BOTANY | CALS

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.

Small classes are taught by faculty who have a commitment to undergraduate education. Students participate in mentored research, assisting faculty with research projects on campus and abroad. The major prepares students for careers in industry and government agencies, for graduate and professional schools, and for teaching jobs in high schools.

The general botany specialization is for students who may not intend to pursue a graduate degree but are interested in a career in plant biology. This specialization provides some flexibility in tailoring the courses needed in order to pursue specific interests. Students are encouraged to consult with an advisor and botany faculty member when deciding on which courses to take.

The botanical research specialization is for students who intend to pursue a graduate degree and requires research with a faculty member. This specialization provides some flexibility in tailoring the courses needed in order to pursue specific interests. Students are encouraged to consult with an advisor and botany faculty member when deciding on which courses to take.

Coursework for the Major

Required coursework is dependent upon the specialization. Coursework for each specialization can be found below under Critical Tracking and Model Semester Plan.

Relevant Minors and/or Certificates

Students majoring in botany can minor in most other disciplines, and this is a good way to organize students’ electives around areas of interest. Note that botany majors cannot minor in biology, nor can biology majors minor in botany (the curricula for the botany and biology majors are too similar).

UFTeach Program

More Info

There is a severe shortage of qualified secondary science teachers in Florida and nationwide. Students interested in becoming part of this high-demand profession should see a botany advisor or the UFTeach advisor. UFTeach students complete the UFTeach minor in science teaching with their B.S. in botany and have the coursework and preparation for professional teacher certification in Florida when they graduate.

Research

More Info

Botany majors are strongly encouraged to participate in research, and research is required for the Botanical Research specialization. Research experience is valuable on many levels: it diversifies the college experience; it teaches students how scientists apply the knowledge gained in the classroom to real world questions; it provides the opportunity to work with and get to know researchers who are the best in their field; it introduces students to cutting edge scientific questions and techniques; it can enhance a student’s resume/CV when applying to graduate or professional school; and finally it is essential in helping students determine if science is a good career choice.

CALS botany majors may participate in research for course credit, as a scholar (e.g., University Scholar, Science for Life Scholar, Beckman Scholar), as a volunteer, or, in rare cases, as a paid research assistant. Please visit Undergraduate Research for information regarding course credit. Students who plan to enroll for course credit must contact potential research mentors, develop a project, and turn in the required application and proposal no later than the week before drop/add. If the window is missed, students should still contact potential research mentors, if only to discuss upcoming opportunities.

Related Botany Programs

• Combined Degree
• Bachelor of Science in Botany, CLAS
• Botany minor

Academic Learning Compact

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

I = Introduced; R = Reinforced; A = Assessed

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Assessment Types

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