

Curriculum in Plant and Environmental Soil Science

Curriculum in Plant and Environmental Soil Science is administered by the Department of Soil and Crop Sciences. Students following this curriculum develop and utilize basic scientific knowledge to understand the most fundamental resources—plants, soils and water—and their interaction of these resources in different environmental settings.

Based on professional goals and objectives, students may select a career emphasis in crops, soils or water. Selection of electives will allow students to complement and strengthen knowledge and skills in areas of interest. The curriculum prepares students to seek employment as agronomists—professionals in industry or government agencies dealing with agricultural production, plant, soil, water or environmental sciences—or for graduate and professional studies in specialized subject areas. Credit hours required: 120.

University Core Curriculum Requirements

Required Courses	(Th-Pr)	Cr
AGEC 105 Introduction to Agricultural Economics	(3-0)	3
CHEM 101 and CHEM 111 Fundamentals of Chemistry I and Lab.	.....	4
COMM 203 Public	(3-0)	3
ENGL 104 Composition and Rhetoric	(3-0)	3
POLS 206 American National Government ³	(3-0)	3
POLS 207 State and Local Government ³	(3-0)	3
American and Texas history	.....	6
Humanities elective ^{2,4}	.....	3
Mathematics electives (MATH prefix required) ²	.....	6
Natural Sciences elective ¹	.....	4
Visual and performing arts elective ^{2,4}	.....	3
*KINE 198 Health and Fitness Activity	(0-2)	1
*KINE 199 Required Physical Activity	(0-2)	1
		43

Department of Soil and Crop Sciences Core Courses

Required Courses	(Th-Pr)	Cr
CHEM 222 Elements of Organic and Biological	(3-0)	3
SCSC 205 Problem Solving in Plant and Soil Systems	(2-2)	3
SCSC 301 Soil	(3-2)	4
SCSC 307 Crop Biology and Physiology	(3-2)	4
SCSC 309 Water in Soils and	(3-2)	4
SCSC 481 Senior Seminar	(2-0)	2
SCSC 484 Internship		
or SCSC 491 Undergraduate Research;		
or Study Abroad (SCSC 420 Brazilian Agriculture and Food Production Systems,		
or SCSC 421 International Agricultural Research Centers -Mexico,		
or SCSC 423 Natural Resources and Agricultural Sustainability in UK)		3
STAT 302 Statistical Methods or ESSM 313 Sampling Methods and Designs of Ecosystems		3
Pest Management: Choose 2 from:		
PLPA 301/PLPA 303 Plant Pathology and Plant Pathology Lab		
ENTO 201 General Entomology		
ENTO 401 Principles of Insect Pest Management		
SCSC 446 Weed Management and Ecology		7-8
Ecology: RENR 205 Fundamentals of Ecology or SCSC 444 Forage Ecology and Management		3
		36-37

Crops Emphasis

Required Courses	(Th-Pr)	Cr
SCSC 304 Plant Breeding and	(3-0)	3
SCSC 311 Principles of Crop	(3-0)	3
SCSC 402 Crop Stress Management	(3-2)	4
SCSC 410 International Agricultural	(3-0)	3
SCSC 441 Crop Production	(3-0)	3
Directed		9
Free electives		<u>15-16</u>
		<u>40-41</u>
total hours		120

Soil and Water Emphasis

Required Courses	(Th-Pr)	Cr
GEOG 390 Principles of Geographic Information Systems or ESSM 351 Geographic Information Systems and Resource Management		3
SCSC 310 Soil Morphology and Land Use Interpretations	(1-3)	2
SCSC 405 Soil and Water Microbiology	(3-2)	4
SCSC 422 Soil Fertility and Plant Nutrient Management	(3-0)	3
SCSC 432 Soil Fertility and Plant Nutrient Management Lab	(0-3)	1
SCSC 455 Environmental Soil and Water Science	(3-0)	3
SCSC 458 Watersheds and Water Quality Management	(3-0)	3
Directed		6
Free electives		<u>15-16</u>
		<u>40-41</u>
total hours		120

- NOTES:** 1. Recommended natural sciences courses: CHEM 102/CHEM 112, PHYS 201 or PHYS 218, BIOL 111, BIOL 115/BIOL 123, GEOL 101 or GEOL 104, GENE 301.
2. To be selected from the University Core Curriculum. Refer to the appropriate tables in this catalog for a list of acceptable courses.
3. Credit by examination may be used to substitute for 3 hours of POLS 206 or POLS 207.
4. The University Core Curriculum includes a requirement for 6 hours of international and cultural diversity courses. A course satisfying another Core category, a college/department requirement, or a free elective can be used to satisfy these requirements. See academic advisor.
5. To be selected from soils emphasis courses.
6. To be selected from crops emphasis courses.