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## The University of Tennessee at Martin

### Plant & Soil Science Concentration, 2004-2005

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#### 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 of courses 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 West Tennessee Agricultural Pavilion, are used for instructional purposes. The UT Agricultural Experiment Station and UTM Agricultural 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.

#### For More Information

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## Program of Study, Crop & Soil Management Option

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

### Freshman Year

#### Fall

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
<u>Philosophy 160: Introduction to Ethics . . . . .</u>	<u>3</u>
Total Hours . . . . .	16

#### Spring

Biology 120: Introductory Plant and Animal Biology . . .	4
English 112: English Composition . . . . .	3
Math 160 or 210: Calculus for Business and Life Sciences or Elementary Statistics and Probability . . .	3
Agriculture Elective* . . . . .	3
<u>Social Dynamics Elective* . . . . .</u>	<u>3</u>
Total Hours . . . . .	16

### Sophomore Year

#### Fall

Chemistry 121: General Chemistry . . . . .	4
Agricultural Engineering Technology 220: Surveying and Soil and Water Engineering . . . . .	3
Animal Science 110: Introduction to Animal Science . .	3
Agricultural Economics 110: Introduction to Agricultural Business . . . . .	3
<u>Agriculture Elective* . . . . .</u>	<u>3</u>
Total Hours . . . . .	16

#### Spring

Chemistry 122: General Chemistry . . . . .	4
Communications 230: Public Speaking . . . . .	3
Soil Science 210: Introduction to Soil Science . . . . .	4
Agricultural Engineering Technology 110: Introduction to <u>Agricultural Engineering . . . . .</u>	<u>3</u>
Total Hours . . . . .	14

### Junior Year

#### Fall

Chemistry 310: Chemistry . . . . .	3
Plant Science 322: Introductory to Plant Pathology . . .	3
Soil Science 315: Soil and Water Conservation . . . . .	3
Zoology 325: Economic Entomology . . . . .	3
Computer Science 201: Introduction to Computer <u>Applications . . . . .</u>	<u>3</u>
Total Hours . . . . .	15

#### Spring

Biology 336: Introductory Genetics . . . . .	3
Plant Science 333: Weed Science . . . . .	3
Soil Science 412: Soil and Chemistry Fertility . . . . .	3
Agriculture 390: Career Planning in Agriculture . . . . .	2
English or Communication Elective* . . . . .	3
<u>Agriculture Economics Elective* . . . . .</u>	<u>3</u>
Total Hours . . . . .	17

### Senior Year

#### Fall

Plant Science 431: Principles of Plant Breeding . . . . .	3
Plant Science 433: Field and Crop Production . . . . .	3
Agriculture 441: Interpretation of Agricultural Research	3
Microbiology 251: General Bacteriology . . . . .	4
<u>Aesthetics Elective* . . . . .</u>	<u>3</u>
Total Hours . . . . .	16

#### Spring

Botany 421: Plant Function and Development . . . . .	3
Agriculture 295: International Food and Fiber Systems . . . . .	3
Agricultural Engineering Technology Elective* . . . . .	3
<u>Agriculture Electives* . . . . .</u>	<u>5</u>
Total Hours . . . . .	14

\*See catalog for options.