

**SOIL, ENVIRONMENTAL & ATMOSPHERIC SCIENCES B.S. DEGREE WITH
EMPHASIS IN SOIL RESOURCE MANAGEMENT
(128 Credit hours)**

University Requirements (31 Credits)

ENGLISH 1000 – Exposition & Argumentation (3 Credits) FSpS
Course to fulfill State Law Requirement (3 Credits)
(History 1100, 1200, or 1400 or Political Science 1100 or 1700)
Economics/Business Elective (3 Credits)
Additional Social Science elective (3 Credits)
Humanistic Studies and Fine Arts electives (9 Credits)
MATH 1100 – College Algebra for Calculus Bound Students (3 Credits) FSpS
STAT 1400 – Elementary Statistics for Agriculture (3 Credits) FSpS **or**
STAT 2530 - Statistical Methods in Natural Resources (3 Credits) Sp
CHEM 1320 – General Chemistry I w/Lab (4 Credits) FSpS

Departmental Quantitative Skills (9-11 Credits)

MATH 1400 – Calculus for Social & Natural Sciences I (3 Credits) FSpS **or**
MATH 1500 – Analytical Geometry & Calculus I (5 Credits) FSpS
Quantitative Electives (6 Credits)
*Other courses in Math, Computer Science, and Statistics **or***
ENV SC 4320 – Hydrologic & Water Quality Modeling (3 Credits) F
NAT R 4325 – Introduction to Geographic Information Systems (GIS) (3 Credits) Sp
NAT R 4365 – GIS Applications (3 Credits)
NAT R 4385 – Landscape Ecology & GIS Analysis I (3 Credits) Sp

Departmental Sciences (22-24 Credits)

Chemistry (3 Credits)

Must include one course in organic or biochemistry

Organic Chemistry

CHEM 2030 – Survey of Organic Chemistry (3 Credits) F **or**

CHEM 2100 – Organic Chemistry I (3 Credits) FSpS

Biochemistry

BIOCHM 2110 – The Living World: Molecular Scale (3 Credits) Sp **or**

BIOCHM 2112 – Biotechnology in Society (3 Credits) FSp

Biological Science (6-8 Credits)

ENV SC 1100 – Introduction to Environmental Science (3 Credits) F **or**

NAT R 1070 – Ecology and Renewable Resource Management (3 Credits) Sp **and**

PLNT S 2110 – Plant Growth & Culture (3 Credits) Sp **or**

BIO SC 1010 – General Principles & Concepts of Biology (3 Credits) FSpS **and**

BIO SC 1020 – General Biology Laboratory (2 Credits) FSpS **or**

BIO SC 1200 – General Botany w/Lab (5 Credits) FS

Geology (4 Credits) – any course

Science Electives (9)

Courses in biochemistry, biology, chemistry, geology, and physics as well as the following courses:

CV ENG 3702 – Hydrology (4 Credits) FSp
FOREST 4320 – Forest Ecology (5 Credits) (WI) F
PLNT S 3210 – Principles of Weed Science (4 Credits) F
PLNT S 3225 – Plant Breeding & Genetics (3 Credits) Sp
PLNT S 4315 – Crop Physiology (3 Credits) Sp

Departmental Requirements (36 Credits)

Soil and Atmospheric Sciences (6 Credits)

ATM SC 1050 – Introduction to Meteorology (3 Credits) FSp
SOIL 2100 – Introduction to Soil Science (3 Credits) F 2015, 2016, Sp 2017

Computer Science (3 Credits)

AFNR 1120 – Computing and Information Technology (2 credits) FSp **and**
AFNR 2120 – Working with Data Using Excel (1 credit) FSp **or**
NAT R 4325 – Introduction to GIS (3 Credits) Sp
GEOG 3040- Geographic Information Systems I (3 credits) FSp

Capstone Experience (4 Credits)

SOIL 4320 – Genesis of Soil Landscapes (4 Credits) F even years

Additional Emphasis Area Requirements (23 Credits)

SOIL 2106 – Soil Science Lab (2 Credits) FSp
SOIL 3290 – Soils and the Environment (3 Credits) (WI) F
Additional Soils courses (12 Credits)
SOIL 4305 – Environmental Soil Physics (3 Credits) F
SOIL 4306 – Environmental Soil Physics Laboratory (2 Credits) F
SOIL 4308 – Soil Conservation (3 Credits) Sp odd years
SOIL 4312 – Environmental Soil Microbiology (3 Credits) Sp
SOIL 4313 – Soil Fertility & Plant Nutrition (3 Credits) Sp
SOIL 4314 – Soil Fertility & Plant Nutrition Laboratory (2 Credits) Sp
SOIL 4318 – Environmental Soil Chemistry (3 Credits) Sp
SOIL 4360 – Precision Agriculture Science & Technology (3 Credits) Sp

Other Soils courses or the following courses (6 Credits):

BIO EN 4150 – Soil & Water Conservation Engineering (3 Credits) F
CV ENG 3400 – Fundamentals of Geotechnical Engineering (4 Credits) FSp
ENV SC 4320 – Hydrologic & Water Quality Modeling (3 Credits) F
F&W 3400 – Water Quality & Natural Resources Mgmt (3 Credits) Sp
FOREST 4390 – Watershed Management & Water Quality (3 Credits) F

V. Electives (26-30 Credits)

Remaining hours from university, quantitative, science, and department to complete 128 credit hours total requirement.