

ENVIRONMENTAL SOIL SCIENCE, CERTIFICATE

REQUIREMENTS

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Code	Title	Credits
	Soil Science Foundation	4
	Soil Science Themes	9
	Allied Sciences	2-4
Total Credits		16

- The certificate requires a minimum of **16 credits**.
- A minimum grade of C is required in all certificate coursework.
- Courses taken on a pass/fail (satisfactory/unsatisfactory) basis will not count toward the certificate.
- All certificate coursework must be completed in residence at the UW-Madison.

SOIL SCIENCE FOUNDATION

Complete the following courses for a total of **4 credits**:

Code	Title	Credits
SOIL SCI 301 or SOIL SCI/ ENVIR ST/ GEOG 230	General Soil Science Soil: Ecosystem and Resource	3
SOIL SCI 302	Meet Your Soil: Soil Analysis and Interpretation Laboratory	1
Total Credits		4

SOIL SCIENCE THEMES

Complete at least one course from three of the four thematic areas for a minimum of **9 credits**. Courses may only count towards one thematic area. Additional courses from this section may be completed to meet the overall minimum credits for the certificate.

Soil Fertility & Chemistry

Code	Title	Credits
SOIL SCI 326	Plant Nutrition Management	3
SOIL SCI/BSE/ CIV ENGR 372	On-Site Waste Water Treatment and Dispersal	2
SOIL SCI 430	Soil Pollution and Human Health	3
SOIL SCI/ F&W ECOL 451	Environmental Biogeochemistry	3
SOIL SCI 621	Soil and Environmental Chemistry	3
SOIL SCI/ CIV ENGR/ M&ENVTOX 631	Toxicants in the Environment: Sources, Distribution, Fate, & Effects	3

Soil Physics & Development

Code	Title	Credits
PLANTSCI/ ATM OCN 532	Environmental Biophysics	3

SOIL SCI 327	Environmental Monitoring and Soil Characterization	3
SOIL SCI/ GEOG 525	Soil Geomorphology	3
SOIL SCI/ GEOG 526	Human Transformations of Earth Surface Processes	3
SOIL SCI 622	Soil Physics	3

Soil Biology & Ecology

Code	Title	Credits
SOIL SCI 323	Soil Biology	3
SOIL SCI/ MICROBIO 425	Environmental Microbiology	3
AGROECOL 370	Grassland Ecology	3
SOIL SCI/ F&W ECOL 451	Environmental Biogeochemistry	3
SOIL SCI/ MICROBIO 523	Soil Microbiology and Biochemistry	3

Soils and the Environment

Code	Title	Credits
SOIL SCI 211	Soils and Climate Change	2
SOIL SCI 250	Introduction to Environmental Science	3
SOIL SCI/ ENVIR ST 324	Soils and Environmental Quality	3
SOIL SCI 327	Environmental Monitoring and Soil Characterization	3
SOIL SCI 430	Soil Pollution and Human Health	3
SOIL SCI 499	Soil Management	3
SOIL SCI/ ENVIR ST 575	Assessment of Environmental Impact	3
SOIL SCI 585	Using R for Soil and Environmental Sciences	3

ALLIED SCIENCES

Complete one course from the following for a minimum of **2 credits**:

Course List

Code	Title	Credits
A A E 101	Introduction to Agricultural and Applied Economics	4
A A E/ENVIR ST 244	The Environment and the Global Economy	4
A A E 352	Global Health: Economics, Natural Systems, and Policy	4
AGROECOL/ C&E SOC/ENTOM/ ENVIR ST 103	Agroecology: An Introduction to the Ecology of Food and Agriculture	3
AGROECOL 370	Grassland Ecology	3
BSE 301	Land Information Management	3
AGROECOL 377	Global Food Production and Health	3
BSE/CIV ENGR/ SOIL SCI 372	On-Site Waste Water Treatment and Dispersal	2
BSE 473	Water Management Systems	3
C&E SOC/SOC 140	Introduction to Community and Environmental Sociology	4

C&E SOC/SOC 222	Food, Culture, and Society	3
C&E SOC/ F&W ECOL/ SOC 248	Environment, Natural Resources, and Society	3
C&E SOC/A A E/ SOC 340	Issues in Food Systems	3-4
ENTOM/ NUTR SCI 203	Introduction to Global Health	3
ENTOM 570	Systems Thinking in Global Health	3
PLANTSCI 110	Introduction to Plant Science and Technology	4
PLANTSCI 227	Propagation of Horticultural Plants	3
LSC 212	Introduction to Scientific Communication	3
PLANTSCI/ PL PATH 261	Sustainable Turfgrass Use and Management	2
PLANTSCI 370	World Vegetable Crops	3
LSC 251	Science, Media and Society	3
LSC 430	Communicating Science with Narrative	3
PL PATH 311	Global Food Security	3

CERTIFICATE COMPLETION REQUIREMENT

This undergraduate certificate must be completed concurrently with the student's undergraduate degree. Students cannot delay degree completion to complete the certificate.