2011-13 Cal Poly Catalog
Architectural Engineering Department

BS ARCHITECTURAL ENGINEERING

60 units upper division  GWR
2.0 GPA  USCP

* = Required in Support; also satisfies GE

Note: No major or support courses may be taken as credit/no credit.

Note: All ARCE majors must obtain a grade of C- or better in ARCE courses that are prerequisites for other ARCE courses.

MAJOR COURSES

ARCE 211 Structures I .................. 3
ARCE 212 Structures II ................. 3
ARCE 223 Mechanics of Structural Members ........ 3
ARCE 224 Mechanics of Structural Members Lab .... 1
ARCE 225 Dynamics or ME 212 Engrg Dynamics 3
ARCE 227 Structures III ................ 2
ARCE 257 Structural CAD for Building Design .... 2
ARCE 302 Structural Analysis ............ 4
ARCE 303 Steel Design I ................ 3
ARCE 304 Timber Design ................ 3
ARCE 305 Masonry Design ................ 2
ARCE 306 Matrix Analysis of Structures .... 3
ARCE 351, 352, 353 Structural Computing Analysis I, II, III ................................ 1,1,1
ARCE 354 Numerical Analysis Laboratory ...... 1
ARCE 371 Structural Systems Laboratory ..... 3
ARCE 372 Steel Structures Design Laboratory.... 3
ARCE 412 Dynamics of Framed Structures .... 3
ARCE 421 Soil Mechanics ................... 3
ARCE 422 Foundation Design .............. 3
ARCE 444 Reinforced Concrete Lab ........... 3
ARCE 451 Timber/Masonry Structures Design and Constructability Laboratory .......... 3
ARCE 452 Concrete Structures Design and Constructability Laboratory .................. 3
ARCE 483 Seismic Analysis and Design .......... 4
Advanced structural electives ................ 6
Select 6 units from:
ARCE 403, 410, 414, 423, 445, 446, 447, 448, 449, 471, 473, 475 (3/12/14) (9/15/15) Interdisciplinary senior project ................................................. 5
Select 5 units from:
1 ARCE 415 (5) or 453 (3) and 460 (2)

SUPPORT COURSES

ARCH 106 Materials of Construction ........... 2
ARCH 131, 132, 133 Design and Visual Communication 1.1, 1.2, 1.3 ...................... 4,4,4
ARCE 260 or ARCH 217/ARCH 218/ARCH 219 (C3)* (2/7/13) ........... 4
BRAE 237 Intro to Engineering Surveying .... 2
CHEM 124 General Chem/Engr Discipline (B3/B4)* 4

CM 115 Fundamentals of Construction Mgmt........ 6
CM 332 Evaluation of Cost Alternatives or IME 314 Engineering Economics .......... 3
CSC 231 Programming for Engineering Students or CSC 234 C and UNIX (3) ................. 2
EDES 101 Intro to Architecture and Env Design .... 2
EE 201 Electrical Circuit Theory ................ 3
GEOL 201 Physical Geology ................... 3
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
ME 302 Thermodynamics ..................... 3
ME 341 Fluid Mechanics ........................ 3
PHYS 141 General Physics IA (Add’l Area B)* .... 4
PHYS 132, 133 General Physics .................. 4,4
STAT 312 Statistical Methods for Engineers or STAT 321 Probability and Statistics for Engineers and Scientists (B6)* .................. 4

GENERAL EDUCATION (GE)

72 units required, 28 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 (12 units)

A1 Expository Writing .......................... 4
A2 Oral Communication ....................... 4
A3 Reasoning, Argumentation, and Writing * .... 4

Area B  Science and Mathematics (4 units)

B1 Mathematics/Statistics * 8 units in Support .... 0
B2 Life Science .................................. 4
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 (12 units)

C1 Literature ...................................... 4
C2 Philosophy .................................... 4
C3 Fine/Performing Arts * 4 units in Support ...... 0
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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1 If ARCE 415 is taken for 4 units then 1 additional unit of Free Electives is required. (9/03/14)