

Materials Science and Engineering—Major Requirements for BS Degree

Effective Fall 2017

University of California, Merced

Anticipated Graduation Date (ex: May 2021) _____

Full Name: _____ ID #: _____ Email _____

| Requirement/ Course Dept # | Course Title | Grade | Units or # Required | Term/Year Completed | Substitute Approved |
|--|---|-------|---------------------|---------------------|---------------------|
| UCM Requirements | | | | | |
| -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 | | |
| School Requirements | | | | | |
| -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 | | |
| Major/Core Requirements | | | | | |
| -ENGR 097/197 or SSHA GE | | | 3 units | | |
| -Upper-division Writing Course | | | 4 units | | |
| Engineering Fundamentals | | | | | |
| -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 | | |
| MSE Core | | | | | |
| -ENGR 045 | Introduction to Materials | | 4 units | | |
| -MSE 109 | Materials Thermodynamics | | 4 units | | |
| -MSE 110 | Solid State Materials Properties | | 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 | | |
| Additional Degree Requirements | | | | | |
| -CHEM 002 | General Chemistry I | | 4 units | | |
| -ENGR 191 | Professional Seminar | | 1 unit | | |
| -Choose a minimum of 12 units from Technical Electives | | | 12 units | | |

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| Notes/Comments |
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| 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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Full Name: _____ ID #: _____ Email _____

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 104

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 |
|----------------|--------------|-------|-------|---------------------|
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