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

**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