

# Materials Science and Engineering—Major Requirements for BS Degree

Effective Fall 2015

University of California, Merced

Anticipated Graduation Date (ex: May 2019) \_\_\_\_\_

Full Name: \_\_\_\_\_ ID #: \_\_\_\_\_ Email \_\_\_\_\_

Requirement/ Course Dept #	Course Title	Grade	Units or # Required	Term/Year Completed	Substitute Approved
<b>UCM Requirements</b>					
-UC Entry Level Writing			n/a		
-American History/Institutions			n/a		
-CORE 001	World at Home I		1 course		
-WRI 010	College Composition		1 course		
<b>School Requirements</b>					
-MATH 021	Calculus I Phys Sciences & Eng		4 units		
-MATH 022	Calculus II Phys Sciences & Eng		4 units		
-MATH 023	Vector Calculus		4 units		
-MATH 024	Linear Algebra and Differential Equations		4 units		
-MATH 032	Probability and Statistics		4 units		
-PHYS 008	Introductory Physics I		4 units		
-PHYS 009	Introductory Physics II		4 units		
-ME 021	Engineering Computing		4 units		
-Science Course	BIO 001, BIO 005, ESS 001, or ESS 005		4 units		
-Arts/Humanities GE			3-4 units		
-Social Science GE			3-4 units		
<b>Major/Core Requirements</b>					
-ENGR 097/197 or SSHA GE			3 units		
-Upper-division Writing Course			4 units		
<i>Engineering Fundamentals</i>					
-ENGR 057	Statics and Dynamics		4 units		
-ENGR 120	Fluid Mechanics		4 units		
-ENGR 130	Thermodynamics		3 units		
-ENGR 151	Strength of Materials		4 units		
-ENGR 155	Engineering Economics		3 units		
<i>MSE Core</i>					
-ENGR 045	Introduction to Materials		4 units		
-PHYS 141	Condensed Matter Physics		4 units		
-MSE 109	Materials Thermodynamics		4 units		
-MSE 111	Materials Kinetics and Processing		4 units		
-MSE 112	Materials Selection and Performance		3 units		
-MSE 113	Materials Characterization		4 units		
-MSE 120	Materials Capstone Design		3 units		
<i>Additional Degree Requirements</i>					
-CHEM 002	General Chemistry I		4 units		
-PHYS 010	Introductory Physics III		4 units		
-ENGR 191	Professional Seminar		1 unit		
-Choose a minimum of 12 units from Technical Electives			12 units		

## Notes/Comments

Advisor Signature/Date:

Student Signature/Date:

This guide is an unofficial document intended to be used for advising/course planning only. This document cannot be used to supersede or waive requirements listed in the UCM Catalog unless approved by your advisor.

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**Service Learning/Freshman Seminar/SSHA GE**

3 units of ENGR 097/ENGR 197 or one 3-4 unit SSHA GE course.

Term / Course / Team or Title / Units

1.
2.
3.

**Technical Elective Courses**

Choose a minimum of 12 units from:

MSE 114  
MSE 115  
MSE 116  
MSE 117  
MSE 118  
MSE 119  
MSE 121

MSE 126  
MSE 195 (4 units maximum)  
ENGR 170  
BIOE 110  
BIOE 111  
BIOE 112  
CHEM 112

Course Dept. #	Course Title	Grade	Units	Term/Year Completed