# Suggested Course Plan for a UC Riverside Major in Environmental Engineering

## Catalog Year: 2020

### Fall Quarter Units | Winter Quarter Units | Spring Quarter Units
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CEE 010 | 1 | CHEM 001B & CHEM 01LB | 5 | CHEM 001C & CHEM 01LC | 5
*Intro to Chem. & Envir. Engineering* | General Chemistry & Lab | General Chemistry & Lab
CHEM 001A & CHEM 01LA | 5 | ENGL 001B | 4 | ENGL 001C or Alternate* | 4
*General Chemistry & Lab* | Intermediate Composition | Applied Intermediate Composition
ENGL 001A | 4 | MATH 009B | 4 | MATH 009C | 4
*Beginning Composition* | First Year Calculus | First Year Calculus
MATH 009A | 4 | PHYS 040A | 5 | PHYS 040B | 5
*First Year Calculus* | Physics (Mechanics) | Physics (Heat/Waves/Sound)

### Second Year

| CHEM 008A & CHEM 08LA | 4 | CHE 100 | 4 | CS 010A | 4
*Organic Chemistry* | Engineering Thermodynamics | C++ Programming
ENVE 171 | 4 | CHEM 008B & CHEM 08LB | 4 | ENVE/CHE 130 | 4
MATH 046 | 4 | MATH 010A | 4 | MATH 010B | 4
*Differential Equations* | Multivariable Calculus | Multivariable Engineering Thermodynamics
PHYS 040C | 5 | Breadth | 4 | ME 010 | 4
*Physics (Electricity/Magnetism)* | Humanities/Social Sciences | Statics

### Third Year

| BIOL 005A & BIOL 05LA | 5 | CHE 120 | 4 | ENVE 146 | 4
*Cell & Molecular Biology & Biochem* | Mass Transfer | Water Quality Systems Design
CHE 114 | 4 | ENVE 133 | 4 | ENVE/CHE 160A | 3
*Applied Fluid Mechanics* | Fund. of Air Pollution Engineering | Chem. & Envir. Engineering Lab
ENGR 118 | 5 | ENVE 142 | 4 | Technical Elective** | 4
*Engineering Modeling & Analysis* | Water Quality Engineering | 
Breadth | 4 | Breadth | 4 | Breadth | 4
*Humanities/Social Sciences* | Humanities/Social Sciences | Humanities/Social Sciences

### Fourth Year

| ENSC/SWSC 100 | 4 | ENVE 135 | 4 | ENVE 175B | 4
*Intro to Soil Science* | Fate & Trans. of Envir. Contaminants | Senior Design Project
ENVE 120 | 4 | ENVE 160C | 3 | Technical Elective** | 4
*Unit Operations and Processes* | Environmental Engineering Lab | 
ENVE 160B | 3 | ENVE 175A | 4 | Technical Elective** | 4
*Environmental Engineering Lab* | Senior Design Project | 
CEE 158 | 3 | Breadth | 4 | Breadth | 4
*Professional Development for Engr* | Humanities/Social Sciences | Humanities/Social Sciences

Total Units: 193

Maximum units: 232

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### To earn a B.S., you must complete all College and University requirements. For a full list of requirements, go to catalog.ucr.edu.

### English Composition*

A C or better is required in all English Composition courses to satisfy the graduation requirement. Please consult with your Academic Advisor for ENGL 1C alternatives.

### Breadth Requirements

For an approved list of Breadth courses, go to http://student.engr.ucr.edu/policies/requirements/breadth.html.

### Humanities: (3 courses)

A. World History: _____________

B. Fine Arts, Lit., Phil., Rlst: _____________

C. Human Persp. on Science: _____________

### Social Sciences: (3 courses)

A. Econ. or Posc.: _____________

B. Anth., Psyc, or Soc.: _____________

C. General Social Science: _____________

### Ethnicity: (1 course)

1. _____________

### Upper Division: (2 courses)

1. _____________

2. _____________

### Technical Electives **

Please note that Technical Electives may be offered throughout the Academic Year. Consult with your Faculty Mentor about potential offerings. See approved technical electives on back.

Course Plan is subject to change.
Environmental Engineering-Technical Electives

You must select one option below and complete 3 courses (at least 12 units) from that option. Units are listed in (). Select from the list below:

**Air Pollution Control Technology Option:**
- *CHE 116*  Heat Transfer (4)
- *ENVE 134*  Technology of Air Pollution Control (4)
- *Choose one from:*
  - CEE 125  Analytical Methods for Chemical and Environmental Engineers (4)
  - CEE 132  Green Engineering (4)
  - CHE 102**  Catalytic Reaction Engineering (4)
  - ENSC/ENTX/CHEM 135  Chemistry of the Clean and Polluted Atmosphere (4)
  - ENVE 138  Combustion Engineering (4)
  - ENVE/ENSC 144  Solid Waste Management (4)
  - ENVE 145  Hazardous Waste Management (4)

**Water Pollution Control Technology Option:**
- *Choose one from:*
  - CHE 124**  Biochemical Engineering Principles (4)
  - ENVE 121  Biological Unit Processes (4)
- *Choose one from:*
  - CEE 125  Analytical Methods for Chemical and Environmental Engineers (4)
  - CHE 116  Heat Transfer (4)
  - ENSC 136  Chemistry of Natural Waters (4)
  - ENSC 163**  Hydrology (4)
- *Choose one from:*
  - CEE 132  Green Engineering (4)
  - ENVE/ENSC 144  Solid Waste Management (4)
  - ENVE 145  Hazardous Waste Management (4)

*Required for the option selected
**Course requires prerequisites not accounted for in curriculum. Please check with the undergraduate faculty advisor about the ability to take this course.