

**CALIFORNIA STATE UNIVERSITY, FULLERTON**  
**DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

**Civil Engineering Program Layout (129 units)**

Semester 1 (15 units)

- Oral Communications elective (3) (GE I.A)
- MATH 150A Analytic Geometry and Calculus (4) (GE III.A.1)
- EGCE 206 Arch & CE Drafting & Eng. Applications (1)
- Government elective (3) (GE II.B.2)
- CHEM 115 Introduction to General Chemistry (4) (GE III.A.2.a)

Semester 2 (17 units)

- English 101 (3) (GE I.B)
- MATH 150B Analytic Geometry and Calculus (4)
- EGCE 214 Engineering Surveying (2)
- EGCE 214L engineering Surveying Laboratory (1)
- PHYS 225 Fundamental Physics (Mech) (3) (GE III.A.2.a)
- PHYS 225L Fundamental Physics Lab (Mech) (1) (GE III.A.2.a)
- American History elective (3) (GE II.B.1)

Semester 3 (17 units)

- MATH 250A Intermediate and Calculus (4)
- EGCE 201 Statics (3)
- PHYS 226 Fundamental Physics (E & M) (3)
- PHYS 226L Fundamental Physics Lab (E & M) (1)
- BIOL 101 Elements of Biology (3) (GE III.A.2.c)
- Critical Thinking elective (3) (GE I.C)

Semester 4 (16 units)

- MATH 250B Linear Algebra and Differential Equations (4)
- Introduction to the Arts elective (3) (GE III.B.1)
- EGCE 301 Mechanics of Materials (3)
- EGCE 302 Dynamics (3)
- Introduction to the Humanities elective (3) (GE III.B.2)

Semester 5 (16 units)

- EGCE 308 Eng. Analysis and Applications (3)
- EGCE 324 Soil Mechanics (3)
- EGCE 325 Structural Analysis (3)
- EGCE 377<sup>+</sup> Civil Engineering Material Lab (1)
- Implications, Explorations and Participatory Experience in the Arts and Humanities elective & Cultural Diversity elective (3) (GE III.B.3 & GE V)
- Implications, Explorations and Participatory Experience in the Social Sciences elective & Cultural Diversity elective (3) (GE III.C.2 & GE V)

Semester 6 (17 units)

- EGCE 324L<sup>+</sup> Soil Mechanics Lab (1)
- EGCE 325L<sup>+</sup> Structural Analysis Lab (1)
- EGCE 428 Engineering Hydraulics (3)
- EGCE 441 Environmental Engineering (3)
- EGCE 408 Reinforced Concrete Design (3)
- EGCE 430 Structural Steel Design (3)
- EGCE elective\* (3)

Semester 7 (16 units)

- EGCE 401 Engineering Economy and Profnism (3) (GE III.C.1)
- EGCE 432 Computer Aided Design in Civil Eng. (3)
- EGCE elective\* (3)
- EGCE elective\* (3)
- EGCE 428L<sup>+</sup> Engineering Hydraulics Lab (1)
- The Dev. of World Civilization elective (3) (GE II.A)

Semester 8 (15 units)

- EGCE 418 Foundation Design (3)
- EGCE 468<sup>+</sup> Engineering Construction (3)
- EGCE 494, 494L Design of Civil Engineering Structures (4)
- EGCE elective\* (3)
- EGCE Technical Elective Lab\*,<sup>++</sup> (1)
- EGCE 499 Independent study\* for EGCE 497 project (1)

<sup>+</sup> Upper division writing requirement

\* students need to take 400 level electives after satisfying their pre requisites. They can choose these electives from\*\*\*

- EGCE 411 Structural Dynamics
- EGCE 431L<sup>+</sup> Advanced Structural Laboratory
- EGCE 435 Design of Hydraulic Structures
- EGCE 436 Engineering Hydrology
- EGCE 463 Precast & Prestressed Concrete Design
- EGCE 463L<sup>+</sup> Precast & Prestressed Concrete Design Lab
- EGCE 465<sup>+</sup> Planning and Control of Eng. Const. Projects
- EGCE 466 Public Transit Syst Planning & Operations
- EGCE 481 Solid Waste Technology and Management
- EGCE 482 Liquid Waste Technology and Management
- EGCE 493 Structural Systems for Buildings
- EGCE 497 Senior Project

<sup>++</sup> Students must take one lab between EGCE 431L and EGCE 463L

\*\*\*To satisfy the Electrical Accrediation Commission of ABET course depth requirement, students need to take a minimum of two courses from four civil engineering areas. Since the department offers five areas (structural, geotechnical, hydraulics, environmental and construction), the student can choose any four areas of interest. The following table identifies the required electives as a function of the available four areas (minimum requirement)

Areas of study	Required elective courses
Structural, Geotechnical, Hydraulics, Environmental	CE 481 or CE 482, CE 435 or CE 436
Structural, Geotechnical, Environmental, Construction	CE 481 or CE 482
Structural, Geotechnical, Hydraulics, Construction	CE 435 or CE 436

Only upon the approval of the advisor, students can take the electives among Chem 125, Geol 376, EGEE 203 and EGME 304.