

# PREPROFESSIONAL

This biological science includes the study of insects, mites, ticks, spiders, and nematodes. These creatures can have both helpful and harmful effects on our food, environment, and health. Entomology and Nematology students study ecology, medically significant arthropods, social insects, insect management, physiology, behavior, evolution, natural ecosystem cycles, and systematics.

## About this Program

- **College:** Agricultural and Life Sciences (<http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/>)
- **Degree:** Bachelor of Science
- **Specializations:** Biological Science of Insects ([http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ENY\\_BS/ENY\\_BS02/](http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ENY_BS/ENY_BS02/)) | Preprofessional (p. 1) | Urban Pest Management ([http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ENY\\_BS/ENY\\_BS07/](http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ENY_BS/ENY_BS07/))
- **Credits for Degree:** 120

To graduate with this major, students must complete all university, college, and major requirements.

## Department Information

The Entomology and Nematology Department prepares students for exciting careers in a variety of fields. Entomology and Nematology majors can enter medical, dental, or veterinary school; progress to graduate study in any of several biological sciences such as ecology, nematology, entomology, horticulture, or zoology; or move directly to a variety of careers in fields such as pest management, ecotourism, or biosecurity. Website (<http://entomology.ifas.ufl.edu/>)

## CONTACT

Email ([baldwinr@ufl.edu](mailto:baldwinr@ufl.edu)) | 352.273.3923

P.O. Box 110620  
1881 Natural Area Drive, Bldg. 970  
STEINMETZ HALL  
GAINESVILLE FL 32611-0620  
Map (<http://campusmap.ufl.edu/#/index/0970>)

## Curriculum

- Combination Degrees
- Entomology and Nematology
- Entomology and Nematology Minor
- Landscape Pest Management Certificate
- Medical Entomology Certificate
- Pest Control Technology Certificate
- Urban Pest Management Certificate

The Department of Entomology and Nematology offers the major. Faculty within the department cover areas in systematics, ecology, medically significant arthropods, social insects, insect management, physiology, behavior, evolution and natural ecosystem cycles. The department has a long tradition of sending students to medical, veterinary and dental school. Graduate school prospects are also high and employment options using entomology are versatile.

## Preprofessional

This option provides preparation for programs in medicine, dentistry, optometry, veterinary, chiropractic, osteopathy and podiatry. Students should refer to the preprofessional information in the college's admission section and they should contact the Office of Health and Legal Professions Advising in the Academic Advising Center, 100 Farrior Hall.

Except with undergraduate coordinator permission, students are expected to complete the following courses on campus; other ENY courses can be taken online:

Code	Title	Credits
ENY 3005	Principles of Entomology	2
ENY 3005L	Principles of Entomology Laboratory	1
ENY 4161	Insect Classification	3
ENY 4660	Medical and Veterinary Entomology	2
ENY 4660L	Medical and Veterinary Entomology Laboratory	1

Minimum grades of C are required for all core courses. Students must maintain a 2.0 cumulative GPA for specialization electives with no individual course grade less than C-.

## Critical Tracking

Critical Tracking records each student's progress in courses that are required for progress toward each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (<http://www.flvc.org/cpp/displayRecord.jsp?cip=260702&track=01>) may be used for transfer students.

## Semester 1

- Complete 2 of 5 critical-tracking courses, excluding labs: BSC 2010/BSC 2010L or BOT 2010C, BSC 2011/BSC 2011L, CHM 2045/CHM 2045L, CHM 2046/CHM 2046L, MAC 2311
- 2.5 GPA on math and science courses
- 2.0 UF GPA required

## Semester 2

- Complete 1 additional critical-tracking course, excluding labs
- 2.5 GPA on math and science courses
- 2.0 UF GPA required

## Semester 3

- Complete 1 additional critical-tracking course, excluding labs
- 2.5 GPA on math and science courses
- 2.0 UF GPA required

## Semester 4

- Complete 1 additional critical-tracking course, excluding labs
- 2.5 GPA on math and science courses
- 2.0 UF GPA required

## Semester 5

- Complete all critical-tracking courses, including labs
- 2.5 GPA on math and science courses

- 2.0 UF GPA required
- 2.0 upper division GPA required

## Semester 6

- Complete 2 major elective courses, excluding labs: ALS 4161, ALS 4162, ALS 4163, ENY 4660, ENY 4573, ENY 4210, ENY 3510C, ENY 3225C, IPM 3022, PMA 4570C
- 2.0 UF GPA required
- 2.0 upper division GPA required

## Semester 7

- Complete 1 additional major elective course, excluding labs
- 2.0 UF GPA required
- 2.0 upper division GPA required

## Semester 8

- Complete a minimum of 3 credits of ENY 4911 or ENY 4230
- 2.0 UF GPA required
- 2.0 upper division GPA required

### Model Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

*This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.*

Course	Title	Credits
<b>Semester One</b>		
Quest 1 (Gen Ed Humanities)		3
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry 1 Laboratory ( <b>Critical Tracking</b> ; State Core Gen Ed Physical Sciences)	4
Select one:		3
ENC 1101	Expository and Argumentative Writing	
ENC 2210	Technical Writing	
ENC 3254	Professional Writing in the Discipline (State Core Gen Ed Composition ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> ); Writing Requirement)	
MAC 2311	Analytic Geometry and Calculus 1 ( <b>Critical Tracking</b> ; State Core Gen Ed Mathematics)	4
<b>Credits</b>		<b>14</b>
<b>Semester Two</b>		
Select one:		3-4
AEB 2014	Economic Issues, Food and You	
ECO 2023	Principles of Microeconomics	
AEB 3103	Principles of Food and Resource Economics (Gen Ed Social and Behavioral Sciences)	
AEC 3030C	Effective Oral Communication	3

CHM 2046 & 2046L	General Chemistry 2 and General Chemistry 2 Laboratory ( <b>Critical Tracking</b> ; State Core Gen Ed Physical Sciences)	4
STA 2023	Introduction to Statistics 1 (Gen Ed Mathematics)	3
State Core Gen Ed Humanities ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )		3
<b>Credits</b>		<b>16-17</b>

<b>Semester Three</b>		
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences	3
Select one:		3-4
BSC 2010 & 2010L	Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 ( <b>Critical Tracking</b> )	
BOT 2010C	Introductory Botany ( <b>Critical Tracking</b> ; Gen Ed Biological Sciences)	
CHM 2210 or CHM 3217	Organic Chemistry 1 or Organic Chemistry/Biochemistry 1	3-4
State Core Gen Ed Social and Behavioral Sciences ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )		3
Gen Ed Composition; Writing Requirement		3
<b>Credits</b>		<b>15-17</b>

<b>Semester Four</b>		
Quest 2 (Gen Ed International or Diversity)		3
BSC 2011 & 2011L	Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 ( <b>Critical Tracking</b> ; Gen Ed Biological Sciences)	4
CHM 2211 or CHM 3218	Organic Chemistry 2 or Organic Chemistry/Biochemistry 2	3-4
CHM 2211L	Organic Chemistry Laboratory	2
Elective		2
<b>Credits</b>		<b>14-15</b>

<b>Semester Five</b>		
AGR 3303	Genetics	3
ENY 3005 & 3005L	Principles of Entomology and Principles of Entomology Laboratory (Gen Ed Biological Sciences; must be taken on campus)	3
PHY 2053 & 2053L	Physics 1 and Laboratory for Physics 1	5
Approved electives		4
<b>Credits</b>		<b>15</b>

<b>Semester Six</b>		
Select one:		3-4
ENY 4455C	Social Insects	
ENY 4573	Beekeeping I ( <b>Critical Tracking</b> )	
ZOO 4205C	Invertebrate Biodiversity	
MCB 3020 & 3020L	Basic Biology of Microorganisms and Laboratory for Basic Biology of Microorganisms	4
PHY 2054 & 2054L	Physics 2 and Laboratory for Physics 2	5
Approved elective ( <b>Critical Tracking</b> )		3
<b>Credits</b>		<b>15-16</b>

<b>Semester Seven</b>		
Select one:		4
BCH 3025	Fundamentals of Biochemistry	

BCH 4024	Introduction to Biochemistry and Molecular Biology <sup>1</sup>	
ENY 4161	Insect Classification (Gen Ed Biological Sciences; must be taken on campus)	3
ENY 4660 & 4660L	Medical and Veterinary Entomology and Medical and Veterinary Entomology Laboratory ( <b>Critical Tracking</b> ; must be taken on campus)	3
Approved electives ( <b>Critical Tracking</b> )		6
<b>Credits</b>		<b>16</b>
<b>Semester Eight</b>		
Select one:		3-4
ENY 4453	Behavioral Ecology and Systematics	
PCB 4043C	General Ecology	
ALS 3153	Agricultural Ecology	
ZOO 4307C	Vertebrate Biodiversity	4
Approved electives ( <b>Critical Tracking</b> )		8
<b>Credits</b>		<b>15-16</b>
<b>Total Credits</b>		<b>120</b>

ENY 3005L	A	A	
ENY 4161	R, A		R, A

## Assessment Types

- Assignments
- Exams
- Course grades
- Research collection

<sup>1</sup> Not required if CHM 3217/CHM 3218 was taken.

### Academic Learning Compact

The entomology and nematology curriculum develops an excellent knowledge base and an understanding of concepts and fundamental practices. Through formal courses, laboratory experimentation and individual research experience, students will learn how the scientific method is applied to the biological world at the whole organism and population levels. Students will learn to evaluate hypotheses, to acquire and interpret experimental data, and to communicate results effectively in appropriate styles. Special focus will be information on insect identification, morphology, behavior, physiology and ecology.

## Before Graduating Students Must

- Pass the entomology and nematology competency exam, which will be tailored to individual specializations.
- Complete requirements for the baccalaureate degree, as determined by faculty.

## Students in the Major Will Learn to

### Student Learning Outcomes (SLOs)

#### Content

1. Identify insects and describe and explain insect morphology, physiology and behavior.

#### Critical Thinking

2. Acquire, analyze and synthesize entomological information.

#### Communication

3. Communicate proficiently in the sciences in oral and written forms.

## Curriculum Map

*I = Introduced; R = Reinforced; A = Assessed*

Courses	SLO 1	SLO 2	SLO 3
AEC 3030C			A
AEC 3033C			A
ENY 3005	I, A	I, A	I