

## Bachelor of Science Requirements for CEE (120 units)

<b>Freshman Year</b>	<b>Fall</b>	<b>Spring</b>
Math 1A - 1B, Calculus	4	4
Chem 1A, General Chemistry	4	-
Physics 7A, Physics for Scientists and Engineers	-	4
Engin 7, Introduction to Computer Programming for Scientists and Engineers	-	4
Basic Science Breadth Elective (Bio 1B or CE 70)	3-4	-
CE 92, Introduction to Civil and Environmental Engineering	1	-
Reading and Composition Courses from List A and List B	4	4
<b>Total</b>	<b>16-17</b>	<b>16</b>
<b>Sophomore Year</b>		
Math 53-54, Multivariable Calculus, Linear Algebra and Differential Equations	4	4
Physics 7B, Physics for Scientists and Engineers	4	-
<i>Basic Science Elective:</i> Chemistry 1B or 4B, General Chemistry or Physics 7C, Physics for Scientists and Engineers	-	4
CE C30/ME C85, Introduction to Solid Mechanics	-	3
CE 93, Engineering Data Analysis	-	3
CE 60, Structure and Properties of Civil Engineering Materials	3	-
<i>Engineering Sophomore Elective:</i> CE 11, Engineered Systems and Sustainability or CE 70, Engineering Geology (if CE 70 was taken in the freshman year, then students must take CE 11 here)	-	3
First Additional Humanities and Social Studies Course	4	-
<b>Total</b>	<b>15</b>	<b>17</b>
<b>Junior Year</b>		
CE 100, Elementary Fluid Mechanics	4	-
CE 130N, Mechanics of Structures	-	3
<i>Engineering Science Elective:</i> Engin 115 or ME 40, Thermodynamics, or ME 104, Engineering Mechanics II	-	3-4
<i>Elective Core (4 of 7), see below</i>	6	6
Second and Third Additional Humanities and Social Studies Electives	4	3
<b>Total</b>	<b>14</b>	<b>15-16</b>
<b>Senior Year</b>		
CE 192, The Art and Science of Civil and Environmental Engineering Practice	1	-
Engineering Electives <sup>†</sup>	12	3
Design Elective (see list below)	-	3-4
Fourth Additional Humanities and Social Studies Elective	-	4
Free Electives	3-4	3-4
<b>Total</b>	<b>16-17</b>	<b>13-15</b>
<b>Elective Core</b>	<b>Design Electives</b>	
CE 103, Hydrology (Spring)	CE 105, Applied Environmental Fluid Mechanics (Spring)	
CE 111, Environmental Engineering (Fall)	CE 112, Environmental Engineering Design (Spring)	
CE 120, Structural Engineering (Fall)	CE 122N and L, Design of Steel Structures (N Fall, L Spring)	
CE 155, Transportation Systems Engineering (Spring)	CE 123N and L, Design of Reinforced Concrete Structures (N Fall, L Spring)	
CE 167, Engineering Project Management (Fall)	CE 153, Design of Transportation Facilities (Fall)	
CE 175, Geotechnical and Geoenvironmental Engineering (Fall and Spring)	CE 177, Foundation Engineering Design (Fall)	
CE 191, Civil and Environmental Systems Analysis (Fall)	CE 180, Construction, Maintenance, and Design of Engineered Systems (Spring)	
	CE 186, Design of Cyber-Physical Systems (Spring)	

<sup>†</sup>See [coe.berkeley.edu/hssreq](http://coe.berkeley.edu/hssreq) for a list of approved humanities and social studies courses.

<sup>†</sup>Engineering Electives (15 units total): Upper-division technically oriented engineering coursework offered in the College of Engineering or in Chemical Engineering. Cannot include any course taken on a P/NP basis, BioE 100; CE 194, 195, C195; E 100, 110, C111, 124, 130AC, 140, 191, 193, 195, 196; EE 194; IEOR 172, 190 series; ME 106; ChemE 185.