

B. S. IN SOILS AND SUSTAINABLE CROP SYSTEMS

Concentration: Soil and Water Environmental Science

Emphasis Area: Soil Science

Emphasis Area: Soil Management

Emphasis Area: Soil and Water Quality

FRESHMAN YEAR

First Semester

BIOL 110 Principles of Biology I¹5(4,3)
CH 101 General Chemistry.....4(3,3)
MTHSC 102 Intro. to Math. Analysis².....3(3,0)
or **MTHSC 106 Calculus of One Var. I²**4(4,0)
SSCS 101 Survey of SSCS1(1,0)
Arts and Humanities (Non-Literature) Req.³3(3,0)

Semester Hours: 16-17

Second Semester

BIOL 111 Principles of Biology II¹5(4,3)
CH 102 General Chemistry4(3,3)
ENGL 103 Accelerated Composition.....3(3,1)
EXST 301 Introductory Statistics.....3(2,2)
or **MTHSC 108 Calculus of One Var. II**.....4(4,0)
or **MTHSC 207 Multivariable Calculus**4(4,0)
SSCS 102 Academic & Prof. Development I.....1(1,0)

Semester Hours: 16-17

SOPHOMORE YEAR

CH 223 Organic Chemistry3(3,0)
CH 227 Organic Chemistry Lab1(0,3)
or **CH 201 Survey of Organic Chemistry**.....4(3,3)
CSENV 202 Soils4(3,2)
GEOL 101/103 Physical Geology & Lab3(3,3)
PHYS 207/209 General Physics I & Lab.....3(3,2)
or **PHYS 122/124 Physics w/ Calculus I & Lab**4(3,1)

Semester Hours: 16

PHYS 208/210 General Physics II & Lab4(3,2)
or **PHYS 221/223 Physics w/ Calculus II & Lab**...4(3,3)
Arts and Humanities (Literature) Req.²3
Cross Cultural Awareness²3
Emphasis Area³4

Semester Hours: 14

JUNIOR YEAR

COMM 250 Public Speaking3(3,0)
MICRO 305 General Microbiology4(3,3)
Emphasis Area Requirement³ 5
Plant Science Requirement⁴ 3

Semester Hours: 15

CSENV 475 Soil Physics/Chemistry.....3(2,3)
CSENV 490 Beneficial Soil Organisms in
Plant Growth3(3,0)
ENGL 315 Scientific Writing & Communication 3
SSCS 401 Academic & Prof. Development II.....1
Emphasis Area Requirement³3
Social Science Requirement²3

Semester Hours: 16

SENIOR YEAR

CSENV 350 Practicum 3
CSENV 403 Soil Genesis and Classification2(1,3)
CSENV 455 Seminar 1
Applied Spatial Technology Requirement⁵3
Emphasis Area Requirement³ 3
Field Scale Environmental Mgt. Requirement⁶ 3

Semester Hours: 15

AGRIC 315 Environment and Agriculture.....3
BIOSC 401/402 Plant Physiology & Lab.....4(3,2)
CSENV 408 Land Treatment of Wastewater and
Sludges3
Emphasis Area Requirement³3
Social Science Requirement²3

Semester Hours: 16

Total Semester Hours = 124-126

(Classes in bold are General Education Requirements)

¹ BIOL 110 and 111 are strongly recommended; however, BIOL 103 and 104 may substitute.

² See General Education Requirements.

³ Selected from department-approved list. Emphasis Areas include Soil & Water Quality, Soil Management, & Soil Science.

⁴ Selected from BIOSC 441, CSENV 421, 422, 423, (AP EC) 426, or HORT 456.

⁵ Selected from AG M 410, FOR 433, or other course approved by advisor

⁶ Selected from AG M 402, ENTOX 421, or other course approved by advisor

Department-Approved Courses: Soil Science

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|---|--------|
| CH 224 Organic Chemistry | 3(3,0) |
| and CH 228 Organic Chemistry Lab | 1(0,3) |
| or BIOCH 305 Essential Elements of Biochemistry | 3(3,0) |
| and BIOCH 306 Essential Elements of Bioch Lab | 1(0,3) |
| CH 313 Quantitative Analysis | 3(3,0) |
| CH 317 Quantitative Analysis Lab | 1(0,3) |
| CSENV 452 Soil Fertility and Mgt. | 3(3,0) |
| CSENV 453 Soil Fertility Lab. | 1(0,2) |

And 6 hours of courses supporting emphasis and approved by advisor

Department-Approved Courses: Soil Management

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|--------------------------------------|--------|
| AG M 301 Soil and Water Conservation | 2(2,0) |
| CSENV 452 Soil Fertility and Mgt. | 3(3,0) |
| CSENV 453 Soil Fertility Lab. | 1(0,2) |
| CSENV 446 Soil Management | 3(3,0) |

And 9 hours of courses supporting emphasis and approved by advisor

Department-Approved Courses: Soil and Water Quality

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|-------------------------------------|--------|
| CH 224 Organic Chemistry | 3(3,0) |
| and CH 228 Organic Chemistry Lab | 1(0,3) |
| BIOCH 301 Molecular Biochemistry | 3(3,0) |
| ENTOX 446 Soil & Water Qual.:Fund. | 3(3,0) |
| ENTOX 447 Soil & Water Qual.: Appl. | 3(3,0) |

And 5 hours of courses supporting emphasis and approved by advisor