

## BS BIOMEDICAL ENGINEERING

### 2007-09 Cal Poly Catalog

**Biomedical and General Engineering Department**  
**Engineering Bldg. (13), Room 260**  
**(805) 756-6400**

- ☐ 60 units upper division      ☐ GWR  
 ☐ 2.0 GPA                              ☐ USCP

\* = Satisfies General Education requirement

#### MAJOR COURSES

ENGR 110 Engineering Science I.....	3
BMED 111 Biomedical Engrg Calculations .....	3
BMED 212 Intro to Biomedical Engrg Design .....	3
BMED 310 Biomed. Engrg Measurement/Analysis .....	4
BMED 410 Biomechanics.....	4
BMED 420 Biomaterials .....	4
BMED 425 Biomedical Engineering Transport.....	4
BMED 430 Biomedical Modeling .....	4
BMED 440 Bioelectronics and Instrumentation .....	4
BMED 450 Special Topics in Biomedical Engrg .....	4
BMED 455 Biomedical Engineering Design I.....	4
BMED 456 Biomedical Engineering Design II .....	4
BMED 460 Engineering Physiology.....	4
Advisor approved technical electives (300/400).....	14
BMED 481, 482 or ENGR 462 Senior Project .....	4
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#### SUPPORT COURSES

BIO 161 Intro to Cell & Molecular Bio (B2/B4)* .....	4
CHEM 124 Gen Chem for Engrg I (B3/B4)* and CHEM 125 Gen Chem for Engrg II (Add'l Area B)* or CHEM 127, 128 (10-30-07).....	4,4
ENGL 149 Technical Writing for Engineers (A3)* .....	4
MATH 141,142 Calculus I, II (B1)* .....	4,4
MATH 143 Calculus III (Add'l Area B)*.....	4
MATH 241 Calculus IV .....	4
MATH 244 Linear Analysis I .....	4
PHYS 141 General Physics IA.....	4
PHYS 132 General Physics II.....	4
PHYS 133 General Physics III.....	4
<sup>1</sup> Advisor approved math and science electives .....	16
CE 204 Mechanics of Materials I.....	3
CSC 101 Fundamentals of Computer Science or CSC 234 C and Unix .....	3
EE 201 Electric Circuit Theory .....	3
IME 314 Engineering Economics .....	3
MATE 210 Materials Engineering .....	3
ME 211 Engineering Statics.....	3
ME 212 Engineering Dynamics .....	3
ME 302 Thermodynamics .....	3
ME 341 Fluid Mechanics I.....	3
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#### GENERAL EDUCATION (GE)

72 units required; 32 units are in Support.

→See page 56 for complete GE course listing.

→Minimum of 8 units required at the 300-400 level.

#### Area A Communication (8 units)

A1 Expository Writing .....	4
A2 Oral Communication .....	4
A3 Reasoning, Argumentation, and Writing * 4 units in Support.....	0

#### Area B Science and Mathematics (no add'l units req'd)

B1 Mathematics/Statistics * 8 units in Support.....	0
B2 Life Science *4 units in Support .....	0
B3 Physical Science* 4 units in Support .....	0
B4 One lab taken with either a B2 or B3 course B5 (requirement for Liberal Arts students only)	
B6 Upper-division Area B * 4 units in Support ....	0
Additional Area B units * 8 units in Support .....	0
Area C Arts and Humanities (16 units)	
C1 Literature .....	4
C2 Philosophy .....	4
C3 Fine/Performing Arts .....	4
C4 Upper-division elective .....	4

#### Area D/E Society and the Individual (16 units)

D1 The American Experience (40404) .....	4
D2 Political Economy .....	4
D3 Comparative Social Institutions .....	4
D4 Self Development (CSU Area E) .....	4
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ELECTIVES .....	<hr/>
	0
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<sup>1</sup> For a total of 16 units:

Select one course from:

ZOO 331, ZOO 332, BIO 432, BIO 433.

Select one course from GE B6\*:

MATH 344, STAT 312, PHYS 417.

Typical remaining course selections include, but are not limited to:

BIO 302 OR 303 OR 351, BIO 405, BIO 447, BIO 452; CHEM  
312, CHEM 313, CHEM 444, CHEM 473, MCRO 221 OR 224,  
MCRO 225, MCRO 320, MCRO 402, ZOO 426.