2011-13 Cal Poly Catalog

Biomedical and General Engineering Department

BS GENERAL ENGINEERING

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

* = Required in Support; also satisfies GE
Note: No major, support or concentration courses may be taken as credit/no credit.

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
2 ME 343 Heat Transfer or ME 350 or
MATE 325 and 326 and 327 (10/5/15) ......................... 4
ENGR 482 (1) and 482 (2) Sr. Project Design Lab I, II or ENGR 462 (4) or Sr. Project-
appropriate engineering discipline (1/16/15) ............. 4
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 Gen Chem I, II ........... 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 Algebra I ........................................ 4
Select one of the following: MATH 344; STAT 312, 321, 350 (B6)* ......................... 4
PHYS 141 General Physics I ..................................... 4
PHYS 132, 133 General Physics ................................ 4,4
Physical science electives ........................................ 4,4

Select from the following:
CHEM 129 or CHEM 126, 216, 217, 305, 312, 313, 316, 317; (8/25/15)
GEO 102, 201, 205, 241, 305;
PHYS 107, 211, 212, 323, 417 (7/31/13)

GENERAL EDUCATION (GE)

72 units required, 32 of which are specified in Support.
See page 39 for complete GE course listing.
Minimum of 8 units required at the 300 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 (not required for Engineering students)
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

FREE ELECTIVES .................................................. 0

191

CONCENTRATIONS OR INDIVIDUALIZED COURSE OF STUDY (select one)

Bioengineering Concentration
CSC 341 Numerical Engineering Analysis .......... 4
ENGR 450 451 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 361, 432, 442; CHEM 305, 371; CSC 471;
EE 336, 419; ENVE 304, 331, 421, 443; MATE
330; ME 328, 329, 401, 428, 445; STAT 312, 321, 350
Approved electives ........................................... 14

Corrected 10-31-11

Individualized Course of Study ............................. 46
Technical electives. A minimum of 35 units must
be at 300-400 level.

1 BMED 212 may be substituted for ENGR 112.
2 A minimum of 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.
3 If the MATE 325, 326 and 327 sequence is taken for 3 units than one
additional unit of upper-division Technical Electives is required.

(10/5/15)