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 I ............................... 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 481 (2) and 482 (2) Sr. Project Design Lab
I, II or ENGR 462 (4) or Sr. Project-
appropriate engineering discipline (1/16/15) ...... 4
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 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
Select from the following:
CHEM 129 or CHEM 126, 216, 217, 305, 312,
313, 316, 317; (8/25/15)
GEOL 102, 201, 205, 241, 305;
PHYS 107, 211, 212, 323, 417 (7/31/13) .... 60

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

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

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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; ENV 304, 331, 421, 443; MATE
330; ME 328, 329, 401, 428, 445; STAT 312, 321,
350
Approved electives ..................................... 14

46

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)