

## SOIL & SUSTAINABLE CROP SYSTEMS

### Freshman Year

#### First Semester

- 5 - BIOL 110 Principles of Biology I
  - 4 - CH 101 General Chemistry
  - 3 - MTHSC 102 Intro. to Math. Analysis<sup>2</sup> *or*
  - 4 - MTHSC 106 Calculus of One Variable I<sup>2</sup>
  - 1 - SSCS 101 Survey of SSCS
  - 3 - Arts and Humanities (Non-Lit.) Requirement<sup>3</sup>
- 16-17

#### Second Semester

- 5 - BIOL 111 Principles of Biology III
  - 4 - CH 102 General Chemistry
  - 3 - ENGL 103 Accelerated Composition
  - 3 - EX ST 301 Introductory Statistics *or*
  - 4 - MTHSC 108 Calculus of One Variable II *or*
  - 4 - MTHSC 207 Multivariable Calculus
  - 1 - SSCS 102 Academic and Professional Dev. I
- 16-17

<sup>1</sup>BIOL 110 and 111 are strongly recommended; however, BIOL 103/105 may substitute for BIOL 110, and BIOL 104/106 may substitute for BIOL 111.

<sup>2</sup>MTHSC 106 is recommended for students in the Agricultural Biotechnology Concentration.

<sup>3</sup>See General Education Requirements. PHIL 103 is recommended for students in the Agricultural Biotechnology Concentration.

## AGRICULTURAL BIOTECHNOLOGY CONCENTRATION

### Sophomore Year

#### First Semester

- 3 - CH 223 Organic Chemistry
  - 1 - CH 227 Organic Chemistry Lab.
  - 3 - COMM 250 Public Speaking
  - 3 - ECON 200 Economic Concepts<sup>1</sup> *or*
  - 3 - ECON 211 Principles of Microeconomics<sup>1</sup>
  - 3 - SSCS 333 Agricultural Genetics
  - 3 - Arts and Humanities (Literature) Requirement<sup>2</sup>
- 16

#### Second Semester

- 3 - AP EC 205 Agriculture and Society
  - 3 - BIOSC 335 Evolutionary Biology
  - 3 - CH 224 Organic Chemistry
  - 1 - CH 228 Organic Chemistry Lab.
  - 3 - GEN 300 Fundamental Genetics
  - 1 - GEN 301 Fundamental Genetics Lab.
- 14

### Junior Year

#### First Semester

- 3 - BIOCH 305 Essential Elements of Biochem.
  - 1 - BIOCH 306 Essential Elements of Bioch. Lab.
  - 3 - BIOSC 304 Biology of Plants
  - 3 - CSENV 422 Major World Crops
  - 3 - SSCS 335 Agricultural Biotechnology
  - 3 - Social Science Requirement<sup>2</sup>
- 16

#### Second Semester

- 1 - CSENV 350 Practicum
  - 3 - ENGL 315 Scientific Writing and Comm.
  - 3 - PL PA 310 Plant Diseases and People
  - 3 - PL PH (BIOSC) 340 Plant Med. and Magic
  - 1 - SSCS 401 Academic and Professional Dev. II
  - 4 - Emphasis Area Requirement<sup>3</sup>
- 15

### Senior Year

#### First Semester

- 3 - BIOSC 401 Plant Physiology
- 1 - BIOSC 402 Plant Physiology Lab.
- 3 - CSENV 350 Practicum
- 4 - ENT (BIOSC) 301 Insect Biology and Diversity
- 1 - SSCS 445 Regulatory Issues and Policies
- 1 - SSCS 450 Agric. Biosystems and Risk Assess.
- 3 - Emphasis Area Requirement<sup>3</sup>

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#### Second Semester

- 2 - CSENV 350 Practicum
  - 3 - CSENV 409 Biology of Invasive Plants
  - 1 - SSCS 451 Agric. Biotech. and Global Society
  - 9 - Emphasis Area Requirement<sup>3</sup>
- 15

### 124–126 Total Semester Hours

<sup>1</sup>ECON 200 is recommended for students in the Agricultural Biosystems and Technology Emphasis Area. ECON 211 is recommended for students in the Agricultural Biotechnology and Global Society Emphasis Area.

<sup>2</sup>See General Education Requirements.

<sup>3</sup>Select from department-approved list. Emphasis Areas include Agricultural Biosystems and Technology; and Agricultural Biotechnology and Global Society.

## SOIL AND WATER ENVIRONMENTAL SCIENCE CONCENTRATION

### **Sophomore Year**

#### **First Semester**

3 - CH 223 Organic Chemistry *and*  
1 - CH 227 Organic Chemistry Lab. *or*  
4 - CH 201 Survey of Organic Chemistry  
4 - CSENV 202 Soils  
3 - GEOL 101 Physical Geology  
1 - GEOL 103 Physical Geology Lab.  
3 - PHYS 207 General Physics I *and*  
1 - PHYS 209 General Physics I Lab. *or*  
3 - PHYS 122 Physics with Calculus I *and*  
1 - PHYS 124 Physics Lab. I

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#### **Second Semester**

3 - PHYS 208 General Physics II *and*  
1 - PHYS 210 General Physics II Lab. *or*  
3 - PHYS 221 Physics with Calculus II *and*  
1 - PHYS 223 Physics Lab. II  
3 - Arts and Humanities (Literature) Requirement1  
3 - Cross-Cultural Awareness Requirement1  
4 - Emphasis Area Requirement2  
14

### **Junior Year**

#### **First Semester**

3 - COMM 250 Public Speaking  
4 - MICRO 305 General Microbiology  
5 - Emphasis Area Requirement2  
3 - Plant Science Requirement3  
15

#### **Second Semester**

3 - CSENV 475 Soil Physics and Chemistry  
3 - CSENV 490 Beneficial Soil Organisms in  
Plant Growth  
3 - ENGL 315 Scientific Writing and Comm.  
1 - SSCS 401 Academic and Professional Dev. II  
3 - Emphasis Area Requirement2  
3 - Social Science Requirement1  
16

### **Senior Year**

#### **First Semester**

3 - CSENV 350 Practicum  
2 - CSENV 403 Soil Genesis and Classification  
1 - CSENV 455 Seminar  
3 - Applied Spatial Technology Requirement4  
3 - Emphasis Area Requirement2  
3 - Field Scale Environmental Mgt. Requirement5  
15

3 - AGRIC (EN SP) 315 Environment and Agric.  
3 - BIOSC 401 Plant Physiology  
1 - BIOSC 402 Plant Physiology Lab.  
3 - CSENV (B E) 408 Land Treatment of  
Wastewater and Sludges  
3 - Emphasis Area Requirement2  
3 - Social Science Requirement1  
16

#### **Second Semester**

124–126 Total Semester Hours

1See General Education Requirements.

2Select from department-approved list. Emphasis Areas include Soil and Water Quality, Soil Management, and Soil Science. 3BIOSC 441, CSENV 421, 422, 423, (AP EC) 426, or HORT 456

4AG M 410, FOR 433, or other course approved by advisor

5AG M 402, ENTOX 421, or other course approved by advisor

## SUSTAINABLE CROP PRODUCTION CONCENTRATION

### **Sophomore Year**

#### **First Semester**

3 - AP EC 202 Agricultural Economics  
3 - CH 223 Organic Chemistry1  
1 - CH 227 Organic Chemistry Lab.1  
4 - CSENV 202 Soils  
3 - PL PA 310 Plant Diseases and People  
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3 - AP EC 205 Agriculture and Society  
3 - CH 224 Organic Chemistry1  
1 - CH 228 Organic Chemistry Lab.1  
3 - COMM 250 Public Speaking  
3 - SCS 333 Agricultural Genetics  
3 - Plant Science Requirement2  
16

#### **Second Semester**

### **Junior Year**

#### **First Semester**

4 - ENT (BIOSC) 301 Insect Biology and Diversity  
3 - I P M 401 Principles of Integrated Pest Mgt.  
3 - Emphasis Area Requirement3  
3 - Plant Science Requirement2  
3 - Social Science Requirement4  
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3 - BIOSC 401 Plant Physiology  
1 - BIOSC 402 Plant Physiology Lab.  
3 - CSENV 405 Plant Breeding  
3 - CSENV 409 Invasive Plants  
3 - ENGL 315 Scientific Writing and Comm.  
2 - PL PA 411 Plant Disease Diagnosis I  
1 - SCS 401 Academic and Professional Dev. II  
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#### **Second Semester**

### **Senior Year**

#### **First Semester**

3 - CSENV 490 Beneficial Soil Organisms in  
Plant Growth  
3 - ENT 401 Insect Pests of Ornamental Plants  
and Shade Trees *or*  
4 - ENT 407 Applied Agricultural Entomology  
6 - Emphasis Area Requirement3  
12-13

3 - CSENV 350 Practicum  
3 - CSENV 452 Soil Fertility and Management  
1 - CSENV 453 Soil Fertility Lab.  
1 - CSENV 455 Seminar  
3 - Arts and Humanities (Literature) Requirement4  
6 - Emphasis Area Requirement3  
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#### **Second Semester**

123–126 Total Semester Hours

1CH 223/227 and 224/228 are strongly recommended; however, CH 201 and BIOCH 305/306 may be substituted.

2BIOSC 304, CSENV 422, 423, HORT 310, 455, 456, or other course approved by advisor

3Select from department-approved list. Emphasis Areas include Crop Production; and Integrated Pest Management.

4See General Education Requirements.