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** – offered in the Fall semester
- **S** – offered in the Spring semester
- **B** – offered in both semesters

This notation is not a guarantee that the course is offered in the indicated semester. It is only a notation of when the course is typically offered. 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* - **F**/131* - **B** or Biol 102 – **S** (choose in consultation with advisor)

**Environmental Science Core (6 courses):**
EVST 100 An Introduction to the Environment - **F**
Biol 234 Environmental Biology* - **F** or Biol 272 Conservation Biology* - **F**
   or Biol 233 Environmental Problem Solving in Biology
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):**
A&S 201 Culture and the Environment - **S**
AFS 330 Cowboys in Africa: Social Transformations and Environmental Justice - **S**
Econ 202 Environmental Economics* - **S**
EGRS 230 Environmental Justice – **no regular cycle**
Eng 276 Literature of the Sea - **F**
Eng 351 Environmental Writing* - **S**
EVST 215 Environmental Policy* - S
EVST 220 People, Places, and Environments of the Mid-Atlantic - S
EVST 230 Water Problems, Water Solutions - S
EVST/WGS 253 Gender, Race, and Environmental Justice - S – odd years
EVST 254 Cultures of Nature F – odd years
EVST 310 Organizations and the Environment* - F
EVST/ FAMS 363 Green Screen Film and The Environment* - F – even year
EVST/EGRS 373 Technology and Nature* - S
ART/EVST 250 Art and Environment - F
Govt 231 Global Environmental Politics* - F
Hist 252 Transformation of the American Environment – S
IA 240 Pursing Global Sustainability – S
Phil 155 Environmental Ethics – S – odd years
WGS 204 Gender & Environmentalism – F

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

(1) Restoration Ecology
OR
(2) Hydrology and 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
CE 351 Water Resources Engineering* - S
CE 421 Hydrology* - F – odd years
CE 422 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 421* - F – odd years or CE 423*- S – odd years 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)

**Ecology**
Biol 231 Ecology* - S
Biol 332 Advanced Aquatic Ecology* F – odd years
Biol 341 Environmental Issues in Aquatic Ecosystems* F

**Physical Flow Systems**
CE 351 Water Resources Engineering* - S
CE 421 Hydrology* - F – odd years
CE 451 Open Channel Flow* - S – odd years
ChE 211 Material and Energy Balances* - F
EVSC/Geol 211 Rivers and Watersheds: Form and Function
Geol 210 Hydrogeology* - F
Geol 300 Earth Surface Processes* - S

**Marine Systems**
Geol 205 Oceanography* - S – even years
Geol 315 Paleoclimatology and Paleoceanography* - S odd years

**Water Quality**
CE 423 Water Quality* - S – odd years
CE 425 Water Supply and Pollution Control* - F – odd years
Chem 252 Environmental Chemistry* - F
Geol 321 Geochemistry* - S – even years

**Toolbox Courses**
CE 321 Introduction to Environmental Engineering and Science* - F
Chem 231 Analytical Chem I* - F
(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* or ME 362*) – **CE251 - F/ME362 - S**
CE 351 Water Resources Engineering* - S  
CE 421 Hydrology* - F – **odd years**
ChE 311 Transport Phenomena*- F  
ChE 370 Alternative Energy Resources*- S  
Geol 215 Sedimentology and Stratigraphy*- 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**