2011-13 Cal Poly Catalog

Aerospace Engineering Department

BS AEROSPACE 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

AERO 121 Aerospace Fundamentals .................. 2
AERO 215 Introduction to Aerospace Design .... 2
AERO 300 Aerospace Engineering Analysis ....... 5
AERO 301, 302, 303 Aerothermodynamics ...... 4,4,4
AERO 304 Experimental Aerothermodynamics ... 2
AERO 306 Aerodynamics and Flight Performance 4
AERO 307 Experimental Aerodynamics.......... 2
AERO 320 Fundamentals of Guidance and Control 4
AERO 331 Aerospace Structural Analysis I ........ 4
AERO 401 Propulsion Systems........................ 4
AERO 420 Stability/Control of Aerospace Vehicles 4
AERO 431 Aerospace Structural Analysis II ....... 4
AERO 433 Experimental Stress Analysis ........... 1
AERO 446 Introduction to Space Systems ......... 4
AERO 461, 462 Senior Project I, II or
AERO 463, 464 Senior Project Laboratory I, II 2,3
CE 204 Mechanics of Materials I ................. 3
2 CE 207 Mechanics of Materials II ............... 2-3
EE 201, 251 Electric Circuit Theory and Lab ...... 3,1
Concentration courses (see below) ............... 22

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SUPPORT COURSES

BIO 213 and ENGR/BRAE 213 (B2)* ................. 2,2
CHEM 124 Gen Chem for Engineering (B3/B4)* 4
EE 321, 361 Electronics and Lab .................. 3,1
ENGL 149 Technical Writing for Engineers (A3)* 4
IME 144 Intro Design and Manufacturing ...... 4
MATE 210 Materials Engineering .................. 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 211 Engineering Statics .......................... 3
ME 212 Engineering Dynamics ..................... 3
PHYS 131 General Physics I or PHYS 141 General Physics IA (Add’l Area B)* (5/23/12) 4
PHYS 132, 133 General Physics II, III .......... 4,4
STAT 312 Statistical Methods for Engineers (B6)* 4

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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

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

195 - 196

CONCENTRATIONS (select one)

Aeronautics Concentration

AERO 405 Supersonic/Hypersonic Aerodynamics .... 4
AERO 443, 444, 445 Aircraft Design I, II, III ....... 4,3,3
1 Aeronautics approved electives .................... 8

Select 8 units from the following:

AERO 360, 570, 571 require a petition.

(5/2/11)(10/30/15) 22

Astronautics Concentration

AERO 451 Spaceflight Dynamics ..................... 4
AERO 447, 448, 449 Spacecraft Design I, II, III .... 4,3,3
1 Astronautics approved electives .................... 8

Select 8 units from the Aeronautics approved electives list, above.

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1 Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

2 If CE 207 is taken for 2 units the department waives the third unit.

(7/23/15)