



Soil and Watershed Sciences

The concentration in Soil and Watershed Science provides students with one of the top soil science programs in the nation. The concentration enables students to understand the complex ways in which aquatic and terrestrial ecosystems are influenced by soil properties and processes and land management decisions. The soil performs such critical ecological functions as supplying and purifying water, recycling wastes, nurturing plants, modifying the atmosphere by emitting or sequestering gases and particulates, providing habitat for the most diverse biological communities on Earth, and serving as a medium for human engineering projects.

Science and Math Fundamentals Required (53-54 credits):

- ▲ **ENST 200** Fundamentals of Soil Science (4)
- ENST 233** Introduction to Environmental Health (3)
- ENST 360** Ecosystem Ecology (4)
- ENST 389** Internship (3) ◆
- ENST 471** Capstone I (2)
- ENST 472** Capstone II (3)
- ▲ **BSCI 170/171** Principles of Biology I (4)
- ▲ **BSCI 160/161** Principles of Biology II (4)
- ▲ **CHEM 131&132** Fundamentals General Chemistry & Lab (4)
- ▲ **CHEM 231&232** Organic Chemistry I & Lab (4)
- ▲ **MATH 140** Calculus I (4) -or- **MATH 120** Elementary Calculus I (3)
- ▲ **PHYS 121** Fundamentals of Physics I (4)
- ▲ **BIOM 301** Introduction to Biometrics (3)
- { **PLSC 100** Introduction to Horticulture (4) -or-
- { **PLSC 101** Introductory Crop Science (4)
- GEOL 100/110** Physical Geology and Lab (4)

Fundamental Soil Science Required (14 credits):

- ENST 414** Soil Morphology, Genesis and Classification (4)
- ENST 417** Soil Hydrology and Physics (3)
- ENST 421** Soil Chemistry (4)
- ENST 422** Soil Microbial Ecology (3)

Technical Electives (choose 3-4 courses—9 credits):

- ENST 301** Field Soil Morphology I (1)
- ENST 302** Field Soil Morphology II (1)
- ENST 303** Field Soil Morphology III (1)
- ENST 309** Advanced Field Soil Morphology (1)
- ENST 411** Principles of Soil Fertility (3)
- ENST 423** Soil-Water Pollution (3)
- ENST 424** Field Study in Soil Morphology (4)
- ENST 430** Wetland Soils (3)
- ENST 453** Watershed Science (3)
- GEOG 373** Geographic Information Systems (3)

Breadth Electives (choose 2 courses—6-7 credits):

- AREC 365** World Hunger, Population, and Food Supply (3)
- ENST 410** Ecosystem Services: An Integrated Analysis (3)
- ENST 432** Environmental Microbiology (3)
- ENST 440** Crops, Soils and Civilization (3)
- ENST 441** Sustainable Agriculture (3)
- ENST 450** Wetland Ecology (3)
- ENST 451** Water Quality: Field and Lab Analysis Methods (3)
- GEOL 340** Geomorphology (4)
- GEOL 451** Groundwater (3)
- GEOL 452** Watershed and Wetland Hydrology (3)
- GEOL 453** Ecosystem Restoration (3)

- ▲ Benchmark to be completed by 30 credits
- ▲ Benchmark to be completed by 60 credits
- ▲ Benchmark to be completed by 90 credits
- ◆ Requires prior approval

Highlighted Courses are ENST CORE
Students must maintain a 2.0 grade point average in major required courses