

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 299 or 301, and 302, and 303	
Aerothermodynamics (2/21/17)	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
	91

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	4
Physics IA (Add'l Area B)* (5/23/12)	
PHYS 132, 133 General Physics II, III	4,4
STAT 312 Statistical Methods for Engineers (B6)*	4
	65

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
	40

FREE ELECTIVES

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 311, 407, 409, 416, 419, 425, 432, 434,
- 435, 450, 452, 470, 510, 511, 512, 515, 517,
- 519, 520, 521, 522, 523, 524, 525, 526, 530,
- 532, 533, 534, 535, 540, 541, 550, 551, 552,
- 553, 555, 557, 560, 561, 562, 565, 566, 567.
- AERO 360, 570, 571 require a petition.

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

22

Astronautics Concentration

AERO 451 Spaceflight Dynamics I	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.

22

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. (7/27/15)