

Bioengineering—Major Requirements for BS Degree

Effective Fall 2016

University of California, Merced

Anticipated Graduation Date (ex: May 2020) _____

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 | | |
| -BIO 001 + BIO 001L | Contemporary Biology + Lab | | 5 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 | | |
| -ENGR 057 | Statics and Dynamics | | 4 units | | |
| -ENGR 065 | Circuit Theory | | 4 units | | |
| -ENGR 130 | Thermodynamics | | 3 units | | |
| -ENGR 166 | Analog and Digital Electronics | | 3 units | | |
| <i>Bioengineering Core</i> | | | | | |
| -BIOE 030 | Introduction to Bioengineering | | 4 units | | |
| -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 | | |
| -BIO 002 + BIO 002L | Introduction to Molecular Biology + Lab | | 5 units | | |
| -BIOE 150 | Bioengineering Design | | 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>Additional Degree Requirements</i> | | | | | |
| -BIOE 140 | Biomolecular Engineering | | 4 units | | |
| -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 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.

Bioengineering—Major Requirements for BS Degree

Effective Fall 2016

University of California, Merced

Anticipated Graduation Date (ex: May 2020) _____

Full Name: _____ ID #: _____ Email _____

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