

Horticulture, Plant and Soil Sciences

College of Agriculture, Food and Environment

The Horticulture, Plant and Soil Sciences degree program is designed to provide students with the knowledge and skills needed for a career in the production and management of plants and soils for food, fiber, forage, oil, recreation, landscaping and the enhancement of the human environment. Graduates have the technical and scientific skills as well as the communication, computational, leadership, and interpersonal capabilities necessary to function effectively as professionals. Careers are as diverse as they are challenging. Each Option prepares graduates for specific professional opportunities.

Options

Students pursuing a Horticulture, Plant and Soil Sciences degree may choose from the following Options:

- Horticulture Enterprise Management
- Turfgrass Science
- Crops and Livestock
- Crop, Soil and Horticulture Science

Graduation Requirements

Students must complete a minimum of 120 semester credit hours with at least 45 credit hours from courses at the 300 level or above. A 2.0 grade-point standing (on a 4.0 scale) is necessary and remedial courses may **not** be counted toward the total hours required for the degree. In addition to the UK Core and college requirements, students must select an Option with the assistance of an advisor and fulfill the area's program requirements.

UK Core Requirements

See the *UK Core* section of the 2016-2017 *Undergraduate Bulletin* for the complete UK Core requirements. The courses listed below are (a) recommended by the college, or (b) required courses that also fulfill UK Core areas. Students should work closely with their advisor to complete the UK Core requirements.

I. Intellectual Inquiry in Arts and Creativity

Choose one course from approved list 3

II. Intellectual Inquiry in the Humanities

Choose one course from approved list 3

III. Intellectual Inquiry in the Social Sciences

Recommended:

CLD 102 The Dynamics of Rural Social Life 3

IV. Intellectual Inquiry in the Natural, Physical, and Mathematical Sciences

CHE 105 General College Chemistry I 4

CHE 111 Laboratory to Accompany General Chemistry I 1

V. Composition and Communication I

CIS/WRD 110 Composition and Communication I 3

VI. Composition and Communication II

CIS/WRD 111 Composition and Communication II 3

VII. Quantitative Foundations

MA 123 Elementary Calculus and Its Applications 4

VIII. Statistical Inferential Reasoning

STA 210 Making Sense of Uncertainty:

An Introduction to Statistical Reasoning 3

for the **Crop, Soil and Horticulture Science Option**, students take:

STA 296 Statistical Methods and Motivations 3

IX. Community, Culture and Citizenship in the USA

GEN 100 Issues in Agriculture, Food and Environment 3

X. Global Dynamics

Choose one course from approved list 3

UK Core hours **33**

Graduation Composition and Communication Requirement (GCCR)

PLS 490 Topics in Plant and Soil Science 3

Subtotal: Graduation Composition and Communication

hours (GCCR) **3**

Premajor Requirements

CHE 105 General College Chemistry I 4

CHE 107 General College Chemistry II 3

CHE 111 Laboratory to Accompany General Chemistry I 1

CHE 113 Laboratory to Accompany General Chemistry II 2

MA 123 Elementary Calculus and Its Applications 4

Subtotal: Premajor hours **14**

Students choose one of four Options in the Horticulture, Plant and Soil Science program – Horticulture Enterprise Management; Turfgrass Science; Crops and Livestock; and Crop, Soil and Horticulture Science. All students take the Major Requirements listed below. Then, depending on their Option, take specific courses and 21 hours of Specialty Support courses, some of which may be specified. Option requirements follow Major Requirements.

Major Requirements

PLS 104 Plants, Soils, and People: A Science Perspective 3

PLS 210 The Life Processes of Plants 3

or

*BIO 148 Introductory Biology I

and

*BIO 152 Principles of Biology II 6

PLS 220 Introduction to Plant Identification 3

PLS 366 Fundamentals of Soil Science 4

PLS 386 Plant Production Systems 4

PLS 395 Special Problems in Plant and Soil Science

or

PLS 399 Experiential Learning in Plant and Soil Science 3

PLS 404 Integrated Weed Management 4

PLS 470G Soil Nutrient Management 3

PLS 490 Topics in Plant and Soil Science 3

**Students in the Crop, Soil and Horticulture Science Option take BIO 148/152.*

Subtotal: Major hours **30-33**

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University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at www.sacscoc.org for questions about the accreditation of University of Kentucky.

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Options

Horticulture Enterprise Management Option

PLS 100 An Introduction to Horticulture Professions	1
PLS 440 Plant Propagation	3
PLS 525 Nursery and Floriculture Crop Production	4
PPA 400G Principles of Plant Pathology	3
Select 12 credit hours from the following courses:	
PLS 320 Woody Horticultural Plants	4
PLS 330 Herbaceous Horticultural Plants I	2
PLS 332 Herbaceous Horticultural Plants II	2
PLS 451 Landscape Management and Arboriculture	3
PLS 515 Turf Management	3
PLS 520 Fruit and Vegetable Production	4
Other PLS courses with consent of advisor	4
Subtotal: Option hours	23

Specialty Support Requirements

Select 21 hours of courses with consent of advisor	21
Subtotal: Specialty Support	21

Electives

Elective courses should be selected by the student to lead to the minimum total of 120 hours required for graduation.

Subtotal: Electives	minimum of 1
TOTAL HOURS:	120

Turfgrass Science Option

PLS 514 Grass Taxonomy and Identification	3
PLS 515 Turf Management	3
PPA 400G Principles of Plant Pathology	3
Select additional 9 credit hours of PLS courses	9
Subtotal: Option hours	18

Specialty Support Requirements

ENT 320 Horticultural Entomology	3
CHE 226 Analytical Chemistry	
or	
CHE 236 Survey of Organic Chemistry	3
Select additional 15 credit hours of specialty support in consultation with academic advisor	15
Subtotal: Specialty Support	21

Electives

Elective courses should be selected by the student to lead to the minimum total of 120 hours required for graduation.

Subtotal: Electives	minimum of 1
TOTAL HOURS:	120

Crops and Livestock Option

PLS 510 Forage Management and Utilization	3
Select 15 credit hours of additional PLS courses	15
Subtotal: Option hours	18

Specialty Support Requirements

CHE 236 Survey of Organic Chemistry	3
Earn a minor in Animal Science	18

Minor in Animal Sciences

Prerequisites

Note that several classes in Group A and Group B have prerequisites beyond/other than ASC 101. These are indicated in parentheses following the courses below.

Students taking the minor are responsible for satisfying the prerequisites.

Minor Requirements

ASC 101 Domestic Animal Biology	3
ASC 102 Introduction to Livestock and Poultry Production	3
Additional Course Work	9

An additional 9 hours from the list that follows, with at least one course from Group A and one course from Group B.

Group A

ASC 300 Meat Science (ASC 101 and ASC 102)	4
ASC 325 Animal Physiology (BIO 152)	3
ASC 362 Animal Breeding and Genetics (ASC 101 and BIO 152)	4
ASC 364 Reproductive Physiology of Farm Animals (ASC 101 and BIO 152)	4
ASC 378 Animal Nutrition and Feeding (ASC 101 and CHE 230 or CHE 236) ...	4

Group B

ASC 340 Poultry Production (ASC 101 and ASC 102)	2
ASC 404G Sheep Science (ASC 300, ASC 362, ASC 364 and ASC 378)	4
ASC 406 Beef Cattle Science (ASC 300, ASC 362, ASC 364 and ASC 378)	4
ASC 408G Swine Production (ASC 101, ASC 102 and ASC 378)	3
ASC 410G Equine Science (ASC 101, ASC 320, ASC 362 and ASC 364)	3
ASC 420G Dairy Cattle Management (ASC 362, ASC 364 and ASC 378)	3

Total Hours Required	15
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Additional specialty support classes may be selected in consultation with your academic advisor for a total of 21 hours in specialty support.

Subtotal: Specialty Support	21
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Electives

Elective courses should be selected by the student to lead to the minimum total of 120 hours required for graduation.

Subtotal: Electives	minimum of 1
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TOTAL HOURS:	120
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Crop, Soil and Horticulture Science Option

Select 18 hours of PLS courses with consent of advisor	18
Subtotal: Option hours	18

Specialty Support Requirements

CHE 226 Analytical Chemistry	
or	
CHE 230 Organic Chemistry I	
or	
CHE 236 Survey of Organic Chemistry	3

STA 296 Statistical Methods and Motivations	3
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An additional **15** credit hours of other science courses from the following list or other science courses selected with consent of advisor for a total of **21** hours:

BIO 304 Principles of Genetics	4
BIO 308 General Microbiology	3
BIO 315 Introduction to Cell Biology	4
BIO 430G Plant Physiology	4
EES 220 Principles of Physical Geology	4
PHY 211 General Physics	5
PHY 213 General Physics	5
CHE 231 Organic Chemistry Laboratory I	1
CHE 232 Organic Chemistry II	3
CHE 233 Organic Chemistry Laboratory II	1
Subtotal: Specialty Support	21

Electives

Elective courses should be selected by the student to lead to the minimum total of 120 hours required for graduation.

Subtotal: Electives	minimum of 1
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TOTAL HOURS:	120
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