-3-1] (C) * Materials Lab {CE 215 or c//}
3rd Year	FALL 18 Credits	STAT 370 [3-0-3] (C) * Statistics for Engineers {MATH 172}	ME 312 [2-3-3] (C) * Manufacturing Engineering {MSE 201, MIE}	MSE 302 [3-0-3] (C) * Electronic Materials {CHEM 105, PHYS 202 or c//}	MSE 316 [3-0-3] (C) * Thermodynamics and Kinetics of Materials {MSE 201} <FALL>	MSE 320 [1-6-3] (C) * Materials Structure - Properties Lab {MSE 201 or c//} <FALL>	MSE 402 [3-0-3] (C) * Polymeric Materials {MSE 201} <FALL>
	SPRING 15 Credits	EE 261 [3-0-3] (C) * Electrical Circuits I {MATH 315 or c//, PHYS 202}	EE 262 [1-6-1] (C) * Electrical Circuits Lab I {EE 261 or c//}	MSE 321 [3-0-3] (C) * Materials Characterization {MSE 201} <SPRING>	MSE 323 [1-3-2] (C) * Materials Characterization Lab {MSE 321 or c//} <SPRING>	MSE 401 [3-0-3] (C) * Metallic Materials {MSE 201} <SPRING>	MSE 403 [3-0-3] (C) * Ceramic Materials {MSE 201} <SPRING>
4th Year	FALL 12 Credits	ME 416 [1-6-3] (C) * Mechanical Systems Design {MSE 320, MSE 413 or c//, MIE}	MSE 413 [3-0-3] (C) * Mechanics of Solids {CE 215, MSE 201} <FALL>	MSE 425 [0-9-3] (C) * Senior Thesis I {MSE 320, MSE 323, MIE}	Engineering and Science Elective [3-0-3] (C) * 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	ENGL 402 [3-0-3] Technical Writing {ENGL 101, Junior Standing [60 credits]}	MSE Elective [3-0-3] (C) * Any 400- or 500-level MSE Course	MSE Technical Elective [3-0-3] (C) * Upper-division CE, CHE, CHEM, CPTS, EE, MATH, MSE, ME, PHYSICS, or STAT course (except ME 416)	Engineering and Science Elective [3-0-3] (C) * See Above		

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 a maintain a 2.60 or higher major GPA⁴

See next page for table key.

This document is for unofficial planning purposes.

Notes

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

¹ [WSU Undergraduate Education UCORE](#)

² 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 Materials Science and Engineering Major

