BOTANY | BOTANICAL RESEARCH

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 ecology, genetics, physiology, taxonomy, evolution, cells and tissues, molecular biology, and biodiversity of plants.

About this Program
• College: Liberal Arts and 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.

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/BSC 2010L or BOT 2010C, BSC 2011/BSC 2011L or BOT 2011C, CHM 2045/CHM 2045L, CHM 2046/CHM 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

For degree requirements outside of the major, refer to CLAS Degree Requirements: Structure of a CLAS Degree.

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).

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 2045 &amp; 2045L</td>
<td>General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; Gen Ed Physical Sciences)</td>
<td>4</td>
</tr>
<tr>
<td>IUF 1000</td>
<td>What is the Good Life (Gen Ed Humanities)</td>
<td>3</td>
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<tr>
<td>MAC 2311</td>
<td>Analytic Geometry and Calculus 1 (Critical Tracking; State Core Gen Ed Mathematics)</td>
<td>4</td>
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<tr>
<td>State Core Gen Ed Composition; Writing Requirement</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>BSC 1920</td>
<td>First Year Introduction: Biology at UF (recommended elective)</td>
<td>1</td>
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Semester Two
Select one:
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<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>
<td>3-4</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>
<tr>
<td>CHM 2046 &amp; 2046L</td>
<td>General Chemistry 2 and General Chemistry 2 Laboratory (Critical Tracking; Gen Ed Physical Sciences)</td>
<td>4</td>
</tr>
<tr>
<td>State Core Gen Ed Social and Behavioral Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Gen Ed Composition; Writing Requirement</td>
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<td>3</td>
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<tr>
<td>Elective</td>
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Semester Three
Select one:
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<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BSC 2011 &amp; 2011L</td>
<td>Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (Critical Tracking; Gen Ed Biological Sciences)</td>
<td>4</td>
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<tr>
<td>BOT 2011C</td>
<td>Plant Diversity (Critical Tracking; Gen Ed Biological Sciences)</td>
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<tr>
<td>CHM 2210</td>
<td>Organic Chemistry 1 (Gen Ed Physical Sciences)</td>
<td>3</td>
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<tr>
<td>State Core Gen Ed Humanities</td>
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<td>3</td>
</tr>
<tr>
<td>Gen Ed Social and Behavioral Sciences</td>
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Semester Four
Select one:
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2211 &amp; 2211L</td>
<td>Organic Chemistry 2 and Organic Chemistry Laboratory</td>
<td>5</td>
</tr>
<tr>
<td>PHY 2053 &amp; 2053L</td>
<td>Physics 1 and Laboratory for Physics 1 (Gen Ed Physical Sciences)</td>
<td>5</td>
</tr>
<tr>
<td>STA 2023</td>
<td>Introduction to Statistics 1 (Gen Ed Mathematics)</td>
<td>3</td>
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</table>
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

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

Courses  SLO 1  SLO 2  SLO 3  SLO 4

| BOT 2011C | R | R | I |
| BOT 2710 | R | R | R |
| BOT 3503 and R/A | R/A | R/A |
| BOT 3503L |
| BSC 2010 | I | I | I |
| BSC 2011 | I | I |
| PCB 3601C | R/A | R/A | R/A | R/A |
| PCB 4043C | R/A | R/A | R/A | R/A |

Semester Five
Select one: 3-4

PCB 4043C General Ecology
PCB 3601C Plant Ecology
BOT 3151C Local Flora of North Florida
BSC 3307C Climate Change Biology
PCB 4674 Evolution
PHY 2054 Physics 2
& 2054L

Elective or Gen Ed Mathematics 3

Credits 16

Semester Six
BOT 2710C Practical Plant Taxonomy 3
Select one: 3-4

BOT 4935/5225C Special Topics (Plant Anatomy)
PCB 3023 Essential Cell Biology
BCH 4024 Introduction to Biochemistry and Molecular Biology

Electives 4

Foreign language 5

Credits 15-16

Semester Seven
AGR 3303 Genetics 3-4
or PCB 3063
BOT 4911 Undergraduate Research in Botany
& BSC 3911 and Entering Research in Biology
Select one: 3-4

PCB 4043C General Ecology
PCB 3601C Plant Ecology
BOT 3151C Local Flora of North Florida
BSC 3307C Climate Change Biology

Foreign language 5

Credits 15-17

Semester Eight
BOT 3503 Physiology and Molecular Biology of Plants
& 3503L

BSC 4936 Critical Analysis of Biological Research 2
Biodiversity breadth course 3-4

Elective 3

Credits 13-14

Total Credits 120

1 Gen Ed Mathematics if COP 2800 or BSC 2891 taken for computational requirement.