



**CAL POLY**

Civil & Environmental Engineering  
COLLEGE OF ENGINEERING

# ENVIRONMENTAL ENGINEERING

Building 13, Room 266  
805-756-2947  
ceenve.calpoly.edu

## PROGRAM DESCRIPTION

Environmental engineering encompasses the interrelation of people, materials and processes in a complex and changing environment. It is a broad field that includes control of air and water pollution, environmental health and safety, solid waste and more. We offer a sound background in the fundamentals of thermodynamics, fluid mechanics, mass transfer, water resources and geotechnical engineering. The problem-oriented approach to instruction in modern, well-equipped laboratories provides an excellent opportunity to gain experience and understanding of the discipline.

## OUR MISSION

To prepare graduates for practice in professional engineering, emphasizing Cal Poly's Learn by Doing philosophy integrating design throughout the curriculum, especially in the numerous design-centered laboratories. Students demonstrate their understanding of engineering knowledge and their ability to apply that knowledge creatively to practical problems.



# ENVE

## ASSOCIATED CLUBS

Student clubs are an integral part of our department curriculum and give our students unique, hands-on opportunities to become successful and resourceful professionals in their fields. Clubs include:

- Cal Geo
- Cal Poly Concrete Canoe
- Cal Poly Rainworks
- Steel Bridge
- Chi Epsilon Honor Society
- Engineers for a Sustainable World
- Engineers Without Borders
- Institute of Transportation Engineers
- Society of Civil Engineers
- Society of Environmental Engineers
- Society of Women Engineers

## LABS INCLUDE:

- Bio-Environmental Engineering Lab
- Building Information Modeling Lab
- Environmental Protection Engineering Lab
- Geotechnical Engineering Lab
- Environmental Engineering Chemical Wet Lab
- Computer Lab
- Advanced Geotechnical Engineering Lab
- Pavement and Advanced Materials Lab
- Hal Cota Air Measurements Lab
- Computer-Aided Design Lab
- Water Resources Lab

**166**  
undergraduate  
students

enrolled in  
environmental  
engineering

**41**  
graduate  
students

enrolled in the  
blended B.S. and M.S.  
programs

## ENVIRONMENTAL ENGINEERING GRADUATES

Environmental engineers may find employment with various private and public organizations, including federal, state and local governments. They may design, plan and implement measures improving recycling, waste disposal and treatment, public health and pollution control technology.



# B.S. IN ENVIRONMENTAL ENGINEERING

Suggested Four-year Academic Flowchart • 2022-2026 Catalog

Updated 5/16/2022

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Intro. to the Environmental Engineering Profession <b>ENVE 111 (1)</b>	Computer Aided Drafting in Civil Engineering <b>CE 113 (2)</b>		Air Quality Engineering <b>ENVE 325 (4)</b> <small>(CHEM 125 or 128)</small>	Noise & Vibration Control <b>ENVE 309 (3)</b> <small>(MATH 241; PHYS 142)</small>		Environmental Fluid Mechanics <b>ENVE 264 (4)</b> <small>(MATH 241; PHYS 142; ME 211)</small>	Water Chemistry & Water Quality Measurements <b>ENVE 434 (4)</b> <small>(CHEM 125 or 129; ENVE 330 or 331)</small>	Mass Transfer Operations <b>ENVE 421 (4)</b> <small>(ENVE 325; 331; 304 or ME 302; ENVE 264 or ME 341)</small>	Civil Engineering Professional Practice <b>CE 465 (1)</b> <small>(Sr Standing and Instr. Consent)</small>	Senior Project Design Laboratory I & II <b>ENVE 466 (2)</b>   <b>ENVE 467 (2)</b> <small>(ENVE 438; CE 336; Sr Standing; CE 465†)</small>   <small>(ENVE 466)</small>	
	General Physics I <b>PHYS 141 (4)</b> <small>(MATH 141 w/min C-; MATH 142† or 182†)</small> [Area B Elective]	General Physics II <b>PHYS 142 (4)</b> <small>(PHYS 141; MATH 142 or 182)</small>	General Physics III <b>PHYS 143 (4)</b> <small>(PHYS 141; MATH 142. Recom: MATH 241)</small>	Mechanics of Materials I <b>CE 204 (3)<sup>1</sup></b> <small>(ME 211)</small>	Mechanics of Materials II <b>CE 207 (2)<sup>1</sup></b> <small>(CE 204)</small>	Programming Applications in Engineering <b>CE 251 (2)</b> <small>(CE 113; MATH 244; CE 204 or CE 208†)</small>	Process Thermodynamics <b>ENVE 304 (3)</b> <small>(CHEM 125 or 129; ENVE 331)</small>	Water & Wastewater Treatment Design <b>ENVE 438 (3)</b> <small>(ENVE 331 and ME 341 or ENVE 264)</small>	Choose 12 units from the following: Air Pollution Control <b>ENVE 411 (4)*</b> Envir Engineering of Energy <b>ENVE 480 (4)*</b>		
Calculus I <b>MATH 141 (4)</b> * [B4]	Calculus II <b>MATH 142 (4)</b> <small>(MATH 141 w/min C- or Instr. Consent)</small> [B4]	Calculus III <b>MATH 143 (4)</b> <small>(MATH 142 w/min C- or Instr. Consent)</small> [Area B Elective]	Calculus IV <b>MATH 241 (4)</b> <small>(MATH 143)</small>	Fundamentals of Env. Engineering <b>ENVE 331 (4)</b> <small>(CHEM 125 or 128; MATH 242 or 244†)</small>		Statistical Methods for Engineers <b>STAT 312 (4)</b> * [Upper-Div B]	Water Resources Engineering <b>CE 336 (4)</b> <small>(ME 341 or ENVE 264; CE 337†)</small>	Hydraulics Laboratory <b>CE 337 (1)</b> <small>(ENVE 264 or ME 341; CE 336†)</small>	Industrial Pollution Prevention <b>ENVE 450 (4)</b> <small>(ENVE 331)</small>	Groundwater Hydraulics and Hydrology <b>CE 434 (4)</b> <small>(CE 336)</small>	Intro Haz Waste Mgmt <b>ENVE 436 (4)*</b> Bioremediation Eng <b>ENVE 443 (4)*</b>
General Chemistry for Physical Science & Engineering I <b>CHEM 124 (4)</b> * [B1 & B3]	General Chemistry for Physical Science & Engineering II <b>CHEM 125 (4)</b> <small>(CHEM 124, or AP Chemistry score of 5)</small>	General Chemistry for Physical Science & Engineering III <b>CHEM 126 (4)</b> <small>(CHEM 125 w/min C- or Instr. Consent)</small>	Engineering Statics <b>ME 211 (3)</b> <small>(MATH 241†; PHYS 131 or 141)</small>	Linear Analysis I <b>MATH 244 (4)</b> <small>(MATH 143)</small>	Survey of Organic Chemistry <b>CHEM 312 (5)</b> <small>(CHEM 125 or 128)</small>		Geotechnical Engineering <b>CE 381 (4)</b> <small>(CE 207 or 208; ME 341 or ENVE 264)</small>	Air Quality Measurements <b>ENVE 426 (3)</b> <small>(ENVE 325; CHEM 212/312; ENVE 264 or ME 341; STAT 312)</small>	Approved Technical Elective <b>(2)<sup>2</sup></b> ***	Approved Technical Elective <b>(4)<sup>2</sup></b> ***	Approved Technical Elective <b>(4)<sup>2</sup></b> ***
Oral Communication <b>COMS 101/102 (4)**</b> [A1]				GE (4) **	GE (4) **	GE (4) **	GE (4) **	GE (4) **	GE (4) **	GE (4) **	GE (4) **
Expository Writing <b>ENGL 133/134 (4)**</b> [A2]						Graduation Writing Requirement <b>GWR*</b> <small>(Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)</small>					
Reasoning, Argumentation, & Writing [A3] <b>COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGQS 145 (4)**</b> <small>(Completion of GE A2 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.</small>											
13	18	16	15	18	15-16	14	16	18	15	18	14
										TOTAL:	190-191

**Notes:**

**MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET**

\* Refer to current catalog for prerequisites.

\*\* One course from each of the following GE areas must be completed: A1, A2, A3, C1, C2, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, Lower-Division E, and F. Upper-Division C should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

\*\*\* To be selected in consultation with your academic advisor.

† Course can be taken previously or concurrently.

<sup>1</sup> Transfer students take CE 208 (5) in the Fall Quarter in place of both CE 204 (3) and CE 207 (2).

<sup>2</sup> 10 units Technical Electives. See catalog for course options. Consult advisor.

**Legend:**

Course Title	
Course # (Units)	
(Prerequisite)	
[GE Area]	

**Major (86)**

**Support (60-61)**

**General Ed. (44)**