

# Plant & Soil Science Concentration

## Crop & Soil Management Option

### Career Opportunities

Food and fiber production for a growing world population on a decreasing land base is one of the greatest challenges facing the American people. They are looking to agriculture to supply food and fiber for the future. The plant and soil science curriculum (crop and soil management option) is designed to help students prepare themselves for careers in food and fiber production – in practical aspects as well as biotechnology aspects.

The plant and soil science curriculum (crop and soil management option) leads to a Bachelor of Science degree in Agriculture with a concentration in Plant and Soil Science. Students graduating from this program also have the option of further education at the graduate level. Students are required to complete 25 hours of plant and soil science courses plus the basic core curriculum. The program also includes a number of elective courses and several additional courses in agriculture. This enables students in plant and soil science who may also have a strong interest in animal science or agricultural business to concentrate their electives in these areas. Course requirements during the first two years are very similar to those of other universities, allowing easy transfer of credits.

### Employment Possibilities

As the world population continues to increase, demand for food and fiber will also increase. With this demand will come the need for more people to support the farmer. Less than 10% of our graduates return to the farm; most serve the farmer through supportive areas. Career opportunities available in addition to farming include various federal and state agencies such as The U.S. Department of Agriculture, Agricultural Extension Service, and Natural Resource Conservation Service; various industries associated with agriculture and the environment, including feed, seed, fertilizer, chemical, agricultural supplies and equipment companies; agricultural communications and public relations; lending agencies; environmental consultants; conservation and recreation. Students completing this curriculum will have met the academic requirements for the Certified Crop Advisor program (CCA). The recent emergence of biotechnology has opened several additional careers in plant and soil science research. Graduates of this curriculum area are also well prepared for further studies in plant and soil science at the graduate level.

### Facilities

Modern classrooms and laboratory facilities, including the Ned R. McWherter Agricultural Complex, are used for instructional purposes. The UT Martin Agricultural and Natural Resources Field Teaching/Demonstration Complex are jointly used for research, teaching, and demonstration. In addition to the use of these facilities, field trips to leading agricultural businesses, farms and resource-management areas such as parks and wildlife refuges are conducted. Thus, students have a first-hand opportunity to observe proper application of new concepts, technology and management principles in real-life situations. Numerous computer facilities are also available for student use.

# Sample Program of Study

This list includes all courses required; however, the sequence may be flexible.

## Freshman Year

### Fall

Agriculture 295: International Food and Fiber Systems (Social and Behavioral Sciences Elective) .....	3
Biology 110: Introductory Cell Biology and Genetics .....	4
English 111: English Composition .....	3
Math 140: College Algebra and Elementary Functions....	3
Plant Science 110: Introductory Plant and Soil Science ..	3
Plant Science 119: Introduction to Plant & Soil Science Laboratory .....	1

**Total Hours.....17**

### Spring

Agricultural Engineering Technology 110: Introduction to Agricultural Engineering .....	3
Biology 120: Introductory Plant and Animal Biology .....	4
English 112: English Composition .....	3
Math 210: Elementary Statistics and Probability .....	3
Humanities Elective* .....	3

**Total Hours.....16**

## Sophomore Year

### Fall

Agricultural Economics 110: Introduction to Agricultural Business .....	3
Agricultural Engineering Technology 220: Surveying and Soil and Water Engineering .....	3
Animal Science 110: Introduction to Animal Science .....	3
Chemistry 111: Introduction to Chemistry I: General and Organic .....	4
Humanities Elective* .....	3

**Total Hours.....16**

### Spring

Chemistry 112: Introduction to Chemistry II: General and Organic .....	4
Communications 230: Public Speaking .....	3
Natural Resources Management 101: Wildlife, Conservation, and Environmental Issues (Social & Behavioral Sciences Elective).....	3
Soil Science 210: Introduction to Soil Science .....	4

**Total Hours.....14**

\* See catalog for options.

\*\* Upper division classes in the Departments of Agriculture and Natural Resources; Biological Sciences; Chemistry; Engineering; or Geology, Geography and Physics.

## Junior Year

### Fall

Plant Science 333: Weed Science .....	3
Soil Science 315: Soil and Water Conservation, or Soil Science 430 or 440: Wetland Science or Soil Physics.....	3
Zoology 325: Economic Entomology .....	3
Fine Arts Elective* .....	3
Humanities Elective* .....	3

**Total Hours.....15**

### Spring

Agriculture 390: Career Planning in Agriculture .....	2
English 325 or Communication 210, 323, 324 or 430 .....	3
Plant Science 322: Introductory Plant Pathology.....	3
Plant Science 422: Forage Crops (odd years) or Plant Science 442: Crop Adaptation and Ecology (even) .....	3
Soil Science 412: Soil and Chemistry Fertility .....	3

**Total Hours.....14**

## Senior Year

### Summer

Agriculture 420: Supervised Field Experience .....	3
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### Fall

Agriculture 441: Interpretation of Agricultural Research ..	3
Plant Science 431: Principles of Plant Breeding .....	3
Plant Science 433: Field and Crop Production .....	3
Upper Division Science Elective** .....	3

**Total Hours.....12**

### Spring

Agriculture Engineering Technology 482: Precision Technologies for Agriculture and Natural Resources ....	3
Botany 421 or 431: Plant Function and Development or Plant Ecology .....	3
Physics 150 or 211: Concepts and Demonstrations in Physics or College Physics .....	4
Upper Division Science Elective** .....	3

**Total Hours.....13**

## For More Information Contact

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