

**2011-13 Cal Poly Catalog**

**Electrical Engineering Department**

**BS ELECTRICAL 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.

**MAJOR COURSES**

EE 111, 151 Intro to Electrical Engineering & Lab	1,1
EE 112 Electric Circuit Analysis I.....	2
EE 129, 169 Digital Design and Lab (3)(1) or CPE/EE 133 Digital Design (4).....	4
EE 211, 241 Electric Circuit Analysis & Lab II.....	3,1
EE 212, 242 Electric Circuit Analysis & Lab III.....	3,1
EE 228 Continuous-Time Signals and Systems.....	4
EE 229, 269 Comp Des/Assembly Lang Prog, Lab (3)(1) or CPE/EE 233 Comp Des/Assembly Lang Prog (4).....	4
EE 255, 295 Energy Conversion Electromag, Lab...	3,1
EE 302, 342 Classical Control Systems and Lab.....	3,1
EE 306, 346 Semiconductor Device Electronics and Lab .....	3,1
EE 307, 347 Digital Electronics and Integrated Circuits and Lab.....	3,1
EE 308, 348 Analog Electronics and Integrated Circuits and Lab.....	3,1
EE 314 Introduction to Communication Systems.....	3
EE 328 Discrete Time Signals and Systems and EE 368 Signals and Systems Laboratory .....	3,1
EE 329 Programmable Logic and Microprocessor-Based Systems Design or EE 336 Microprocessor System Design .....	4
EE 335 Electromagnetic Fields and Transmission	4
EE 375 Electromagnetic Fields/Transmission Lab...	1
EE 402 Electromagnetic Waves .....	4
EE 409, 449 Electronic Design and Lab.....	3,1
EE 460 Senior Project Preparation.....	2
EE 461 Senior Project I or EE 463 Senior Project Design Laboratory I.....	3
EE 462 Senior Project II or EE 464 Senior Project Design Laboratory II.....	2
<sup>1</sup> Technical electives.....	12

Select from the following, a minimum of 2 EE senior design laboratories and 2 EE senior design lectures:

*EE lecture/laboratory electives*

- EE 410, 411, 413, 417, 420, 424, 433, 495 (taken Fall 2009 or later; max 4 units);
- EE/CPE 427, 428, 439, 521, 522, 523;
- EE 431/CPE 441

*EE lecture electives*

- EE 400<sup>†</sup>, 403, 405, 406, 407, 412, 415, 416, 418, 419, 421, 425, 440, 470, 502, 511, 513, 514, 515, 517, 518, 519, 520, 524, 526, 527, 528, 529, 530, 533, 570;
- EE/CPE 432, 438

*EE laboratory electives*

- EE 400<sup>††</sup>, 422, 443, 444, 445, 452, 455, 456, 458, 459, 471, 480, 541, 544;
- EE/CPE 472

*Non-EE electives*

- BMED 410, 420, 425, 430, 440, 445;
- BUS 311;
- CHEM 305, 313;
- CPE 482;
- CSC 341, 342, 343;
- CSC/CPE 315, 416, 453, 454, 458, 464, 471;
- ECON 330, 337, 403, 413;
- ENVE 331;
- IME 301, 303, 319, 322, 326, 401, 405, 407, 427, 435, 457, 458;
- MATE 340, 430, 435;
- MATH 304, 306, 406, 408, 409, 412, 413, 414, 418, 451, 452, 453;
- ME 302, 318, 321, 343, 405, 406, 415, 423, 450, 488;
- MU 311, 312, 411;
- PHYS 302, 303, 310, 313, 317, 322, 340, 341, 342, 403, 405, 406, 408, 409, 412, 417, 423, 424, 452;
- STAT 426, 427

Total units for Major Courses:

**87**

**SUPPORT COURSES**

BIO 213 and ENGR/BRAE 213 (B2)* .....	2,2
CHEM 124 Gen Chem for Engineering (B3/B4)* .....	4
CSC 101 Fundamentals of Computer Science I .....	4
ENGL 149 Technical Writing for Engineers (A3)* .....	4
IME 156 Basic Electronics Manufacturing or IME 157 Electronics Manufacturing .....	2
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
PHYS 141 General Physics IA (Add'l Area B)* ....	4
PHYS 132, 133 General Physics II, III .....	4,4
PHYS 211 Modern Physics I .....	4
STAT 350 Probability and Random Processes for Engineers (B6)* .....	4
<sup>1,2,3</sup> Approved engineering support electives.....	9

Select at least 3 courses from the following:  
 BIO 111; BMED 212, 310, 450, 460;  
 CHEM 125, 212, 216, 305, 313;  
 CSC 141, 142, 341, 342, 343;  
 CSC/CPE 102, 103, 315;  
 IME 142, 143, 301, 314, 405, 407;  
 MATE 210, 215, 232, 340, 430, 435;

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

<sup>2</sup> No course may be used to simultaneously satisfy both engineering support and technical elective requirements.

<sup>3</sup> The number of units given for transfer credit will not exceed the number of units of the Cal Poly course.

<sup>†</sup> Four units max count toward technical electives

<sup>††</sup> One unit max, with approval of department chair, as lab elective.

MATH 206, 304, 306, 406, 408, 409, 412, 413,  
 414, 418, 451, 452, 453;  
 ME 211, 212, 302, 341, 343;  
 PHYS 212, 310, 313, 315, 317, 322, 323, 340,  
 341, 342, 403, 405, 406, 408, 409, 412, 417,  
 423, 424, 452;  
 STAT 426, 427

Total units for Support Courses: 67

**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** ..... 0

194