LAFAYETTE

The Programs in Environmental Science and Environmental Studies

The Environmental Science Major (THROUGH CLASS OF 2025)

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)

Course	*Term Taken*

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)

Course	*Term Taken*

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

Course	*Term Taken*

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 Behaviorial 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**

Course	*Term Taken*

(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*

Course	*Term Taken*

(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**

Course	*Term Taken*