BS GENERAL 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
CE 204 Mechanics of Materials I ......................... 3
CSC 234/CSC 101 ........................................... 3
EE 201 Electric Circuit Theory ............................. 3
1 ENGR 110,111,112 Engineering Science I,II,III 3,3,3
IME 314 Engineering Economics .......................... 3
MATE 210 Materials Engineering and
MATE 215 Materials Laboratory I ........................ 3,1
ME 211 Engineering Statics .................................. 3
ME 212 Engineering Dynamics ................................ 3
ME 302 Thermodynamics .................................... 3
ME 341 Fluid Mechanics I ................................. 3
ME 343 Heat Transfer ....................................... 4
ENGR 481, 482 Sr. Project Design Lab I, II or
Sr. Project-appropriate engineering discipline ..... 2,2
2 Concentration or individual course of study .......... 46

SUPPORT COURSES
BIO 213 and ENGR/BRAE 213 (B2)*...................... 2,2
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
Select one of the following: MATH 344; STAT
312, 321, 350 (B6)* ........................................ 4
PHYS 141 General Physics IA .............................. 4
PHYS 132, 133 General Physics ............................ 4,4
Physical science electives ................................. 4,4

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

ELECTIVES.......................................................... 0

91

CONCENTRATIONS OR INDIVIDUALIZED COURSE OF STUDY (select one)

Bioengineering Concentration
CSC 341 Numerical Engineering Analysis .............. 4
ENGR 450 Special Topics in Bioengineering .......... 4
IME 144 Introduction to Design and Manufacturing 4
MATH 344 Linear Analysis II ............................ 4
ME 326 Intermediate Dynamics .......................... 4
Select 12 units from the following:...................... 12
BIO 431, 432, 442; CHEM 305, 371; CSC 471;
EE 336, 419; ENVE 304, 341, 421, 443; MATE
330; ME 328, 329, 401, 428, 445; STAT 312, 321,
350
Advisor approved electives ................................ 14

46

Biomedical Engineering Concentration
CHEM 312 Survey of Organic Chemistry ............... 4
CHEM 313 Survey of Biochemistry and Biotechnology 5
ENGR 450 Special Topics in Bioengineering .......... 4
IME 144 Introduction to Design and Manufacturing 4
MATE 425 Corrosion Engineering ........................ 4
Select 12 units from the following:...................... 12
BIO 431, 432; BOT 426; CHEM 305, 306, 371,
473, 475, CSC 473, 474; ENVE 304, 331; MATE
446; MATH 344; IME 319, 437; ME 326, 401, 422,
423, 445; PHYS 315, 323; STAT 312, 321, 350
Advisor approved electives ................................ 13

46

Individualized Course of Study ........................... 46

Technical electives. A minimum of 34–35 units
must be at 300-400 level.

1 ENGR 270 may be substituted for ENGR 112.

2 A minimum of 34–35 units at 300-400 level must be completed,
in a concentration, individual course of study or free electives, in addition
to those required in Major, Support and General Education, for a total of
60 upper division units. Corrected effective Summer 2007.