ENTOMOLOGY AND NEMATOLOGY | PREPROFESSIONAL

Entomology and nematology are biological sciences dealing with insects, mites, ticks, spiders, and nematodes.

About this Program
- **College:** Agricultural and Life Sciences
- **Degree:** Bachelor of Science
- **Credits for Degree:** 120
- **Specializations:** Basic Science | Biosecurity | Ecotourism | Plant Protection | Preprofessional | Urban Pest Management

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

Critical Tracking records each student's progress in courses that are required for entry to 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 may be used for transfer students.

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

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

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

**Semester Five**
- Complete all critical-tracking courses, including labs
  - 2.5 GPA on math and science courses
  - 2.0 UF GPA required

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
--- | --- | ---
CHM 2045 & 2045L | General Chemistry 1 and General Chemistry 1 Laboratory **(Critical Tracking; State Core Gen Ed Physical Sciences)** | 4
Select one:
ENC 1101 | Expository and Argumentative Writing | 3
ENC 2210 | Technical Writing | 3
ENC 3254 | Professional Writing in the Discipline **(State Core Gen Ed Composition; Writing Requirement)** | 3
IUF 1000 | What is the Good Life **(Gen Ed Humanities)** | 3
MAC 2311 | Analytic Geometry and Calculus 1 **(Critical Tracking; State Core Gen Ed Mathematics)** | 4

**Semester Two**
Select one:
- AEB 2014 | Economic Issues, Food and You | 3
- ECO 2023 | Principles of Microeconomics | 3
- AEB 3103 | Principles of Food and Resource Economics **(Gen Ed Social and Behavioral Sciences)** | 3
- AEC 3030C | Effective Oral Communication | 3
- CHM 2046 & 2046L | General Chemistry 2 and General Chemistry 2 Laboratory **(Critical Tracking; State Core Gen Ed Physical Sciences)** | 4
- STA 2023 | Introduction to Statistics 1 **(Gen Ed Mathematics)** | 3

State Core Gen Ed Humanities | 3

**Semester Three**
Select one:
- AEC 3033C | Research and Business Writing in Agricultural and Life Sciences | 3
- BSC 2010 & 2010L | Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 **(Critical Tracking)** | 3
- BOT 2010C | Introductory Botany **(Critical Tracking; Gen Ed Biological Sciences)** | 3
- CHM 2210 or CHM 3217 | Organic Chemistry 1 or Organic Chemistry/Biochemistry 1 | 3
- Gen Ed Composition; Writing Requirement | 3
- State Core Gen Ed Social and Behavioral Sciences | 3

**Semester Four**
- BSC 2011 & 2011L | Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 **(Critical Tracking; Gen Ed Biological Sciences)** | 4
- CHM 2211 or CHM 3218 | Organic Chemistry 2 or Organic Chemistry/Biochemistry 2 | 3
- CHM 2211L | Organic Chemistry Laboratory | 2
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**

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<tr>
<th>Courses</th>
<th>SLO 1</th>
<th>SLO 2</th>
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**Assessment Types**

- Assignments
- Exams
- Course grades
- Research collection

1 Not required if CHM 3217/CHM 3218 was taken.

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.