

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
³ ME 343 Heat Transfer <i>or</i> ME 350 <i>or</i>	
MATE 325 and 326 and 327 (10/5/15)	4
ENGR 481 (2) and 482 (2) Sr. Project Design Lab	
I, II <i>or</i> ENGR 462 (4) <i>or</i> Sr. Project-	
appropriate engineering discipline (1/16/15)	4
² Concentration or individual course of study	46
	91

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)* <i>or</i> 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

A3 Reasoning, Argumentation, and Writing * 4 units in Support	0
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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
	40

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
	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)