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 or 131* - B

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### Environmental Science Core (6 courses):

- **EVST 100** An Introduction to the Environment - F
- **Biol 234** Environmental Biology* - F 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
- **Geol 115** Earth: Evolution of a Habitable Planet - F

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### Environmental Studies (choose 2 courses):

- **A&S 201** Culture and the Environment - 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 years
- **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** Pursuing Global Sustainability - S
- **Phil 155** Environmental Ethics – S – odd years
- **WGS 204** Gender & Environmentalism – F

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

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

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(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
- 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
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
Geol 229 Geographical Information Systems and Remote Sensing in Geosciences* - F
Geol 322/CE464 Environmental Geophysics* - S – even years
(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 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**