

# HORTICULTURAL SCIENCE

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Horticultural Science graduates have a foundation of knowledge in the science behind fruit and vegetable production, including commodity production, cropping systems, basic plant science, and molecular biology. Horticultural Science students study genetics, crop nutrition, plant physiology, chemistry, physics, entomology and nematology, and soil and water sciences.

## About this Program

- **College:** Agricultural and Life Sciences (<http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/>)
- **Degree:** Bachelor in Science
- **Specializations:** Organic Horticultural Systems ([http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/HOS\\_BS/HOS\\_BS03/](http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/HOS_BS/HOS_BS03/)) | Plant Biotechnology and Improvement ([http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/HOS\\_BS/HOS\\_BS04/](http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/HOS_BS/HOS_BS04/)) | Science and Technology of Horticultural Crops ([http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/HOS\\_BS/HOS\\_BS02/](http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/HOS_BS/HOS_BS02/))
- **Credits for Degree:** 120
- **More Info**

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

## Department Information

The Horticultural Sciences Department is a team of faculty, staff, and students dedicated to improving fruit and vegetable production for the benefit of farmers and consumers. Florida's climatic diversity and the facilities at UF provide opportunities for cutting-edge research in plant breeding & genetics, plant and environmental physiology, fruit & vegetable production, postharvest physiology, biochemistry, and other disciplines.

**Website** (<https://hos.ifas.ufl.edu/>)

## CONTACT

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Map (<http://campusmap.ufl.edu/#/index/0717>)

## Curriculum

- Combination Degrees
- Horticultural Science
- Horticultural Science Minor
- Horticultural Therapy Certificate
- Organic and Sustainable Crop Production Minor
- Plant Molecular and Cellular Biology Minor

The department offers three specializations: science and technology of horticultural crops, organic horticultural systems, and plant biotechnology and improvement. These options provide a strong science background and flexibility when choosing elective courses. An academic advisor will help develop the curriculum that best suits your career and educational goals.

## Specializations

### Organic Horticultural Systems

This specialization emphasizes the cultural practices that maintain ecological and economical balance in horticultural crop production systems. This is a flexible option with many electives available to meet education and career objectives. Graduates will be prepared for a range of careers related to conventional, sustainable and organic crop production.

### Plant Biotechnology and Improvement

This is a comprehensive program focusing on the molecular aspects of crops, including crop growth, development and cultivar improvement. This specialization is geared toward preparing for careers in laboratory research and is also an excellent preparation for pursuing graduate studies.

### Science and Technology of Horticultural Crops

This specialization offers a generalized program, covering growth and development of horticultural crops. This is a flexible option that can be tailored to individual interests and career objectives, ranging from applied production to basic biology. Career options include commodity production and

management, research biologist, marketing, agricultural chemical sales, fertilizer sales, produce buyer for grocery stores or restaurants, retail flower sales, and a number of other opportunities.

### Academic Learning Compact

The Horticultural Science major prepares students for a career in plant science, including management, production, research, marketing, and sales. Students will gain knowledge ranging from commodity production and cropping systems to basic plant science, and molecular biology. They will develop skills to describe how plant physiology and genetics relate to plant growth and development as well as developing knowledge of plant diseases and other factors that affect horticultural crops.

## Before Graduating Students Must

- Pass the horticultural sciences competency test, given in three parts. One part will be given in each of these required courses:

Code	Title	Credits
HOS 3020C	Principles of Horticultural Crop Production	4
HOS 4304	Horticultural Physiology	3
HOS 4341	Advanced Horticultural Physiology	3

- Achieve minimum grades of C in AEC 3030C and AEC 3033C. These courses are graded using rubrics developed by a faculty team.
- Complete requirements for the baccalaureate degree, as determined by faculty.

## Students in the Major Will Learn to

### Student Learning Outcomes | SLOs

#### Content

1. Describe fundamental concepts, skills, and processes in horticultural science.
2. Apply fundamental concepts, skills, and processes in horticultural science.

#### Critical Thinking

3. Critically analyze and interpret data in horticultural science.
4. Solve problems in horticultural science.

#### Communication

5. Communicate effectively in written form in a manner appropriate in the field of horticultural science.
6. Communicate effectively orally in a manner appropriate in the field of horticultural science.

### Curriculum Map

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

Courses	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6
AEC 3030C					I, R, A	
AEC 3033C						I, R, A
AGR 3303	I	I				
HOS 3020C	I, R, A	I	I	I		
HOS 3430C	I, R	I, R	R	R		
HOS 4304	R	A	A	A		
HOS 4341	R	R	R	R		
HOS 4933					R	R

## Assessment Types

- Class project
- Writing assignments
- Exams
- Final grades