

# BS ELECTRICAL ENGINEERING

2015-2017

updated  
08.20.18

Units Required 192

**NOTE:** This document can be used as a compact display of courses and other curricular requirements at the time of the publication of the 2015-2017 catalog. The Degree Progress Report must be used to track students' progress in all degree requirements, throughout their Cal Poly career.

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

MAJOR COURSES (85)	Units
CPE/EE 133 Digital Design	4
CPE/EE 233 Comp Design & Assem Lang Prog	4
EE 111 Intro to Electrical Engineering	1
EE 151 Intro to Electrical Engineering Lab	1
EE 112 Electric Circuit Analysis I	2
EE 211 Electric Circuit Analysis II	3
EE 241 Electric Circuit Analysis Lab II	1
EE 212 Electric Circuit Analysis III	3
EE 242 Electric Circuit Analysis Lab III	1
EE 228 Continuous-Time Signals and Systems	4
EE 255 Energy Conv Electromag	3
EE 295 Energy Conv Electromag Lab	1
EE 302 Classical Control Syst	3
EE 342 Classical Control Syst Lab	1
EE 306 Semiconduc Dev Elect	3
EE 346 Semiconduc Dev Elect Lab	1
EE 307 Digital Elec & Integ Circ	3
EE 347 Digital Elec & Integ Circ Lab	1
EE 308 Analog Elec & Integ Circ	3
EE 348 Analog Elec & Integ Circ Lab	1
EE 314 Intro to Communications Syst	3
EE 328 Discrete Time Signals & Syst	3
EE 368 Signals & Systems Lab	1
EE/CPE 329 Prog Logic & Micropro-Based Sys <i>or</i> EE 336 Microprocessor System Design	4
EE 335 Electromag Fields & Trans	4
EE 375 Electromag Fields & Trans Lab	1
EE 402 Electromag Waves	4
EE 409 Electronic Design	3
EE 449 Electronic Design Lab	1
EE 460 Senior Project Prep	2
EE 461 Senior Project I <i>or</i> EE 463 Senior Project Design Lab I	2 <i>or</i>
EE 462 Senior Project II <i>or</i> EE 464 Senior Project Design Lab II	2 <i>or</i>
Technical Electives <sup>1,6</sup> <i>A minimum of 2 EE senior design lectures and 2 EE senior design laboratories (See list on reverse.)</i>	11

## SUPPORT COURSES (67)

BIO 213 <i>and</i> BMED 213 (B2) <sup>5</sup>	2
CHEM 124 General Chem for Engineering I (B3/B4) <sup>5</sup>	4
CSC/CPE 101 Fundamentals of Computer Science I	4
ENGL 149 Technical Writing for Engineers (A3) <sup>5</sup>	4
IME 156 <i>or</i> IME 157	2
MATH 141 Calculus I (B1) <sup>5</sup>	4

See reverse for footnotes

MATH 142 Calculus II (B1) <sup>5</sup>	4
MATH 143 Calculus III (Add'l Area B) <sup>5</sup>	4
MATH 241 Calculus IV	4
MATH 244 Linear Analysis I	4
PHYS 141 General Physics IA (Add'l Area B) <sup>5</sup>	4
PHYS 132 General Physics II	4
PHYS 133 General Physics III	4
PHYS 211 Modern Physics I	4
STAT 350 Prob & Random Processes for Engrs (B6) <sup>5</sup>	4
Approved engineering support electives <sup>1,6,7</sup> Select from the following: BIO 111; BMED 212, 310, 450, 460; CHEM 125, 212, 216, 313; CPE 290; CSC/CPE 102, 103, 315; CSC 341, 348; IME 142, 143, 301, 305, 314; MATE 210, 215, 232, 340, MATE 430/BMED 434, MATE/BMED 435; MATH 206, 304, 306, 406, 408, 409, 412, 413, 414, 418, 451, 452, 453; ME 211, 212, 302, 341, 350; PHYS 212, 310, 313, 315, 317, 322, 323, 340, 341, 342, 403, 405, 406, 408, 409, 412, 417, 423, 424, 452; STAT 426, 427	9

## GENERAL EDUCATION (GE)

72 units required, 32 of which are specified in Support

Refer to current schedule or <http://www.ge.calpoly.edu> to choose GE courses.  
You will not receive credit for courses not on the approved lists.

Minimum of 8 units required at the 300 level.

### Area A Communication

- |  |   |
|--|---|
| A1 Expository Writing .....                                    | 4 |
| A2 Oral Communication .....                                    | 4 |
| A3 Reasoning, Argu & Writing (4 units in Support) <sup>5</sup> |   |

### Area B Science and Mathematics (no add'l units req'd)

28 units are listed in Support

### Area C Arts and Humanities

- |                                 |   |
|---------------------------------|---|
| C1 Literature .....             | 4 |
| C2 Philosophy .....             | 4 |
| C3 Fine/Performing Arts .....   | 4 |
| C4 Upper-division elective..... | 4 |

### Area D/E Society and the Individual

- |                                   |   |
|-----------------------------------|---|
| D1 The American Exp (40404) ..... | 4 |
| D2 Political Economy .....        | 4 |
| D3 Comp Social Institutions ..... | 4 |
| D4 Self Dev (CSU Area E) .....    | 4 |

## FREE ELECTIVES

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## OTHER DEGREE REQUIREMENTS:

- Cal Poly, Higher Ed, and Major GPA must all be at least 2.00
- For students admitted Fall 2016 and after, a grade of C- or higher is required in GE A1, A2, A3, and one GE B1 course

All students must complete:

- United States Cultural Pluralism Requirement
- Graduation Writing Requirement
- 60 units Upper Division (any 300-400 level classes)
- Upper Division units in the Major: 27
- Residency Requirements: See Degree Progress Report for details

## TECHNICAL ELECTIVES<sup>1,6</sup>

*Select from the following:* <sup>2</sup>

### **EE Senior Design Lecture/Laboratory Electives:**

EE 410, 411, 413, 417, 420, 424, 433, 434, 495<sup>3</sup>, 516;

EE/CPE 428, 439, 521, 522, 523;

EE 431/ CPE 441

### **EE Senior Design Lecture Electives:**

EE 400<sup>4</sup>, 403, 405, 406, 407, 412, 415, 416, 418, 419, EE 423/BMED  
434/MATE 430, 425, 440, 470, 502, 509, 511, 513, 514, 515, 518, 519,  
520, 524, 526, 527, 528, 529, 530, 533, 570;

EE/CPE 432

### **EE Senior Design Laboratory Electives:**

EE 400<sup>4</sup>, EE/PHYS 422, 443, 444, 445, 452, 455, 456, 458, 459, 471,

EE/CPE 472, 480, 541, 544;

### **Non-EE Electives:**

BMED 410, 420, 425, 430, BMED/MATE 435, 440, 445;

BUS 311;

CHEM 313;

CPE 482;

CSC 341;

CSC/CPE 315, 416, 453, 454, 458, 464, 471;

ECON 330, 337, 403, 413;

ENVE 331;

IME 301, 303, 305, 319, IME/MATE/HNRS 322, 326, 401, 427, 435,  
457, IME/MATE 458/CPE 488;

MATE 340;

MATH 304, 306, 406, 408, 409, 412, 413, 414, 418, 451, 452, 453;

ME 302, 318, 326, 350, 405, 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

<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> A minimum of 2 EE senior design lectures and 2 EE senior design laboratories.

<sup>3</sup> Taken Fall 2009 or later; max 4 units.

<sup>4</sup> Four units max may count toward technical electives. One unit max, with approval of department chair, may count towards Senior Design Lab Elective.

<sup>5</sup> Required in Support; also satisfies GE

<sup>6</sup> No course may be used to simultaneously satisfy both engineering support and technical elective requirements.

<sup>7</sup> The number of units given for transfer credit will not exceed the number of units of the Cal Poly course.