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)

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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)

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

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**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**

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**Electives**

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**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 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