The botany curriculum provides a broad background in the biology of plants, from the molecular to the organismic level. Students who major in botany will take courses in anatomy, ecology, genetics, physiology, taxonomy and molecular biology of plants and biochemistry.

**About this Program**
- **College:** Agricultural and Life Sciences
- **Degree:** Bachelor of Science
- **Credits for Degree:** 120
- **Specializations:** General Botany | Botanical Research
- **Additional Information**
- **Related Botany Programs**

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 1**
- Complete 1 of 5 critical-tracking courses, including lab: BSC 2010/2010L or BOT 2010C, BSC 2011/2011L or BOT 2011C, CHM 2045/2045L, CHM 2046/2046L, MAC 2311
- 2.0 UF GPA required

**Semester 2**
- Complete 1 additional critical-tracking course, including labs
- 2.0 UF GPA required

**Semester 3**
- Complete 1 additional critical-tracking course, including labs, with a 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

**Semester 4**
- Complete 1 additional critical-tracking course, including labs, with a 2.5 GPA required for all critical-tracking courses
- 2.0 UF GPA required

**Semester 5**
- Complete all 5 critical-tracking courses, including labs, with a 2.5 GPA required for all critical-tracking 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHM 2045 &amp; 2045L</td>
<td>General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; State Core Gen Ed Biological and Physical Sciences)</td>
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<td>IUF 1000</td>
<td>What is the Good Life (Gen Ed Humanities)</td>
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<tr>
<td>MAC 2311</td>
<td>Analytic Geometry and Calculus 1 (Critical Tracking; State Core Gen Ed Mathematics)</td>
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<tr>
<td>State Core Gen Ed Composition; Writing Requirement</td>
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<tr>
<td>BSC 1920</td>
<td>First Year Introduction: Biology at UF (recommended elective)</td>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>AEC 3033C</td>
<td>Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)</td>
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<tr>
<td>BSC 2010 &amp; 2010L</td>
<td>Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Critical Tracking; Gen Ed Biological Sciences)</td>
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<tr>
<td>BOT 2010C</td>
<td>Introductory Botany (Critical Tracking; Gen Ed Biological Sciences)</td>
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<tr>
<td>CHM 2046 &amp; 2046L</td>
<td>General Chemistry 2 and General Chemistry 2 Laboratory (Critical Tracking; Gen Ed Physical Sciences)</td>
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<tbody>
<tr>
<td>STA 2023</td>
<td>Introduction to Statistics 1 (Gen Ed Mathematics)</td>
</tr>
<tr>
<td>COP 2800</td>
<td>Computer Programming Using JAVA (or equivalent)</td>
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Students are expected to complete the writing requirement while in the process of taking the courses below. Students are also expected to complete the general education international (GE-N) and diversity (GE-D) requirements concurrently with another general education requirement (typically, GE-C, H or S).
The botany major is offered by both the College of Liberal Arts and Sciences and the College of Agricultural and Life Sciences. This major provides a foundation in the life sciences with emphasis on plant systems. Students will learn the diversity of life, the structure of organisms and ecosystems and how they function (i.e., the acquisition, flow, organization and uses of information, energy and nutrients in living systems). Students will learn the scientific method and how it facilitates the discovery of new knowledge in botany and biology, including how to critically evaluate hypotheses and conclusions.

**Before Graduating Students Must**

- Achieve acceptable performance in all required botany courses.
- Complete requirements for the baccalaureate degree, as determined by faculty.

**Students in the Major Will Learn to**

**Student Learning Outcomes (SLOs)**

**Content**

1. Identify, describe and explain the basic terminology, concepts, methodologies and theories used within the biological sciences.

**Critical Thinking**

2. Analyze biological information and develop reasoned solutions to problems using the processes and applications of scientific inquiry.

3. Discriminate ethical behavior from unethical behavior in scientific research.

**Communication**

4. Communicate knowledge, ideas and reasoning clearly and effectively in written or oral forms appropriate to the biological sciences.

**Curriculum Map**

- **Courses**
- **SLO 1**
- **SLO 2**
- **SLO 3**
- **SLO 4**

<table>
<thead>
<tr>
<th>Courses</th>
<th>SLO 1</th>
<th>SLO 2</th>
<th>SLO 3</th>
<th>SLO 4</th>
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<tr>
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<td>BSC 2010</td>
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<tr>
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<tr>
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<td>R/A</td>
<td>R/A</td>
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**Assessment Types**

- Major field test for biology
- Bioethics quiz
- Scientific paper

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<thead>
<tr>
<th>COP 3275</th>
<th>Computer Programming Using C (or equivalent; Gen Ed Mathematics)</th>
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<tbody>
<tr>
<td>BSC 2891</td>
<td>Python Programming for Biology</td>
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<tr>
<td>PCB 4043C</td>
<td>General Ecology</td>
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</tr>
<tr>
<td>PCB 3601C</td>
<td>Plant Ecology</td>
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</tr>
<tr>
<td>BOT 3151C</td>
<td>Local Flora of North Florida</td>
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<tr>
<td>BSC 3307C</td>
<td>Climate Change Biology</td>
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<tr>
<td>PCB 4674</td>
<td>Evolution</td>
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<tr>
<td>PHY 2054 &amp; 2054L</td>
<td>Physics 2</td>
<td>5</td>
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<tr>
<td>Gen Ed Humanities</td>
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<tr>
<td>BOT 2710C</td>
<td>Practical Plant Taxonomy</td>
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<td>Select one:</td>
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<tr>
<td>BOT 4935/5225C</td>
<td>Special Topics (Plant Anatomy)</td>
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<tr>
<td>PCB 3023</td>
<td>Essential Cell Biology</td>
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<td>BCH 4024</td>
<td>Introduction to Biochemistry and Molecular Biology</td>
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<td>Electives</td>
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<tr>
<td>Foreign language</td>
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| Semester Seven | Credits | 16-17 |
| Select one:    |         |      |
| AEB 2014      | Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences) | |
| AEB 3103      | Principles of Food and Resource Economics (Gen Ed Social and Behavioral Sciences) | |
| ECO 2023      | Principles of Microeconomics (Gen Ed Social and Behavioral Sciences) | |
| AGR 3303      | Genetics | 3-4 |
| or PCB 3063   |         |      |
| BOT 4911      | Undergraduate Research in Botany and Entering Research in Biology | 4 |
| & BSC 3911    |         |      |
| Select one:   |         | 3-4  |
| PCB 4043C    | General Ecology |     |
| PCB 3601C    | Plant Ecology   |     |
| BOT 3151C    | Local Flora of North Florida | |
| BSC 3307C    | Climate Change Biology | |

| Semester Eight | Credits | 13-16 |
| BOT 3503 & 3503L | Physiology and Molecular Biology of Plants and Physiology and Molecular Biology of Plants Laboratory | 5 |
| BSC 4936      | Critical Analysis of Biological Research | 2 |
| Biodiversity breadth course | 3-4 |
| Electives    |         | 6    |

| Total Credits | 120 |

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1 Gen Ed Mathematics; if COP 2800 taken for computational requirement; or elective.