## **BS CIVIL ENGINEERING**

2015-2017

updated 10.04.16

Units Required 189-191

NOTE: This document can be used as a compact display of courses and other curricular requirements at the time of 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 (68)	Units
CE 111 Intro to Civil Engr	1
CE 112 Design Principles in Civil Engr	2
CE 113 Computer Aided Drafting	2
CE 204 Mechanics of Materials I	3
CE 207 Mechanics of Materials II	2
CE 251 Programming App in Engr	2
CE 259 Civil Engineering Materials	2
CE 321 Fund Trans Engr	3
CE 322 Fund Trans Engr Lab	2
CE 336 Water Resources Engineering	4
CE 337 Hydraulics Laboratory	1
CE 352 Structural Engineering	4
CE 355 Reinforced Concrete Design	4
CE 381 Geotech Engineering	4
CE 382 Geotech Engineering Lab	1
CE 465 Civil Engr Prof Practice	1
CE 466 & 467 <i>or</i>	3
CE 468 & 469	3
Technical Electives <sup>2, 3</sup>	24
(In consultation with faculty advisor. See list and	
guidelines on reverse.)	
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SUPPORT COURSES (81-83)

SCITORI COCRSES (01-03)	
BIO 213 and	2
BMED/BRAE 213 $(B2)^1$	2
BRAE 239 Engineering Surveying	4
CHEM 124 Gen Chem for the Engr I (B3/B4) <sup>1</sup>	4
CHEM 125 Gen Chem for the Engr II	4
ENGL 149 Technical Writing for Engineers (A3) <sup>1</sup>	4
ENVE 331 Introduction to Environmental Engineering	4
GEOL 201 Physical Geology	3
MATE 210 Materials Engineering	3
MATE 215 Materials Laboratory I	1
MATH 141 Calculus I (B1) <sup>1</sup>	4
MATH 142 Calculus II (B1) <sup>1</sup>	4
MATH 143 Calculus III (Add'l Area B) <sup>1</sup>	4
MATH 241 Calculus IV	4
MATH 244 Linear Analysis I	4
ME 211 Engineering Statics	3
ME 212 Engineering Dynamics	3
ME 302 Thermodynamics I	3
ME 341 Fluid Mechanics I	3
PHYS 141 General Physics IA (Add'l Area B) <sup>1</sup>	4
PHYS 132 General Physics II	4
PHYS 133 General Physics III	4

STAT 312 Statistical Methods for Engineers (B6) <sup>1</sup>	4
Approved Engineering Science Elective <sup>2, 3</sup>	2-4
Select 2-4 units from: CSC 231, 234, 341; EE 201; IME	
314; MATH 304, 344	

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GENERAL EDUCATION (GE)  72 units required, 32 of which are specified in Support	40
Refer to <u>current schedule</u> or <u>http://www.ge.calpoly.edu</u> to choose GE courses. You will <u>not</u> receive credit for courses not on the approved lists.	
Minimum of 8 units required at the 300 level.	<b>_</b>
Area A Communication	8
A1 Expository Writing	. 4
A2 Oral Communication	.4
A3 Reasoning, Argu & Writing (4 units in Support) <sup>1</sup>	
Area B Science and Mathematics (no add'l units req'd)	
28 units are listed in Support	
28 units are listed in Support  Area C Arts and Humanities	16
11	
Area C Arts and Humanities	. 4
Area C Arts and Humanities C1 Literature	4
Area C Arts and Humanities C1 Literature C2 Philosophy	. 4
Area C Arts and Humanities C1 Literature C2 Philosophy C3 Fine/Performing Arts	. 4
Area C Arts and Humanities C1 Literature C2 Philosophy C3 Fine/Performing Arts C4 Upper-division elective.	. 4 . 4 . 4 . 4
Area C Arts and Humanities C1 Literature C2 Philosophy C3 Fine/Performing Arts C4 Upper-division elective.  Area D/E Society and the Individual	. 4 4 . 4 . 4 . 16
Area C Arts and Humanities C1 Literature C2 Philosophy C3 Fine/Performing Arts C4 Upper-division elective.  Area D/E Society and the Individual D1 The American Exp (40404)	. 4 . 4 . 4 . 4 . 4 . 4

## 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

FREE ELECTIVES ...... 0

## 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

<sup>&</sup>lt;sup>1</sup> Required in Support; also satisfies GE

<sup>&</sup>lt;sup>2</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>&</sup>lt;sup>3</sup>The courses selected to satisfy this requirement may not be used to satisfy other major, support, or general education requirements (no double counting of coursework).

## TECHNICAL ELECTIVES<sup>2,3</sup>

In consultation with faculty advisor, select 24 units from any 400-500 level CE and ENVE courses not required in the major, CE 356, CE 371/CM 371, ENVE 325, and a maximum of 4 units from the following list:

ARCE 305, 372, 403; BIO/NR/SS 421; BMED/CE/ME 404; BRAE 345, 447, 532; CHEM 341; CM 334, 432; CRP 420, 435; CRP/NR 404, 408; ERSC/GEOL 401, 402; GEOL 415; IME 314; MATE 425, 450; MATH 344; SS 423, 442

- <sup>3</sup> Additional guidelines for technical electives:
- a) More than 4 units of coursework outside CE/ENVE is only permitted in special/ unusual cases and requires written justification by the student, and approval by the Department Chair.
- b) CE 400, CE 500 and ENVE 400, ENVE 500 require a course substitution form and no more than 4 total units are allowed.
- c) No more than 8 combined units of CE 470 / ENVE 470, CE 471 / ENVE 471, CE 570 / ENVE 570, CE 571 / ENVE 571 can be credited.
- d) Co-op, graduate seminar, senior project/design, and thesis courses are not permitted.
- e) Only one course can be credited for CE 458 / CE 558; CE 459 / CE 556.

<sup>&</sup>lt;sup>2</sup> Consultation with advisor is recommended prior to selecting technical electives or approved electives; bear in mind your selection.