

Bioengineering—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		
-BioE 021	Computing for Bioengineers		3 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		
<i>Engineering Fundamentals</i>					
-ENGR 045	Introduction to Materials		4 units		
<i>Lower Division Requirements</i>					
-BIO 001 + BIO 001L	Contemporary Biology + Lab		5 units		
-BIO 002 + BIO 002L	Introduction to Molecular Biology + Lab		5 units		
-BIOE 060	Signals and Systems for Bioengineers		3 units		
-BIOE 065	Biocircuits Theory		3 units		
-CHEM 002	General Chemistry I		4 units		
-CHEM 010	General Chemistry II		4 units		
-CHEM 008 + CHEM 008L	Principles of Organic Chemistry + Lab		4 units		
<i>Upper Division Requirements</i>					
-BIOE 100	Physiology for Engineers		4 units		
-BIOE 104	Biotransport		4 units		
-BIOE 106	Cell Biology for Engineers		4 units		
-BIOE 113	Bioinstrumentation		4 units		
-BIOE 130	Biothermodynamics		3 units		
-BIOE 135	Biochemistry for Engineers		4 units		
-BIOE 140	Biomolecular Engineering		4 units		
-BIOE 150	Bioengineering Design		3 units		
-BIOE 166	Bioelectronics		3 units		
<i>Additional Degree Requirements</i>					
-ENGR 191	Professional Seminar		1 unit		
-Choose at least one technical elective (see page 2)			1 course		

Notes/Comments
Advisor Signature/Date:
Student Signature/Date:

This guide in 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/ SSHA GE

Students may take either 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 1)

BIOE 103 (Biosensors and Bioinstrumentation)

BIOE 112 (Biomolecule-Substrate Interactions)

BIOE 114 (Tissue Engineering Design)

BIOE 124 (Introduction to Biomedical Imaging)

BIOE 195 (Upper-Division Undergraduate Research)

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