

Requirements for the Bachelor of Science in Wildlife and Fisheries Science • Wildlife and Fisheries Science Major • Wildlife and Fisheries Science Management Concentration

| First Year | Hours | Credit |
|--|-------|----------------------|
| Forestry, Wildlife and Fisheries 250* | .3 | .3 |
| English 101*, 102* | .6 | .6 |
| ¹ Biology 130*, 140* or 101*, 102* | .8 | .8 |
| ¹ Chemistry 120*, 130* or 100*, 110* | .8 | .8 |
| ² Cultures and Civilizations* or Arts and Humanities Elective* | .6 | .6 |
| Second Year | | |
| Forestry, Wildlife and Fisheries 212 | .3 | .3 |
| Wildlife and Fisheries Science 201 | .1 | .1 |
| Economics 201* | .4 | .4 |
| Mathematics 125* | .3 | .3 |
| Statistics 201* or Mathematics 115* | .3 | .3 |
| Biosystems Engineering Technology 326 or Geography 411 | .3 | .3 |
| Animal Science 220 | .3 | .3 |
| Biology 250 or Forestry 215 | .3-4 | .3-4 |
| Communication Studies 210* or 240* | .3 | .3 |
| Environmental and Soil Science 210 | .4 | .4 |
| ² Cultures and Civilizations* or Arts and Humanities Elective* | .3 | .3 |
| Third Year | | |
| Wildlife and Fisheries Science 305, 323, 340, 341, 350, 440, 442 | .16 | .16 |
| Forestry, Wildlife and Fisheries 312*, 313, 317 | .8 | .8 |
| Ecology and Evolutionary Biology 470 or Environmental and Soil Science 324 | .3-4 | .3-4 |
| ² Cultures and Civilizations* or Arts and Humanities Elective* | .3 | .3 |
| Fourth Year | | |
| Wildlife and Fisheries Science 443, 444, 445 | .9 | .9 |
| Forestry, Wildlife and Fisheries 416 | .3 | .3 |
| Forestry, Wildlife and Fisheries 412 or Forestry 321, or Forestry 422 | .3 | .3 |
| Ecology and Evolutionary Biology 330 or 433 | .3 | .3 |
| Ecology and Evolutionary Biology 474 | .4 | .4 |
| ³ Science Elective | .6 | .6 |
| ² Social Science Elective* | .3 | .3 |
| | | Total 125-127 |

- * Meets University General Education Requirement
- ¹ Chemistry 130 is a prerequisite/corequisite to Biology 140, therefore a student selects Chemistry 120-130 and Biology 130-140; otherwise the student must elect Chemistry 100-110 and Biology 101-102.
- ² General Education Electives. Choose two courses from the Cultures and Civilizations list, two courses from the Arts and Humanities list, and one from the Social Sciences list for a total 15 credit hours. Forestry, Wildlife and Fisheries 312 meets the Communicating through Writing (WC) requirement.
- ³ 300-level and above from animal science; biosystems engineering technology; ecology and evolutionary biology; entomology and plant pathology; environmental and soil Sciences; forestry; forestry, wildlife and fisheries; plant sciences; wildlife and fisheries science; or Geography 410, 412, 413, 436.

Requirements for the Bachelor of Science in Wildlife and Fisheries Science • Wildlife and Fisheries Science Major • Wildlife Health Concentration

| First Year | Hours | Credit |
|--------------------------------------|-------|--------|
| Wildlife and Fisheries Science 101 | .1 | .1 |
| Forestry, Wildlife and Fisheries 250 | .3 | .3 |
| Biology 130*, 140* | .8 | .8 |
| Chemistry 120*, 130* | .8 | .8 |
| Mathematics 125* | .3 | .3 |
| Statistics 201* or Mathematics 115* | .3 | .3 |
| English 101*, 102* | .6 | .6 |
| Second Year | | |
| Wildlife and Fisheries Science 201 | .1 | .1 |
| Animal Science 220 | .3 | .3 |
| Biology 240, 250 | .8 | .8 |
| Microbiology 310, 319 | .5 | .5 |
| Chemistry 350, 360, 369 | .8 | .8 |
| Physics 221*, 222* | .8 | .8 |
| Third Year | | |
| Wildlife and Fisheries Science 301 | .3 | .3 |
| Forestry, Wildlife and Fisheries 317 | .3 | .3 |
| Animal Science 380 | .3 | .3 |

| | |
|---|----|
| Biochemistry and Cellular and Molecular Biology 440 | .3 |
| Microbiology 420 or 430 | .3 |
| ¹ Cultures and Civilizations* or Arts and Humanities Elective* | .6 |
| Economics 201* | .4 |
| Communication Studies 210* or 240* | .3 |
| Fourth Year | |
| Wildlife and Fisheries Science 443, 444, 445 | .9 |
| Microbiology 470 or 2 Wildlife and Fisheries Science 496 | .3 |
| Biosystems Engineering Technology 326 or Geography 411 | .3 |
| ³ Science Elective | .3 |
| ¹ Social Science Elective* | .3 |
| ¹ Cultures and Civilizations* or Arts and Humanities Elective* | .6 |
| Total 120 | |

- * Meets University General Education Requirement.
- ¹ General Education Electives. Choose two courses from the Cultures and Civilizations list, two courses from the Arts and Humanities list, and one from the Social Sciences list for a total 15 credit hours. One of the Cultures and Civilizations or Arts and Humanities or Social Sciences courses must meet the Communicating through Writing (WC) requirement.
- ² Must be a departmental approved internship.
- ³ 300-level and above from animal science; biosystems engineering technology; ecology and evolutionary biology; entomology and plant pathology; environmental and soil sciences; forestry; forestry, wildlife and fisheries; plant sciences; wildlife and fisheries science; or Geography 410, 412, 413, 436.

Minor in Wildlife and Fisheries Science

| Required Courses | Hours | Credit |
|---|-------|-----------------|
| Forestry, Wildlife and Fisheries 250 | .3 | .3 |
| Forestry, Wildlife and Fisheries 317 | .3 | .3 |
| Select three from Forestry, Wildlife and Fisheries 416; Wildlife and Fisheries Science 433, 443, 444, 445 | .9 | .9 |
| | | Total 15 |

DEPARTMENT OF PLANT SCIENCES

<http://plantsciences.utk.edu/>

G. Neil Rhodes, Head

Professors

| | |
|--|-----------------------|
| Albrecht, M.L. (Associate Dean), PhD | .Ohio State |
| Allen, F.L., PhD | .Minnesota |
| Augé, R.M., PhD | .Washington State |
| Bates, G.E., PhD | .Georgia |
| Denton, H.P., PhD | .North Carolina State |
| Deyton, D.E., PhD | .North Carolina State |
| Hayes, R.M., PhD | .Illinois |
| Lockwood, D.W., PhD | .Purdue |
| Miller, R.D., PhD | .Kentucky |
| Mueller, T.C., PhD | .Georgia |
| Rhodes, G.N., PhD | .North Carolina State |
| Samples, T.J., PhD | .Oklahoma State |
| Sams, C.E. (Austin Distinguished Professor), PhD | .Michigan State |
| Stewart, C.N. (Racheff Chair), PhD | .Virginia Tech |
| West, D.R., PhD | .Nebraska |

Associate Professors

| | |
|----------------------|-------------------------|
| Cheng, Z.M., PhD | .Cornell |
| Gwathmay, C.O., PhD | .California (Riverside) |
| Hamilton, S.L., EdD | .Tennessee |
| Klingeman, W.E., PhD | .Georgia |
| Menendez, G.L., MS | .Tennessee |
| Pantalone, V.R., PhD | .North Carolina State |
| Rogers, S.M., MLA | .Georgia |
| Stewart, C.E., MLA | .Georgia |

Assistant Professors

| | |
|---------------------|-----------------------|
| Bailey, W.A., PhD | .Virginia Tech |
| Chen, F., PhD | .California (Davis) |
| Kopsell, D.A., PhD | .Georgia |
| McElroy, J.S., PhD | .North Carolina State |
| Smith, B.R., PhD | .Cornell |
| Sorochan, J.C., PhD | .Michigan State |
| Steckel, L.E., PhD | .Illinois |
| Thompson, M.A., PhD | .Tennessee |

Wszelaki, A.L., PhD California (Davis)
 Zale, J.M., PhD Saskatchewan (Canada)

Instructors

Flanagan, P.C., MS Tennessee
 Osburn, L.D., MS Tennessee

Adjunct Faculty

Airhart, D.L., PhD Georgia
 Ott, R.J., MBA Tennessee
 Pepin, T. MS Tennessee

Emeriti Faculty

Coffey, D.L., PhD Purdue
 McDaniel, G.L., PhD Iowa State

Advisors

Augé, Hamilton, Menendez, Rogers, Sorochan, C. Stewart, C.N. Stewart

Academic programs in the Department of Plant Sciences span the art, science and technology of plant use in society. Students receive preparation for careers in horticulture and agronomy within four concentrations – landscape design and construction; plant science, biotechnology and horticulture; public horticulture; and turfgrass science and management. With increasing emphasis placed on plants in urban areas, extensive training is offered in landscape horticulture (planning, implementation and management for landscapes, turf and gardens). Comprehensive programs are also offered in plant biotechnology and plant production.

Upon entering the department, each student is assigned a faculty advisor for guidance in selection of career specialties and elective courses. The curriculum builds upon the University General Education Requirement with critical courses in botany, soils, and business and adds a set of required departmental courses specific to each concentration. Students are able to customize their program by selecting electives. Students in all concentrations are trained to work knowledgeably in general plant culture. Students are encouraged to earn a minor in a supportive field to further enhance their academic training and professional competitiveness. While firmly grounding students in the knowledge and skills of the plant sciences and arts, our curricula emphasize critical thinking and creative activity. Our students also gain the theoretical education necessary for continuing on for advanced degrees in plant-related fields.

Students should declare a concentration early in their undergraduate program and strictly follow the curriculum described for the concentration. Students who transfer into plant sciences from other colleges or programs must meet the same requirements as those entering the department as freshmen.

Internship or undergraduate research participation is required for each concentration. Full-time summer internships are available at selected local, regional, and national companies or institutions. Part-time summer or semester internships and research experiences are available from the Department of Plant Sciences, other university departments and laboratories, and local commercial firms.

Our graduates find employment in a wide variety of professions. In working for others or within their own businesses, graduates of the landscape concentration design residential landscapes, select proper woody and herbaceous plant materials for specific sites, restore native landscapes, specify specialty components dealing with landscape construction (irrigation, lighting, water features), prepare materials lists and cost estimates for landscape installations, and manage landscape crews. Turf majors have career opportunities in the industries involved with lawn management, athletic fields, golf courses, sales, and park and grounds maintenance. The public horticulture concentration prepares students for careers in botanic gardens, zoos and national parks; professional writing, television and radio; urban forestry; teaching; and municipal and university horticulture. Graduates in plant science, biotechnology and horticulture find employment in education, consulting, sales, agricultural extension, and research and development.

Core Courses

The core courses for the plant sciences concentrations which are required for entry into upper-division courses are as follows.

LANDSCAPE DESIGN CONCENTRATION

Two courses in English composition (English 101 and 102 or equivalent); Mathematics 113 or 123 or 151 or equivalent; Computer Sciences 100 or 102 or equivalent; general chemistry (Chemistry 100 or 120 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); Basic Landscape Plants (Plant Sciences 220 or equivalent); Fundamentals of Landscape Design (Plant Sciences 280 or equivalent).

PLANT SCIENCE, BIOTECHNOLOGY AND HORTICULTURE CONCENTRATION

Two courses in English composition (English 101 and 102 or equivalent); two courses in mathematics (Mathematics 123 and 125 or Mathematics 151 and 152 or equivalent); two courses in general chemistry (Chemistry 100 and 110 or 120 and 130 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); Computer Applications to Problem Solving (Agriculture and Natural Resources 290 or equivalent).

PUBLIC HORTICULTURE CONCENTRATION

Two courses in English composition (English 101 and 102 or equivalent); Mathematics 113 or 123 or 151 or equivalent; Computer Sciences 100 or 102 or equivalent; general chemistry (Chemistry 100 or 120 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); a plant materials course (Plant Sciences 220 or 230 or 290 or equivalent); Public Horticulture (Plant Sciences 226 or equivalent).

TURFGRASS SCIENCE AND MANAGEMENT CONCENTRATION

Two courses in English composition (English 101 and 102 or equivalent); two courses in mathematics (Mathematics 123 and 125 or equivalent); two courses in general chemistry (Chemistry 100 and 110 or 120 and 130 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); Turfgrass Management (Plant Sciences 240 or equivalent); Computer Applications to Problem Solving (Agriculture and Natural Resources 290 or equivalent).

Technical Electives**LANDSCAPE DESIGN AND CONSTRUCTION CONCENTRATION**

Architecture 111, 180, 211, 232, 421; Art 101, 103, 191, 295; Art Drawing 211, 212; Art Media Arts 231, 331; Art Painting 213, 214, 215, 216; Biochemistry and Cellular and Molecular Biology 306; Biology 250; Biosystems Engineering Technology 202, 212; Ecology and Evolutionary Biology 304, 330, 433; Communication Studies 230, 310; English 360*; Entomology and Plant Pathology 201, 306, 313, 321, 410; Environmental and Soil Science 324, 334; Forestry 321; Forestry Wildlife and Fisheries 211, 250, 311; Geography 365, 366; Geology 201, 202, 203; Philosophy 243*, 244, 245*; Political Science 402, 403, 446; Spanish 211, 212.

PLANT SCIENCES, BIOTECHNOLOGY AND HORTICULTURE CONCENTRATION

Agricultural Economics 330, 342, 350, 412; Accounting 200; Biochemistry and Cellular and Molecular Biology 310, 330, 401, 402, 404; Biology 240; Biosystems Engineering Technology 326; Business Administration 201; Chemistry 350; Ecology and Evolutionary Biology 304, 410, 414, 433; English 360*; Entomology and Plant Pathology 451; Environmental and Soil Sciences 355, 442; Finance 301; Management 300; Marketing 300; Microbiology 210; Physics 221.

PUBLIC HORTICULTURE CONCENTRATION

Accounting 415; Art 481; Agriculture and Extension Education 345; Communication Studies 440; Ecology and Evolutionary Biology 309, 330, 433; Educational Administration and Policy Studies 200; Educational Psychology 210; English 360*; Human Resource Development 562; Philosophy 245*; Public Relations 270, 470; Recreation and Leisure Studies 201, 430.

TURFGRASS SCIENCE AND MANAGEMENT CONCENTRATION

Agricultural Economics 212; Biosystems Engineering Technology 202, 212, 452, 462; Entomology and Plant Pathology 321, 410; Environmental and Soil Science 324.

*Courses marked with an * meet the University General Education Requirement.*

PLANT SCIENCES MAJOR LANDSCAPE DESIGN AND CONSTRUCTION CONCENTRATION

Landscape designers create aesthetic concepts and practical designs for improved outdoor living. Students study fundamental and advanced landscape design, landscape design graphics, computer-aided landscape design, surveying, art, socio-economic impact of plants, field botany, professional practices, contracting, basic woody plant identification, landscape construction and maintenance methods. The development of comprehensive design projects helps students prepare for careers in landscape design or advanced studies in landscape architecture. Graduates in design and construction are prepared for employment in several professions in ornamental horticulture. Careful selection of departmental courses and other electives in consultation with the assigned academic advisor will allow graduates to pursue suitable career paths.

Requirements for the Bachelor of Science in Plant Sciences • Plant Sciences Major • Landscape Design and Construction Concentration

| First Year | Hours | Credit |
|---|------------|--------|
| 1Arts and Humanities Elective* | 3 | |
| Biology 111*, 112* | 8 | |
| Chemistry 100* or 120* | 4 | |
| Computer Science 100* | 3 | |
| English 101*, 102* | 6 | |
| Mathematics 113*, 123* or 151* | 3 | |
| 1,2Social Sciences Elective* | 3-6 | |
| Second Year | | |
| Communication Studies 210* or 240* | 3 | |
| 2Economics Elective* | 3-4 | |
| Environmental and Soil Sciences 210 | 4 | |
| Plant Sciences 210, 220, 280 | 9 | |
| Technical Electives | 9 | |
| Unrestricted Elective | 2-4 | |
| Third Year | | |
| 1Cultures and Civilizations Elective* | 3 | |
| Plant Sciences 350, 380 | 6 | |
| Select from Plant Sciences 226, 230, 240, 330, 348, 360, or 370 | 5-6 | |
| Plant Sciences 290 or 291 | 3 | |
| Technical Electives | 6 | |
| Unrestricted Electives | 3-8 | |
| Third Year – Summer | | |
| Plant Sciences 492 | 3 | |
| Fourth Year | | |
| 1Arts and Humanities Elective* | 3 | |
| 1Cultures and Civilizations Elective* | 3 | |
| Plant Sciences 421, 460, 480, 485 | 13 | |
| Select from Plant Sciences 348, 410, 427, 429, 430, 434, 437, 441, 446, 450, 469, 470, or 493 | 5-6 | |
| Technical Electives | 4-5 | |
| Total | 124 | |

* Meets University General Education Requirement.

- Choose from the University General Education lists. Selection should be made in conference with academic advisor.
- Economics 201 satisfies the University General Education-Social Science requirement and the major requirement for economics. If the student transfers ECON LD for 3 credit hours, it will satisfy the major requirement for economics but will not satisfy the University General Education-Social Science requirement. In these cases, the student should take two courses from the Social Sciences list.

NOTE: Students must meet the University General Education Requirement for Communicating through Writing by selecting a course with a (WC) designation. This course may be in the major or from another discipline.

PLANT SCIENCE, BIOTECHNOLOGY AND HORTICULTURE CONCENTRATION

The plant science, biotechnology and horticulture concentration is designed for students desiring to pursue professions in biotechnology or commercial production of agronomic and horticultural crops. This concentration also prepares students for graduate studies in plant sciences. Careful selection of departmental courses and other electives in consultation with the assigned academic advisor will prepare graduates for the career of their choice. The concentration consists of two tracks of study – emphasis in production horticulture and emphasis in science and biotechnology.

Requirements for the Bachelor of Science in Plant Sciences • Plant Sciences Major • Plant Science, Biotechnology and Horticulture Concentration

| First Year | Hours | Credit |
|---|------------|--------|
| Biology 111*, 112* | 8 | |
| Chemistry 100* and 110*, or 120* and 130* | 8 | |
| English 101*, 102* | 6 | |
| Mathematics 151*, 152* | 6 | |
| Plant Sciences 115 | 3 | |
| Second Year | | |
| Agriculture and Natural Resources 290 | 3 | |
| Agricultural Economics 212 | 3 | |
| 1Arts and Humanities Elective* | 3 | |
| Communication Studies 210* or 240* | 3 | |
| 1Cultures and Civilizations Elective* | 3 | |
| Environmental and Soil Sciences 210 | 4 | |
| Plant Sciences 210 | 3 | |
| 1,2Social Sciences Elective* | 3-6 | |
| 2Economics Elective* | 3-4 | |
| Technical Electives | 2-3 | |
| Third Year | | |
| Biochemistry and Cellular and Molecular Biology 321 or Forestry 414 | 4 | |
| 1Cultures and Civilizations Elective* | 3 | |
| English 360* for Production Horticulture Track or Chemistry 350 for Science and Biotechnology Track | 3 | |
| Select from Plant Sciences 235, 240, 241, 330, 370, 410, 430, 434, or 435 | 9 | |
| Plant Sciences 457, 458 or 457, 459; Entomology and Plant Pathology 313 or 321 or 410 | 6 | |
| Technical Electives | 3 | |
| Unrestricted Electives | 0-2 | |
| Fourth Year | | |
| 1Arts and Humanities Elective* | 3 | |
| Select from Plant Sciences 235, 240, 241, 370, 410, 430, 434, or 435 for Production Horticulture Track; or Plant Sciences 353 and 454 for Science and Biotechnology Track | 6 | |
| Plant Sciences 470 | 3 | |
| Plant Sciences 492 or 497 | 3 | |
| Plant Sciences 331 and Technical Electives for Production Horticulture Track, or Plant Sciences 461 for Science and Biotechnology Track | 3 | |
| Technical Electives | 10 | |
| Unrestricted Electives | 3-4 | |
| Total | 124 | |

* Meets University General Education Requirement.

- Choose from the University General Education lists. Selection should be made in conference with academic advisor.
- Economics 201 (4) satisfies the University General Education-Social Science requirement and the major requirement for economics. If the student transfers ECON LD for 3 credit hours, it will satisfy the major requirement for economics but will not satisfy the University General Education-Social Science requirement. In these cases, the student should take two courses from the Social Sciences list.

NOTE: Students must meet the University General Education Requirement for Communicating through Writing by selecting a course with a (WC) designation. This course may be in the major or from another discipline.

PUBLIC HORTICULTURE CONCENTRATION

The public horticulture concentration is intended for students interested in professional careers that promote horticulture and emphasize people, their education and their enjoyment of plants. Such careers include director of a botanical garden or park; city or urban horticulturist; extension agent, teacher, educational director, or program coordinator; professional garden writer/editor or publication manager; horticulture therapist; public garden curator; and plant collections manager. Technical electives allow students to concentrate in specialties of their interest while encouraging the development of strong communication skills. Students are encouraged to earn a minor degree in a supportive field such as education, communications or journalism, or earn a Non-Profit Management Certificate.

Requirements for the Bachelor of Science in Plant Sciences • Plant Sciences Major • Public Horticulture Concentration

| First Year | Hours Credit |
|--|--------------|
| 1Arts and Humanities Elective* | .3 |
| Biology 111*, 112* | .8 |
| Chemistry 100* or 120* | .4 |
| Computer Science 100* or 102** | .3 |
| English 101*, 102* | .6 |
| Environmental and Soil Sciences 210 | .4 |
| Mathematics 113*, 123*, or 151* | .3 |
| Second Year | |
| 1Arts and Humanities Elective* | .3 |
| Communication Studies 240* | .3 |
| 1Cultures and Civilizations Elective* | .3 |
| Plant Sciences 210 | .3 |
| Select from Plant Sciences 220, 226, 280, 290, or 291 | .11 |
| 1,2Social Sciences Elective* | .3-6 |
| 2Economics Elective* | .3-4 |
| Technical Electives | .0-3 |
| Third Year | |
| 1Cultures and Civilizations Elective* | .3 |
| Plant Sciences 230, 240, 328, 330, 348, 370, 410, 434, 436 | .22 |
| Technical Electives | .4-5 |
| Third Year - Summer | |
| Plant Sciences 492 | .3 |
| Fourth Year | |
| Entomology and Plant Pathology 313 or 321 | .3 |
| Entomology and Plant Pathology 410 | .3 |
| Plant Sciences 470 | .3 |
| Select from Plant Sciences 427, 430, 437, 439, 446, or 469 | .10 |
| Plant Sciences 448 or 494 | .3 |
| Technical Electives | .3 |
| Plant Sciences 421 or Unrestricted Electives | .3 |
| Total 124 | |

* Meets University General Education Requirement.

- Choose from the University General Education lists. Selection should be made in conference with academic advisor.
- Economics 201 (4) satisfies the University General Education-Social Science requirement and the major requirement for economics. If the student transfers ECON LD for 3 credit hours, it will satisfy the major requirement for economics but will not satisfy the University General Education-Social Science requirement. In these cases, the student should take two courses from the Social Sciences list.

NOTE: Students must meet the University General Education Requirement for Communicating through Writing by selecting a course with a (WC) designation. This course may be in the major or from another discipline.

TURFGRASS SCIENCE AND MANAGEMENT CONCENTRATION

The turfgrass science and management concentration is designed for the student desiring to pursue professions that include growing and managing turfgrasses used for golf courses, parks, athletic fields, sports complexes, and residential and commercial

lawns. This concentration also prepares students for graduate studies in turfgrass science. Students are encouraged to earn a minor degree in a supportive field such as agricultural economics or environmental and soil sciences. Careful selection of departmental courses and other electives in consultation with the assigned academic advisor will prepare graduates for the career of their choice.

Requirements for the Bachelor of Science in Plant Sciences • Plant Sciences Major • Turfgrass Science and Management Concentration

| First Year | Hours Credit |
|---|--------------|
| 1Arts and Humanities Elective | .3 |
| Chemistry 100* and 110*, or 120* and 130* | .8 |
| 1Cultures and Civilizations Elective* | .3 |
| English 101*, 102* | .6 |
| Mathematics 123* and 125*, or 151* and 152* | .6 |
| 1,2Social Sciences Elective* | .3-6 |
| Second Year | |
| Agriculture and Natural Resources 290 | .3 |
| Biology 111*, 112* | .8 |
| Communications Studies 210* or 240* | .3 |
| 2Economics Elective* | .3-4 |
| Environmental and Soil Sciences 210 | .4 |
| Plant Sciences 240, 241 | .4 |
| Select from Plant Sciences 210, 220, 280, or 290 | .3 |
| Unrestricted Electives | .2-3 |
| Third Year | |
| 1Cultures and Civilizations Elective* | .3 |
| Select from Plant Sciences 210, 220, 280, 290 or 291 | .3 |
| Plant Sciences 330, 331, 341, 343, 348, 442, and 457-458 | .13 |
| Technical Electives | .3 |
| Unrestricted Electives | .9 |
| Third Year - Summer | |
| Plant Sciences 492 | .3 |
| Fourth Year | |
| 1Arts and Humanities Elective* | .3 |
| Biology 250 or Biochemistry and Cellular and Molecular Biology 321 | .4 |
| Entomology and Plant Pathology 313 | .3 |
| Environmental and Soil Sciences 334 | .3 |
| Select from Plant Sciences 353, 360, 410, 421, 427, 429, 430, 434, 435, 436, 437, 446, 448*, 449, 451, 461, 469, or 494 | .6 |
| Plant Sciences 441, 470 | .5 |
| Technical Electives | .4-5 |
| Total 124 | |

* Meets University General Education Requirement.

1 Choose from the University General Education lists. Selection should be made in conference with academic advisor.

2 Economics 201 (4) satisfies the University General Education-Social Science requirement and the major requirement for economics. If the student transfers ECON LD for 3 credit hours, it will satisfy the major requirement for economics but will not satisfy the University General Education-Social Science requirement. In these cases, the student should take two courses from the approved Social Sciences list.

NOTE: Students must meet the University General Education Requirement for Communicating through Writing by selecting a course with a (WC) designation. This course may be in the major or from another discipline.

Minor in Plant Sciences

| Required Courses | Hours Credit |
|---|--------------|
| A minimum of 18 semester hours of upper-division plant sciences courses | .18 |
| Total 18 | |