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 Ecol track should take Biol 111)

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)

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

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 341 Environmental Issues in Aquatic Ecosystems* F
Biol 342 Restoration Ecology
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**

(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 341 Environmental Issues in Aquatic Ecosystems* 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*  

(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 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