

# LAFAYETTE

The Programs in Environmental Science and Environmental Studies

## The Environmental Science Major

The Environmental Science major requires students to take a total of 20 courses, 14 of which have an environmental focus and 6 of which are background science courses. Of the 14 environmentally focused courses, 6 are required core science courses. Additionally, students are to take two environmental studies courses and 6 courses in their environmental concentration area/track (Restoration Ecology **or** Hydrology and Aquatic Systems **or** Energy Resources)

**F** – typically offered in the Fall semester

**S** – typically offered in the Spring semester

**B** – typically offered in both semesters

This notation is not a guarantee that the course is offered in the indicated semester. Please consult the Course Schedule listing on the [Office of the Registrar's Website](#) .

\* denotes courses that have prerequisites

### Science Background Courses (6 courses):

CHEM 121 **B**, 122\* - **S**

Math 161, 162\* - **B**

Math 186\* - **B**

Physics 111\*/131\* **or** BIOL 111 – **F** (students in the Restoration Ecology track should take BIOL 111)

<u>Course</u>	<u>Term Taken</u>

### Environmental Science Core (6 courses):

EVST 100 An Introduction to the Environment - **F**

BIOL 233 Environmental Problem Solving in Biology\* **F or** BIOL 234 Environmental Biology\* - **S or** BIOL 272 Conservation Biology\* - **F**

CHEM 252 Environmental Chemistry\* - **F or** CE 321 Introduction to Environmental Engineering and Science\* - **F**

GEOL 110 Environmental Geology - **S or** GEOL 120 Geologic Disasters: Agents of Chaos - **F**

EVST 290 Climate Change the Facts, the issues, the Long-Term View\* - **S or** GEOL 115 Earth: Evolution of a Habitable Planet - **F**

EVST 400 Environmental Studies Praxis – **F** (normally)

<u>Course</u>	<u>Term Taken</u>

**Environmental Studies** - choose 2 courses from the EVST approved list of courses in Humanities or Social Sciences (see EVST Program requirements).

<u>Course</u>	<u>Term Taken</u>

**Concentration Areas/Tracks: (6 courses in concentration area)**

**(1) Restoration Ecology OR (2) Hydrology & Aquatic Systems OR (3) Energy Resources**

**(1) Restoration Ecology Concentration (6 courses)**

**(Note: students pursuing this track cannot double count BIOL 272 as a required course and a core science course)**

**Required courses**

BIOL 231 Ecology\* - S

BIOL 272 Conservation Biology\* - F

GEOL 300 Earth Surface Processes\* - S

**Elective courses (In addition to the three required courses above, students must take any 3 courses from the list below)**

BIOL 215 Phytopathology\* - F

BIOL 224 Plant Form, Function, and Adaption\* - S

BIOL 225 Microbiology\* **Every 3rd semester**

BIOL 275 Behavioral Ecology\* S

BIOL 332 Advanced Aquatic Ecology\* F

BIOL 342 Restoration Ecology\* F

CE 351 Water Resources Engineering\* - S

CE/EVSC 352 Hydrology\* - F

CE/EVSC 322 Environmental Site Assessment\* - S

CE 423 Water Quality \* - **S – odd years**

CE 425 Water Supply and Pollution Control\* - **S – odd years**

CE 451 Open Channel Flow\* - **S – odd years**  
 EVSC/GEOL 211 Rivers and Watersheds: Form and Function\*  
 GEOL 205 Oceanography\* - **S**  
 GEOL 210 Hydrogeology\* - **F**  
 GEOL 229 Geographical Information Systems and Remote Sensing in Geosciences\* - **F**  
 GEOL 300 Earth Surface Processes\* - **S**  
 GEOL 321 Geochemistry\* - **S even years**

<u>Course</u>	<u>Term Taken</u>

**(2) Hydrology and Aquatic Systems Concentration (6 courses)**

**Required (at least one from each set)**

Groundwater course (GEOL 210\* - **F**)  
 Surface water course (GEOL 300 - **S** or CE/EVSC 352\* or CE 351\* - **S**)  
 Aquatic biology course (BIOL 231\* - **S** or BIOL 332\* - **F every other year** or BIOL 341\* - **F**)

**Elective courses (In addition to three required courses selected above, students must take any 3 courses from the list below)**

BIOL 231 Ecology\* **S**  
 BIOL 332 Advanced Aquatic Ecology\* **F – odd years**  
 BIOL 342 Restoration Ecology\* **F**  
 CE 321 Introduction to Environmental Engineering and Science\* **F**  
 CE 351 Water Resources Engineering\* **S**  
 CE/EVSC 352 Hydrology\* **F**  
 CE 423 Water Quality\* **S**  
 CE 425 Water Supply and Pollution Control\* **S**  
 CE 451 Open Channel Flow\* **S**  
 CHE 211 Material and Energy Balances\* **F**  
 CHEM 231 Analytical CHEM I\* **F**  
 CHEM 252 Environmental Chemistry\* **F**  
 EVSC/GEOL 211 Rivers and Watersheds: Form and Function\*  
 GEOL 205 Oceanography\* **S**  
 GEOL 229 Geographical Information Systems and Remote Sensing in Geosciences\* **F**  
 GEOL 300 Earth Surface Processes\* **S**  
 GEOL 315 Paleoclimatology and Paleoceanography\* **S**  
 GEOL 321 Geochemistry\* **S**

GEOL 322/CE464 Environmental Geophysics\*

<u>Course</u>	<u>Term Taken</u>

**(3) Energy Resources Concentration (6 courses)**

**Required**

- CHE 211 Material and Energy Balances\* - F
- EGRS 352 Energy, Technology, and the Modern World\* - S
- Thermodynamics (CHE 222\* or ME 354\*) – F (both courses)

**Elective courses (In addition to the three required courses selected above, students must take any 3 courses from the list below)**

- Fluid Mechanics (CE251\*- F or ME 362\* - S)
- CE/EVSC 352 Hydrology\* F
- CE 351 Water Resources Engineering\* - S
- CHE 311 Transport Phenomena\*- F
- CHE 342 Atmospheric Engineering and Science\*
- CHE 370 Alternative Energy Resources\*- S
- GEOL 215 Modern and Ancient Depositional Environments\*- S
- GEOL 229 Geographical Information Systems and Remote Sensing in Geosciences\*- F
- GEOL 317 Tectonics and Structure of the Earth\*- F
- GEOL 322/CE 464 Environmental Geophysics\*- S
- ME 470 Heat Transfer\*- F
- ME 475 Thermal/Fluids Systems\*- S
- ME 483 Power Plants\*- no regular cycle

<u>Course</u>	<u>Term Taken</u>

