

# SOIL AND CROP SCIENCE MAJOR, B.S.

Course	Title	Credits
<b>General Requirements</b>		
General Requirements ( <a href="https://catalog.uwplatt.edu/undergraduate/degree-requirements/bachelor-of-science-degree-core-curriculum/">https://catalog.uwplatt.edu/undergraduate/degree-requirements/bachelor-of-science-degree-core-curriculum/</a> )		40-53
School of Agriculture Core ( <a href="https://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/agriculture/#soa-core">https://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/agriculture/#soa-core</a> )		11
<b>Required Courses <sup>1</sup></b>		
SCSCI 1240	Introduction to Plant Science	3
SCSCI 2230	Soils	4
SCSCI 2260	Crop Production and Agroecology	3
SCSCI 3200	Integrated Pest Management	3
SCSCI 3210	Principles of Plant Physiology and Biochemistry	3
SCSCI 3310	Agronomy, Horticulture and Ecological Restoration Seminar	1
SCSCI 3340	Soil Nutrient Management	3
SCSCI 3750	Soil and Crop Science Internship	3-6
BIOLOGY 1350	General Botany	5
or BIOLOGY 1150	Concepts of Biology	
or BIOLOGY 1650	The Unity of Life	
or BIOLOGY 1750	The Diversity of Life	
CHEMISTRY 1050	Survey of General Chemistry	4-5
or CHEMISTRY 1140	General Chemistry I	
<b>Select one of the following:</b>		<b>18+</b>
A double major or an emphasis		
A minor and the requirements listed below		
<b>Soil and Crop Management Electives</b>		
		<b>9</b>
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies	
SCSCI 3360	Applied Agricultural Hydrology	
SCSCI 4250	Weed Science	
SCSCI 4320	Forage Crops	
SCSCI 4350	Soil and Water Conservation	
ENVHORT 3230	Turfgrass Management	
ENVHORT 3300	Fruit and Vegetable Crop Management	
ENVHORT 3360	Greenhouse Operation and Management	
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
<b>Advanced Soil and Crop Science Electives <sup>1</sup></b>		
		<b>9</b>
SCSCI 3220	Plant Development and Biotechnology	
SCSCI 3350	Soil Fertility and Fertilizers	
SCSCI 3410	Regional Geomorphology and Soil Classification	
SCSCI 4240	Plant Breeding	
SCSCI 4340	Plant Physiology	
SCSCI 4370	Physical Properties of Soils	
SCSCI 4530	Plant Pathology	
SCSCI 4360	Soil Microbiology	
SCSCI 3380	Special Problems in Soil Science	
SCSCI 3390	Special Problems in Crop Science	
AGRIC 3410	Agro-Ecosystem Research	
SCSCI 4380	Undergraduate Research in Soil Science	
SCSCI 4390	Undergraduate Research in Crop Science	
<b>Agriculture Electives <sup>2</sup></b>		
		<b>6</b>
Any AGBUS, AGET, ANSCI, ENVHORT, RECLAM or SCSCI courses 2000 level or above		

<sup>1</sup> Total credits from courses such as, independent studies and undergraduate research (SCSCI 3380, SCSCI 3390, SCSCI 4380, SCSCI 4390 and AGRIC 3410) should not exceed 3 credits in calculating the SCSCI major requirements.

<sup>2</sup> May not include the courses used to fulfill the Soil and Crop Science Management electives or the Advanced Soil and Crop Science electives.

## PLANT BREEDING AND BIOTECHNOLOGY EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
BIOLOGY 2040	Cell Biology	4
BIOLOGY 2420	Fundamentals of Biological Investigations	3
BIOLOGY 3330	Genetics	3
BIOLOGY 3530	Biotechnology	3
SCSCI 3220	Plant Development and Biotechnology	4
SCSCI 4240	Plant Breeding	4
SCSCI 4360	Soil Microbiology	3
SCSCI 4530	Plant Pathology	3
<b>Soil and Crop Management Electives</b>		<b>9</b>
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies	
SCSCI 3360	Applied Agricultural Hydrology	
SCSCI 4250	Weed Science	
SCSCI 4320	Forage Crops	
SCSCI 4350	Soil and Water Conservation	
ENVHORT 3230	Turfgrass Management	
ENVHORT 3300	Fruit and Vegetable Crop Management	
ENVHORT 3360	Greenhouse Operation and Management	
AGET 3950	Soil and Water Conservation Engineering	
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
<b>Advanced Soil and Crop Science Electives</b>		<b>6</b>
SCSCI 3330	Soil Morphology and Classification	
SCSCI 3350	Soil Fertility and Fertilizers	
SCSCI 3380	Special Problems in Soil Science	
SCSCI 3390	Special Problems in Crop Science	
SCSCI 3410	Regional Geomorphology and Soil Classification	
SCSCI 4340	Plant Physiology	
SCSCI 4370	Physical Properties of Soils	
SCSCI 4380	Undergraduate Research in Soil Science	
SCSCI 4390	Undergraduate Research in Crop Science	
ENVHORT 3370	Undergraduate Research in Environmental Horticulture	
AGRIC 3410	Agro-Ecosystem Research	
<b>Total Credits</b>		<b>42</b>

## COMPREHENSIVE AGRICULTURE EMPHASIS

Course	Title	Credits
<b>Soil and Crop Management Electives</b>		
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies	
SCSCI 4320	Forage Crops	
SCSCI 4250	Weed Science	
SCSCI 4350	Soil and Water Conservation	
SCSCI 3360	Applied Agricultural Hydrology	
ENVHORT 3300	Fruit and Vegetable Crop Management	
<b>Total Credits</b>		<b>12</b>

ENVHORT 3230	Turfgrass Management	
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
<b>Advanced Soil &amp; Crop Science Electives</b>		<b>12</b>
SCSCI 3220	Plant Development and Biotechnology	
SCSCI 3350	Soil Fertility and Fertilizers	
SCSCI 4240	Plant Breeding	
SCSCI 4340	Plant Physiology	
SCSCI 3330	Soil Morphology and Classification	
SCSCI 3410	Regional Geomorphology and Soil Classification	
SCSCI 4370	Physical Properties of Soils	
SCSCI 4530	Plant Pathology	
SCSCI 4360	Soil Microbiology	
SCSCI 4380	Undergraduate Research in Soil Science	
SCSCI 4390	Undergraduate Research in Crop Science	
SCSCI 3390	Special Problems in Crop Science	
SCSCI 3380	Special Problems in Soil Science	
AGRIC 3410	Agro-Ecosystem Research	
<b>Agriculture Electives <sup>1</sup></b>		<b>18</b>
Any AGBUS, AGET, ANSCI, ENVHORT, RECLAM, or SCSCI courses 2000 level or above		
<b>Total Credits</b>		<b>42</b>

<sup>1</sup> Courses should cover at least 3 subjects listed above. May not include the courses used to fulfill the Soil and Crop Management electives or the Advanced Soil and Crop Science electives.

## INTERNATIONAL EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
AGBUS 2330	World Population, Food and Resources	3
<b>Select one of the following:</b>		<b>3</b>
BUSADMIN 1300	Global Business	
BUSADMIN 3720	International Marketing	
<b>International Experience <sup>1</sup></b>		<b>15</b>
Category A - Choose 3-12 credits from the following:		
Study abroad experience <sup>2</sup>		
One-on-one exchange experience <sup>2</sup>		
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
Category B - Choose 3-12 credits from the following:		
Global Studies Electives ( <a href="https://catalog.uwplatt.edu/undergraduate/degree-requirements/general-education-courses/#globalstudies">https://catalog.uwplatt.edu/undergraduate/degree-requirements/general-education-courses/#globalstudies</a> ) <sup>3</sup>		
<b>Additional Soil and Crop Management Electives</b>		<b>9</b>
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies	
SCSCI 3360	Applied Agricultural Hydrology	
SCSCI 4250	Weed Science	
SCSCI 4320	Forage Crops	
SCSCI 4350	Soil and Water Conservation	
ENVHORT 3230	Turfgrass Management	
ENVHORT 3300	Fruit and Vegetable Crop Management	
ENVHORT 3360	Greenhouse Operation and Management	
<b>Advanced Soil and Crop Science Electives</b>		<b>9</b>
SCSCI 3220	Plant Development and Biotechnology	
SCSCI 3330	Soil Morphology and Classification	

SCSCI 3350	Soil Fertility and Fertilizers
SCSCI 3380	Special Problems in Soil Science
SCSCI 3390	Special Problems in Crop Science
SCSCI 3410	Regional Geomorphology and Soil Classification
SCSCI 4240	Plant Breeding
SCSCI 4340	Plant Physiology
SCSCI 4360	Soil Microbiology
SCSCI 4370	Physical Properties of Soils
SCSCI 4380	Undergraduate Research in Soil Science
SCSCI 4390	Undergraduate Research in Crop Science
SCSCI 4530	Plant Pathology
AGRIC 3410	Agro-Ecosystem Research

**Total Credits****39**

<sup>1</sup> Students must complete 15 credits total selecting from both Category A and B.

<sup>2</sup> Any international experience that is to be counted as credit(s) toward this emphasis must be agreed upon by the student and academic advisor prior to the experience. Of these 3-12 credits, at least three (3) must be agriculture related or related to their major.

<sup>3</sup> Students may select any Global Studies (<https://catalog.uwplatt.edu/undergraduate/degree-requirements/general-education-courses/#globalstudies>) course not already used within the emphasis or used to fulfill the general education Global Studies requirement and/or a World Languages course beyond second semester.

## AGRICULTURAL HYDROLOGY AND WATER QUALITY EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
GEOLOGY 1140	Physical Geology	4
SCSCI 3350	Soil Fertility and Fertilizers	3
SCSCI 3360	Applied Agricultural Hydrology	3
SCSCI 4350	Soil and Water Conservation	3
AGET 3950	Soil and Water Conservation Engineering	3
SCSCI 4370	Physical Properties of Soils	3
BIOLOGY 2420	Fundamentals of Biological Investigations	3
BIOLOGY 3750	Freshwater Biology	4
GEOLOGY 3430	Hydrogeology	4
ENVSS 3230	Geographic Information Systems	4
ECORES 3410	Wetland Ecology, Restoration and Management	3
<b>Soil and Crop Science Management Electives</b>		<b>6</b>
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies	
SCSCI 4250	Weed Science	
SCSCI 4320	Forage Crops	
ENVHORT 3230	Turfgrass Management	
ENVHORT 3300	Fruit and Vegetable Crop Management	
ENVHORT 3360	Greenhouse Operation and Management	
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
<b>Advanced Soil and Crop Science Electives</b>		<b>3-4</b>
SCSCI 3220	Plant Development and Biotechnology	
SCSCI 4240	Plant Breeding	
SCSCI 4340	Plant Physiology	
SCSCI 3330	Soil Morphology and Classification	
SCSCI 3410	Regional Geomorphology and Soil Classification	
SCSCI 4360	Soil Microbiology	
SCSCI 4530	Plant Pathology	
SCSCI 4380	Undergraduate Research in Soil Science	

SCSCI 4390	Undergraduate Research in Crop Science	
SCSCI 3380	Special Problems in Soil Science	
SCSCI 3390	Special Problems in Crop Science	
AGRIC 3410	Agro-Ecosystem Research	
<b>Total Credits</b>		<b>46-47</b>

## AGRONOMY EMPHASIS

Course	Title	Credits
<b>Soil and Crop Management Electives</b>		<b>18</b>
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies (Advanced Soil & Crop Science Electives )	
SCSCI 4320	Forage Crops	
SCSCI 4250	Weed Science	
SCSCI 4350	Soil and Water Conservation	
SCSCI 3360	Applied Agricultural Hydrology	
ENVHORT 3230	Turfgrass Management	
ENVHORT 3300	Fruit and Vegetable Crop Management	
ENVHORT 3360	Greenhouse Operation and Management	
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
<b>Advanced Soil and Crop Science Electives</b>		<b>15</b>
SCSCI 3220	Plant Development and Biotechnology	
SCSCI 3350	Soil Fertility and Fertilizers	
SCSCI 4240	Plant Breeding	
SCSCI 4340	Plant Physiology	
SCSCI 3330	Soil Morphology and Classification	
SCSCI 3410	Regional Geomorphology and Soil Classification	
SCSCI 4370	Physical Properties of Soils	
SCSCI 3380	Special Problems in Soil Science	
SCSCI 3390	Special Problems in Crop Science	
SCSCI 4360	Soil Microbiology	
SCSCI 4530	Plant Pathology (Soil and Crop Management Electives (9 credits))	
SCSCI 4380	Undergraduate Research in Soil Science	
SCSCI 4390	Undergraduate Research in Crop Science	
AGRIC 3410	Agro-Ecosystem Research	
<b>Agriculture Electives <sup>1</sup></b>		<b>9</b>
Any AGBUS, AGET, ANSCI, ENVHORT, RECLAM, or SCSCI courses 2000 level or above		
<b>Total Credits</b>		<b>42</b>

<sup>1</sup> May not include the courses used to fulfill the Soil and Crop Management electives or the Advanced Soil and Crop Science electives.

## SOIL SCIENCE EMPHASIS

Course	Title	Credits
<b>Required Courses</b>		
CHEMSTRY 1240	General Chemistry II	4
PHYSICS 1050	Principles of Physics	5
or PHYSICS 1350	Introductory Physics I	
GEOLOGY 1140	Physical Geology	4
SCSCI 3350	Soil Fertility and Fertilizers	3
SCSCI 4350	Soil and Water Conservation	3
SCSCI 4370	Physical Properties of Soils	3
SCSCI 4360	Soil Microbiology	3
SCSCI 3410	Regional Geomorphology and Soil Classification <sup>1</sup>	3

ENVSS 3230	Geographic Information Systems	4
ECORES 3410	Wetland Ecology, Restoration and Management	3
<b>Soil and Crop Management Electives</b>		<b>6</b>
SCSCI 3260	Seed and Grain Crops	
SCSCI 3280	Precision Agriculture Technologies	
SCSCI 4320	Forage Crops	
SCSCI 4250	Weed Science	
SCSCI 3360	Applied Agricultural Hydrology	
ENVHORT 3230	Turfgrass Management	
ENVHORT 3300	Fruit and Vegetable Crop Management	
ENVHORT 3360	Greenhouse Operation and Management	
AGRIC 4600	Faculty Led Short-Term International Experience in Agriculture	
<b>Advanced Soil and Crop Science Electives</b>		<b>3-4</b>
SCSCI 3220	Plant Development and Biotechnology	
SCSCI 4240	Plant Breeding	
SCSCI 4340	Plant Physiology	
SCSCI 4530	Plant Pathology	
SCSCI 4380	Undergraduate Research in Soil Science	
SCSCI 4390	Undergraduate Research in Crop Science	
SCSCI 3380	Special Problems in Soil Science	
SCSCI 3390	Special Problems in Crop Science	
AGRIC 3410	Agro-Ecosystem Research	
<b>Total Credits</b>		<b>44-45</b>

<sup>1</sup> Students may need to take this course 3 semesters (1 credit per semester) to earn 3 total credits.