PLANT SCIENCE AND LANDSCAPE SYSTEMS

Professors:
G.N. Rhodes (Interim Head), Ph.D. North Carolina State; M.L. Albrecht (Assoc. Dean, College of Agricultural Sciences and Natural Resources), Ph.D. Ohio State; F.L. Allen, Ph.D. Minnesota; E.L. Ashburn, Ph.D. Tennessee (Emeritus); R.M. Augé, Ph.D. Washington State; B.V. Conger, Ph.D. Washington State; G.D. Crater (Emeritus) Ph.D. Ohio State; L.M. Callahan (Emeritus), Ph.D. Rutgers; D.L. Coffey, Ph.D. Purdue; D.E. Dayton, Ph.D. North Carolina State; W.T. Flinchum (Emeritus), Ph.D. North Carolina State; H.A. Fribourg (Emeritus), Ph.D. Iowa State; E.T. Graham (Emeritus), Ph.D. College of Agricultural Sciences and Natural Resources
Pennsylvania State; C.R. Graves (Emeritus), M.S. Tennessee; R.M. Hayes, Ph.D. Illinois; D.W. Lockwood, Ph.D. Purdue; G.L. McDaniel, Ph.D. Iowa State; J.H. Reynolds (Emeritus), Ph.D. Wisconsin; A.D. Rutledge (Emeritus), Ph.D. Tennessee; T.J. Samples, Ph.D., Oklahoma State; C.E. Sams, Ph.D. Michigan State; D.W. Sams (Emeritus), Ph.D. Minnesota; P.P. Shelby (Emeritus), M.S. Tennessee; C.N. Stewart, Ph.D. (Racheff Chair) Virginia Tech; D.R. West, Ph.D. Nebraska; D.B. Williams (Emeritus), Ph.D. Pennsylvania State.

Associate Professors:

Assistant Professors:

Advisors:
Coffey, Hamilton, McDaniel, Menendez, Morgan, Sams, and Sorochon.

The Department of Plant Sciences and Landscape Systems (PSLS) of the University of Tennessee provides quality academic instruction to undergraduate and graduate students. Experienced instructors who are committed to the success of their students staff the department. Advisors give students sound advice in the selection of career specialties, elective courses, and provide students the best education possible. Professors want their students to be successful and enjoy positive student-teacher relationships. They keep track of job openings and assist students during the job selection process. Since most PSLS teachers are also research scientists, undergraduate students interested in advanced studies are directed into appropriate courses necessary for admission to
graduate school. Students are also encouraged to work with faculty researchers in a variety of laboratory, greenhouse, or field experiments.

The department offers a major leading to a Bachelor of Science degree in Plant Sciences and Landscape Systems with five concentrations: Business Management, Horticulture and Agronomy, Landscape Design, Public Horticulture, and Turfgrass Management. Each concentration offers a different approach to address the breadth of opportunities available to PSLS undergraduate students. A minimum of 124 credit hours including internship is required for each concentration. Fulltime summer internships are available at selected local, regional, and national companies or institutions. Part-time summer or semester internships are available from PSLS, other university departments and laboratories and local commercial firms. For more information about undergraduate and other departmental programs, please contact our web site at: http://ohld.ag.utk.edu/psls/

CAREER SPECIALITIES
Students in the Landscape Design and the Public Horticulture concentrations have various career paths open to them. Opportunities exist within landscape construction and maintenance (installation and maintenance of residential and commercial landscapes), landscape design (creation of aesthetic concepts and practical plans for improved outdoor areas), and public horticulture (the promotion of horticulture to enhance people’s education and enjoyment of plants). Students select courses to meet the challenges of the different areas of ornamental horticulture by working closely with their academic advisers. Internships at various horticultural enterprises provide students the opportunity to put theory into practice and screen possible job options. Positions that graduates hold are numerous and include the following: owners, supervisors and employees of landscape construction; design and/or maintenance businesses for residential, recreational and commercial properties; owners, designers, salespersons or managers with interiorscape firms; directors, curators, public relations managers, education program director, high school or college teachers and employees of botanic gardens and arboreta; federal, state, county, city and municipal horticulturists; county extension workers in horticulture; estate manager; arborists and employees of tree care firms; and garden writers. A percentage of undergraduate students go on to graduate studies.

The Business Management and Turfgrass Management concentrations reflect the various other career paths open to graduates. Opportunities exist within floriculture (the field of growing and marketing flowers and plants), turfgrass management (growing and managing turfgrasses used for golf courses, parks, athletic fields, and residential and commercial lawns), wholesale nursery production (the production of trees, shrubs and other woody ornamental plants used by the landscape industry.
or sold through retail outlets), retail horticulture (the marketing; merchandising and sale of vegetables, fruit, or ornamental plants and gardening accessories directed to the consumer), and agronomic crops production and consulting. Positions that graduates hold are numerous and include the following: owner, manager, salesperson or employee of garden centers, farm supply, or other retail outlets; golf course superintendents and assistant superintendents; sales positions with turfgrass equipment firms, supply firms, chemical companies and seed companies; owners, supervisors or growers of turfgrass sod, nursery or floral crop operations, and agronomic and field-produced horticultural crops. The Horticulture and Agronomy concentration provides a solid background in science while preparing students to apply this knowledge. The graduate must have knowledge of the basic chemical, physical and biological sciences and be educated in communication and computer skills. The student may be broadly trained or may specialize in a specific phase of the subject. This concentration is especially designed to qualify students for professional certification and to prepare students for graduate study. Through the appropriate selection of major course and technical electives, students can qualify for certification as a crop scientist, agronomist, or horticulturist. Students can also prepare themselves for graduate study in crop ecology and physiology, crop breeding and genetics, and weed science. Careful selection of departmental courses and related courses as well as electives in consultation with the student’s academic adviser will prepare graduates for a career of their choice in the Plant Science area, whether it be Agronomic or Horticultural in nature. A minor in Integrated Plant Systems shall consist of 18 hours of courses in Plant Sciences and Landscape Systems including IPS 230, IPS 334, and a minimum of 12 credit hours at the upper division. Prerequisites, if any, to these courses will not be waived, but must be included in addition to the total of 18 hours. PSL 471 will not be accepted as a course to meet minor requirements. A minor in Ornamental Horticulture and Landscape Design shall consist of 18 hours of courses in Ornamental Horticulture and Landscape Design: OHLD 110, Introduction to Ornamental Horticulture and one additional lower division course, and a minimum of 12 credit hours at the upper division. Prerequisites, if any, to these courses will not be waived, but must be included in addition to the total of 18 hours. **ENROLLMENT MANAGEMENT PLAN** All students in the Department of Plant Sciences and Landscape Systems must meet certain minimum requirements before registering for upper division PSL, OHLD, or IPS classes. Admittance to each of the departmental concentrations will be determined by completion of core courses with a “C” or better for an individual concentration, completion
of a minimum of 65 credit hours toward the
degree, and a minimum cumulative grade
point average (GPA) of 2.25.
To be considered for progression into the
upper division of the program, majors must
submit an application of intent for progression
prior to class registration for the next semester.
Their transcript will be reviewed by faculty
members for completion of all core courses
and meeting the minimum GPA. Students
must have completed all but 3 core courses
for their concentration by the end of the semester
in which they apply for acceptance
into upper division courses. They must complete
all core courses before entering upper
division courses. They will also need the prerequisites
to these individual upper division
courses.
Once admitted for progression to upper division
programs, students must maintain a cumulative
GPA of 2.25. Junior and senior
majors in PSLS whose cumulative GPA falls
below the minimum of 2.25 will not be allowed
to register in departmental upper division
classes until they again meet the required
GPA for progression. This enrollment management
plan becomes effective for all students
enrolling in PSLS on or after Fall
semester 2001.

CORE COURSES
Majors must have completed the core
courses for their respective PSLS concentration.
Students must declare a concentration
early in their undergraduate program and
strictly follow the curriculum described for it.
Students who transfer into PSLS from other
colleges or programs must meet the same requirements
as those entering the department
as freshmen. The core courses for the PSLS
concentrations are:

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Business Management Concentration:
two courses in English composition (English
101 and 102 or equivalent); college algebra
and calculus (Math 119 and 125 or equivalent);
genral chemistry (Chemistry 100-110
or 120-130 or equivalent); general botany
(Botany 110 and 120 or equivalent); general
accounting (Accounting 201 and 202 or
equivalent); soil science (ESS 210 or equivalent).

Horticulture and Agronomy Concentration:
two courses in English composition (English
101 and 102 or equivalent); college
algebra and either precalculus or calculus
(Math 119 and 125 or 130) or completion of
Math 151 and 152 or equivalent; general
chemistry (Chemistry 100-110 or 120-130 or
equivalent); general botany (Botany 110 and
120 or equivalent); soil science (ESS 210 or
equivalent); crop science (IPS 230 or equivalent).

Landscape Design: two courses in English
composition (English 101 and 102 or
equivalent); college algebra and finite math or
Calculus (Math 119 and 123 or 125 or equivalent);
genral chemistry (Chemistry 100 or
120 or equivalent) and one natural science
elective; general botany (Botany 110 and 120
or equivalent); soil science (ESS 210 or
equivalent); basic landscape plants (OHLD
220 or equivalent); landscape design (OHLD
Public Horticulture Concentration: two courses in English composition (English 101 and 102 or equivalent); college algebra and finite math or calculus (Math 119 and 123 or 125 or equivalent); general chemistry (Chemistry 100 or 120 or equivalent) and one natural science elective; general botany (Botany 110 and 120 or equivalent); soil science (ESS 210 or equivalent); general ecology (Biology 250 or equivalent); basic landscape plants (OHLD 220 or equivalent).

Turfgrass Management Concentration: two courses in English composition (English 101 and 102 or equivalent); college algebra and finite math or calculus (Math 119 and 123 or 125 or equivalent); general chemistry (Chemistry 100-110 or 120-130 or equivalent); general botany (Botany 110 and 120 or equivalent); soil science (ESS 210 or equivalent); basic landscape plants (OHLD 220 or equivalent); microcomputer applications (ANR 290 or equivalent).

BUSINESS MANAGEMENT CONCENTRATION
The Business Management Concentration is fundamental to those interested in starting their own companies. Students receive a minor in either Business Administration or Agricultural Economics and Business allowing easier access to management positions as well as graduate programs such as the Master of Business Administration (MBA) should they want to continue their education in the future.

Hours Credit
Freshman
Botany 110-120 ......................................................... 8
Chemistry 100-110 or 120-130 .................................. 8
English 101-102 ......................................................... 6
Math 119 and 125 ...................................................... 6
OHLD 110 or IPS 230 ................................................ 3
1 Humanities Elective ................................................. 3
Sophomore
Select 2 from OHLD 220, 230, 231, or 280 ............ 5-6
Agriculture and Natural Resources 290 ................. 3
Accounting 201-202 .................................................. 5
Economics 201 .......................................................... 4
Environmental and Soil Sciences 210 ..................... 4
Speech 210 or 240 .................................................... 3
Select Statistics 201 for Business Minor or
Agricultural Economics 212 for Agricultural
Economics Minor ..................................................... 3
1 History Elective ....................................................... 3
Junior
Select 3 from OHLD 326, 330, 350, 360, 370, 380,
390, 391, IPS 334, or 340 ........................................... 8-9
PSLS 492 ................................................................. 3
Select Business Administration 201 and
Management 300 for Business Minor or
Agricultural Economics 342 and 350 for
Agricultural Economics Minor .............................. 6-7
Select 2 from Technical Electives ............................ 6
1 History Elective ....................................................... 3
1 Humanities Elective ................................................. 3
Senior
Select 3 from OHLD 410, 421, 429, 430, 434, 436,
446, 450, 451, 460, 480, 485, 494,
IPS 431, 433, 434, 435, 440,
PSLS 471, 493 ...................................................... 5-13
PSLS 490 ................................................................. 1
Select Finance 301 and Marketing 300 for Business
Minor or Agricultural Economics 412 and
an Agricultural Economics elective for
Agricultural Economics Minor ............................................ 6
Writing Elective ................................................................. 3
Social Science Elective ..................................................... 3
Unrestricted Electives ....................................................... 3-11
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Total: 124 hours

Lists of appropriate electives are available and should be selected in conference with academic advisor.

**HORTICULTURE AND AGRONOMY CONCENTRATION**

The Horticulture and Agronomy Concentration is designed for the student desiring to pursue professions that include graduate studies, research and commercial production of agronomic and horticultural crops. Careful selection of departmental courses and other electives in consultation with your academic adviser will prepare graduates for the career of their choice. The concentration consists of two tracks of study: (1) Emphasis in agronomy and (2) Emphasis in horticulture.

**Hours Credit**

**Freshman**
- Botany 110-120 .......................................................... 8
- Chemistry 100-110 or 120-130 ..................................... 8
- English 101-102 .......................................................... 6
- Math 119 and (125 or 130) or Math 151-152 for agronomy track or Math 119 and (123 or 125) for horticulture track ............................................. 6
- Select IPS 230 for agronomy track or OHLD 110 for horticulture track ............................................. 3

**Sophomore**
- Select Microbiology 210 and Biology 240 for agronomy track or select 1 from OHLD 220, 230, 231, or 280 and select 1 from Microbiology 210 or Biology 240 for horticulture track ............................................. 6
- Agriculture and Natural Resources 290 ......................... 3
- Writing Elective ............................................................. 3
- Humanities Elective ..................................................... 3
- Social Science Elective .................................................. 3
- Environmental and Soil Sciences 210 ............................ 4
- Speech 210 or 240 ....................................................... 3
- Economics 201 ............................................................. 4
- History Elective ............................................................ 3

**Junior**
- OHLD 330 ..................................................................... 3
- Select IPS 334 for agronomy track or select OHLD 370 for horticulture track ............................................. 3
- Select 2 from OHLD 370, 390, 391, or IPS 340 for agronomy track or select 2 from OHLD 350, 360, 390, 391, IPS 334 or 340 for horticulture track ............................................. 6
- PLS 492 ....................................................................... 3
- Environmental and Soil Sciences 334 ......................... 3
- Select Environmental and Soil Sciences 462 for agronomy track or select Botany 330 for horticulture track ............................................. 3
- Entomology and Plant Pathology 313, 321, or 410 .......................................................... 3
- Technical Elective ........................................................ 3-4
- History Elective ............................................................ 3

**Senior**
- PSLS 471 ..................................................................... 3
- PSLS 490 ..................................................................... 1
- Botany 321 ................................................................. 4
- Chemistry 390 ............................................................. 4
- Technical Elective ........................................................ 3-4
- Select IPS 431, 434, 435, and 453 for agronomy track or select 4 from OHLD 410, 430, 451, IPS 431, 433, 434, 440 or 453 for horticulture track ............................................. 12
- Humanities Elective ..................................................... 3
LANDSCAPE DESIGN

CONCENTRATION

Landscape designers create aesthetic concepts and practical plans 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, 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 have access to a large segment of the ornamental horticulture commodity areas of employment.

Hours Credit

**Freshman**
- Botany 110-120 ......................................................... 8
- Chemistry 100 or 120 ................................................ 4
- English 101-102 ......................................................... 6
- Math 119 and (123 or 125) ........................................ 6
- OHLD 110 .................................................................. 3
- Social Science Elective .......................................... 3

**Sophomore**
- OHLD 220, 280 .......................................................... 6
- Agriculture and Natural Resources 290 ..................... 3
- Natural Science Elective .............................................. 4
- Environmental/Technical Elective .............................. 3
- Environmental and Soil Sciences 210 ....................... 4
- Speech 210 or 240 .................................................... 3
- Humanities Elective ................................................. 3
- Unrestricted Electives ............................................... 6

**Junior**
- OHLD 350, 380 .......................................................... 6
- Select 2 from OHLD 225, 230, 231, 330, 370, IPS 334, or 340 ................................................ 5-6
- Select 1 from OHLD 390 or 391 .................................. 3
- Environmental/Technical Elective .............................. 3
- Writing Elective ......................................................... 3
- History Elective ......................................................... 3
- Social Science Elective .............................................. 3
- Unrestricted Elective ............................................... 4-5

**Senior**
- OHLD 460, 480, 485 .................................................. 9
- Select 2 from OHLD 410, 427, 430, 434, 446, 450, 494, IPS 440 or PSLS 493 .................................. 6
- PSLS 490, 492 ............................................................ 4
- Botany 330 or OHLD 421 ........................................... 3
- Environmental/Technical Elective .............................. 3
- History Elective ......................................................... 3
- Humanities Elective ................................................. 3

Total: 124 hours
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.

Directed technical electives allow the student to concentrate in an area of their interest while encouraging the development of good people skills. Students are required internship training in the area of their interest.

**Hours Credit**

**Freshman**
- Botany 110-120 ......................................................... 8
- Chemistry 100 or 120 ................................................ 4
- English 101-102 ....................................................... 6
- Math 119 and (123 or 125) ........................................ 6
- OHLD 110 .................................................................. 3
  - Natural Science Elective ........................................... 4

**Sophomore**
- Select 2 from OHLD 220, 225, 230, 231 or 280 .... 5-6
- Agriculture and Natural Resources 290 ................. 3
- Select 1 from Educational Psychology 210; Public Relations 270; Recreational and Tourism Management 201; Forestry Wildlife and Fisheries 211, or 250 ........................................ 3
  - Social Science Elective ......................................... 3-4
- Environmental and Soil Sciences 210 ........ .......... 4
- Speech 210 or 240 .................................................... 3
  - Humanities Elective ................................................ 3
  - History Elective ....................................................... 3

**Junior**
- Select 4 from OHLD 330, 350, 360, 370, 380, 390, 391, IPS 334 or 340 .................. 11-12
- OHLD 326 .................................................................. 3
- Select 1 from Philosophy 342, Agriculture and Extension Education 346, or Journalism 310 .... 3
- Select 2 from Botany 309, 330, Entomology and Plant Pathology 313, 321, 410 ............................ 6
- Select 2 from Technical Electives ............................. 6

**Senior**
- Select 4 from OHLD 410, 421, 427, 429, 430,434, 436, 446, 450, 451, 460, 480,485, 494, IPS 431, 433, 434, 435, 440, or PSLS 493 .... 8-12
- PSLS 490 ................................................................. 1
- PSLS 492 ................................................................. 3
  - Social Science Elective .......................................... 3
  - History Elective ....................................................... 3
- Writing Elective ....................................................... 3
- Select 2 from Technical Electives ............................. 6

Total: 124 hours

- Lists of appropriate electives are available and should be selected in conference with academic advisor.

**TURFGRASS MANAGEMENT CONCENTRATION**

The Turfgrass 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. Careful selection of departmental courses and other electives in consultation with your academic adviser will prepare graduates for the career of their choice.

**Hours Credit**

**Freshman**
- Botany 110-120 ......................................................... 8
- Chemistry 100-110 or 120-130 .................................. 8
- English 101-102 ....................................................... 6
- Math 119 and (123 or 125) ........................................ 6
- OHLD 110 or IPS 230 ................................................ 3
  - Social Science Elective ........................................... 3
Sophomore
Select 1 from OHLD 220, 225, 230, 231, or 280 ... 2-3
Agriculture and Natural Resources 290 ..................... 3
Writing Elective .................................................. 3
1 Humanities Elective ........................................ 3
Social Science Elective ........................................... 4
Environmental and Soil Sciences 210 ................... 4
Speech 210 or 240 .................................................. 3
1 History Elective ........................................... 3
Unrestricted Elective ........................................ 3
Junior
IPS 340 ..................................................................... 3
OHLD 370 .................................................................. 3
IPS 334 ..................................................................... 3
Select 3 from OHLD 330, 350, 360, 390, or 391 .... 8-9
PSLS 492 .................................................................. 3
Select 2 from Technical Electives ............................. 6
1 History Elective ........................................... 3
Senior
Select 4 from OHLD 410, 421, 430, 450, 451, 460,
494, IPS 431, 433,434, 435, 453,
PSLS 471, 493 ............................................... 5-12
IPS 440 ..................................................................... 4
PSLS 490 .................................................................. 1
Select 2 from Technical Electives ............................. 6
Botany 321 ................................................................ 4
1 Humanities Elective ........................................ 3
Unrestricted Electives ........................................ 2-9

Total: 124 hours

Lists of appropriate electives are available and should be selected in conference with academic advisor.

ADDITIONAL ELECTIVES LIST:
BUSINESS MANAGEMENT
CONCENTRATION
Technical Electives:
Biosystems Engineering Tech. 202,
212, 452, 462
Environmental and Soil Sciences 324,
334, 462
Entomology and Plant Pathology 313,
321, 410
HORTICULTURE AND AGRONOMY
CONCENTRATION
Technical Electives: Agronomy Tract
Agricultural Economics Elective
Biosystems Engineering Tech. 212,
452, 462
Botany 310, 330
Environmental and Soil Sciences 324,
355, 434, 442, 444
Forestry, Wildlife, and Fisheries 250
Technical Electives: Horticulture Tract
Agricultural Economics Elective
Biosystems Engineering Technology
212, 452, 462
Botany 310, 412, 431, 451
Forestry, Wildlife, and Fisheries 250
LANDSCAPE DESIGN CONCENTRATION
Environmental/Technical Electives:
Architecture 111, 180, 211, 232, 421
Art 101, 103, 191, 295
Art Drawing 211, 212
Biology 250
Biosystems Engineering Technology
202, 212
Botany 305, 306, 330, 431
Entomology and Plant Pathology 306,
313, 321, 410
Environmental and Soil Sciences 324,
334
Forestry, Wildlife, and Fisheries 211,
Geology 201, 202
Geography 310, 439
Urban and Regional Planning 401, 402

PUBLIC HORTICULTURE
CONCENTRATION
Technical Electives:
Accounting 415
Art 481
Botany 431
Educational Psychology 210
Forestry 423
Interior Design 200
Philosophy 342
Environmental and Soil Sciences 413, 414, 415
Public Health 410
Public Relations 470
Recreation and Tourism Management 410, 430
Speech 440

PUBLIC HORTICULTURE AND LANDSCAPE
DESIGN CONCENTRATIONS
Natural Science Electives:
Chemistry 110, 130
Geography 131
Geology 101, 103

TURFGRASS MANAGEMENT
CONCENTRATION
Technical Electives:
Agricultural Economics elective (3)
Biosystems Engineering Tech. 202, 212, 452, 462
Environmental and Soil Sciences 310, 311, 315, 432
Entomology and Plant Pathology 313, 321, 410
Engineering 243 and Math 142