



# DISCOVER

University of Kentucky • College of Agriculture

## Entomology

**UK**

Bachelor of Science in Agriculture

Effective: July 1, 1994

**Individualized Program**

Entomology deals with the biology, ecology, evolution, genetics, physiology, economic importance, and management of insects and their relatives.

Entomologists are concerned with the role of insects in nature and their impact on crops, livestock, and human health.

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Entomology is a separate field of biology because of the important impact that insects have on humankind. Today, entomologists are investigating hormones that prevent insects from maturing, chemical attractants that lure insects into traps, pest-resistant plants, genetically-engineered pathogens which kill pest insects, and other new and exciting technologies. Many entomologists study the biology and ecology of insect pests and their natural enemies, providing the information needed to solve insect-related problems for agriculture and society.

As an Entomology major you will be advised by faculty members who will give you personal attention. The curriculum is tailored to your interests and career goals. Courses range from introductory entomology to more advanced topics such as forest entomology, medical and veterinary entomology, field crop entomology, and insect ecology and behavior. You will be encouraged to take courses in biology, plant sciences, and other areas. Undergraduates may gain laboratory and field experience through summer employment opportunities.

### Career Opportunities

Entomology graduates are among the most employable in the agricultural and biological sciences. Recent graduates have found rewarding careers in agricultural, urban, or industrial pest management, as researchers in private industry or universities, with federal agencies such as the

U.S. Department of Agriculture and the Environmental Protection Agency, and as county Extension agents. Others have pursued advanced degrees in entomology, medicine, and other biological sciences.

### Graduation Requirements

To earn the Bachelor of Science degree in Agriculture, you must complete a minimum of 128 semester hours with at least 48 hours from courses at the 300 level and above. A 2.0 grade point standing (on a 4.0 scale) is necessary and remedial courses cannot be counted toward the total hours required for graduation. You must satisfy University Studies Program, college, pre-major, major, and specialty support requirements.

### University Studies Program (USP) Requirements: 36-48 hours

Courses specifically listed in the University Studies Program outline also satisfy college, pre-major, or specialty support requirements.

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#### I. Basic Skills

##### A. Mathematics

*Completed by one of the following*

1. A score  $\geq 26$  on mathematics section of ACT **or**
2. A bypass examination **or**
3. MA 109 College Algebra **or**
4. Any calculus course (satisfies section II-A requirement)

##### B. Foreign Language

*Completed by one of the following:*

1. Two years of the same foreign language in high school **or**
2. Six hours from an approved USP sequence

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#### II. Inference and Communicative Skills

##### A. Inference

*Completed by any calculus course*

## B. University Writing

Completed by one of the following

1. ENG 101/102— Writing I and II or
2. Students who score  $\geq 29$  on English section of ACT and who pass an English proficiency examination may satisfy the University Writing requirement by passing ENG 105 Writing: An Accelerated Course.

## C. Communication Requirement

Three hours from an approved list\*

\* Students who begin their first academic year in the College of Agriculture will satisfy this requirement with GEN 100 and GEN 200 (under College Requirements).

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## III. Disciplinary Requirements

### A. Natural Sciences

- CHE 105— General College Chemistry I
- CHE 107— General College Chemistry II
- CHE 115— General Chemistry Laboratory

### B. Social Sciences

- GEN 102— Dynamics of Rural Social Life\*\*
- Plus one other course from an approved sequence\*\*
- \*\* Suggested sequence. Alternate sequences may be selected.

### C. Humanities

Six hours from an approved sequence

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## IV. Cross-Disciplinary Requirements

- BIO 150— Principles of Biology I\*\*\*
- BIO 152— Principles of Biology II\*\*\*
- \*\*\* Satisfies Area IV when CHE 105, CHE 107, and CHE 115 are used to satisfy area III-A.

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## V. Cross-Cultural Requirement:

Three hours from the approved list.

## College

### Requirements: 6-9 hours

#### A. General Requirements: 6 hours

- GEN 100— Issues in Agriculture: The Development of Modern Agriculture\*
- GEN 200— Issues in Agriculture: Contemporary Problems in Agriculture\*

\* If you transfer into agriculture after completing your first academic year in another UK major or at another university, you are required to take only GEN 200.

#### B. Business or Technical Writing: 3 hours

- ENG 203— Writing for Business and Industry or
- ENG 204— Technical Writing

#### C. Complete a proposed plan of study for third-fourth years

## Pre-Major

### Requirements: 20 - 25 hours

Select one of the following for math:

- MA 109/123— College Algebra/  
Elementary Calculus ..... 6 or
- MA 123/162— Elementary Calculus/Finite Math ..... 6 or
- MA 123/132— Elementary Calculus/Calculus for  
the Life Sciences ..... 6 or
- MA 113— Calculus I ..... 4

Plus the following:

- BIO 150/151— Principles of Biology I and Laboratory I ..... 5
- and
- BIO 152/153— Principles of Biology II and Laboratory II ..... 5
- Plus the following:
- CHE 105/107— General College Chemistry I and II ..... 6
- CHE 115— General Chemistry Laboratory ..... 3

## Major Requirements: 24 hours

Required:

- ENT 300— General Entomology ..... 3
- ENT 564— Insect Taxonomy ..... 4

Select remaining credits from:\*

- ENT 310— Insect Pests of Field Crops ..... 3
- ENT 320— Horticultural Entomology ..... 3
- ENT 340— Livestock Entomology ..... 2
- ENT 360— Genetics ..... 3
- ENT 395— Independent Work ..... 2-3
- ENT 402— Forest Entomology ..... 3
- ENT 530— Integrated Pest Management ..... 3
- ENT 561— Medical Entomology ..... 4
- ENT 562— External Morphology of Insects ..... 4
- ENT 563— Parasitology ..... 4
- ENT 568— Insect Behavior ..... 3
- BIO 570— Invertebrate Zoology ..... 4

\* Must include at least one of the following courses: ENT 530, ENT 562, or ENT 568.

## Specialty Support: 21 hours

Courses may be selected with your advisor's consent from other departments within the College of Agriculture and from other related areas such as biology, chemistry, and statistics. Your curriculum will be tailored to your interests and career goals.

## Electives

Electives may be selected to complete the 128 semester hours required for graduation.

## Suggested Schedule

If you enroll at UK during your first semester, you may follow this suggested schedule. **Use this schedule only as a guide**, since schedules will vary if: you have previously attended another college, you have earned credit by examination or via a high school advanced placement course, or you are not starting in the fall semester. Also, some upper division courses in this major are offered on an

every-other-year basis. Your faculty advisor will assist you in course selection and career planning.

This plan is for students who complete two years of the same foreign language in high school. All other students must complete six hours of foreign language from an approved sequence at the University.

## First Year

### Fall Semester (15 hours)

ENG 101— Writing I .....	3
CHE 105— General College Chemistry I .....	3
MA 113— Calculus .....	4
BIO 150— Principles of Biology I.....	3
BIO 151— Principles of Biology Laboratory I .....	2

### Spring Semester (17 hours)

ENG 102— Writing II .....	3
GEN 100— Development of Modern Agriculture .....	3
CHE 107— General College Chemistry II .....	3
CHE 115— General Chemistry Laboratory .....	3
BIO 152— Principles of Biology II .....	3
BIO 153— Principles of Biology Laboratory II .....	2

## Second Year

### Fall Semester (15 hours)

GEN 102— Dynamics of Rural Social Life .....	3
(USP Social Science I)	
ENT 300— General Entomology .....	3
Cross-cultural .....	3
Humanities I .....	3
Specialty Support .....	3

### Spring Semester (18 hours)

GEN 200— Contemporary Problems in Agriculture .....	3
ENG 204— Technical Writing .....	3
ENT 310— Insect Pests of Field Crops .....	3
Social Science II .....	3
Humanities II .....	3
Specialty Support .....	3

## Third-Fourth Year Schedule

(when fall semester of third year falls on an even year)

### Third Year

#### Fall Semester — Even Year (17 hours)

ENT 564— Insect Taxonomy .....	4
ENT 320— Horticultural Entomology .....	3 or
ENT 360— Genetics .....	3 or
ENT 402— Forest Entomology .....	3
Specialty Support .....	7
Elective .....	3

#### Spring Semester — Odd Year (15-16 hours)

ENT 340— Livestock Entomology .....	2 or
ENT 568— Insect Behavior .....	3
Specialty Support .....	7
Elective .....	6

## Fourth Year

### Fall Semester — Odd Year (15-16 hours)

ENT 395— Independent Work (or capstone) .....	3
ENT 402— Forest Entomology .....	3 or
ENT 561— Medical Entomology .....	4
Specialty Support .....	3
Elective .....	6

### Spring Semester — Even Year (16 hours)

ENT 530— Integrated Pest Management .....	3
Specialty Support .....	4
Elective .....	9

## Third-Fourth Year Schedule

(when third year fall semester falls on an odd year)

### Third Year

#### Fall Semester — Odd Year (15-16 hours)

ENT 320— Horticultural Entomology .....	3 or
ENT 402— Forest Entomology .....	3 or
ENT 561— Medical Entomology .....	4
Specialty Support .....	6
Elective .....	6

#### Spring Semester — Even Year (16 hours)

ENT 530— Integrated Pest Management .....	3
Specialty Support .....	4
Elective .....	9

### Fourth Year

#### Fall Semester — Even Year (17 hours)

ENT 395— Independent Work (or capstone) .....	3
ENT 564— Insect Taxonomy .....	4
ENT 320— Horticultural Entomology .....	3 or
ENT 360— Genetics .....	3 or
ENT 402— Forest Entomology .....	3
Specialty Support .....	4
Elective .....	3

#### Spring Semester — Odd Year (15-16 hours)

ENT 340— Livestock Entomology .....	2 or
ENT 568— Insect Behavior .....	3
Specialty Support .....	7
Elective .....	6

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## For more information contact:

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