HORTICULTURAL SCIENCE | ORGANIC CROP PRODUCTION

This major prepares students for careers in plant science, including management, production, applied research, molecular biology research, marketing, sales and a number of other areas. Students can receive training ranging from commodity production/cropping systems to basic plant science/molecular biology.

About this Program

- **College:** Agricultural and Life Sciences
- **Degree:** Bachelor in Science
- **Credits for Degree:** 120
- **Specializations:** Horticultural Production | Horticultural Science | Organic Crop Production | Plant Molecular and Cellular Biology

Additional Information

- **Related Horticultural Science Programs**

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

The department offers four specializations: horticultural sciences, horticultural production, organic crop production, and plant molecular and cellular biology. These options provide a strong science background and flexibility when choosing elective courses. Details of the specializations are outlined below. An academic advisor will help develop the curriculum that best suits your career and educational goals.

Related Horticultural Science Programs

- Combined Degree
- Horticultural Science minor

Organic Crop Production

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.

Critical Tracking

Note that critical tracking is the same for all specializations of this major except Plant Molecular and Cellular Biology.

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, excluding labs: BOT 2010C or BSC 2010/BSC 2010L, BOT 2011C or BSC 2011/BSC 2011L, CHM 2045/CHM 2045L, MAC 1147, PHY 2004 or PHY 2020
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 2

- Complete 1 additional critical-tracking course, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 3

- Complete 1 additional critical-tracking course, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 4

- Complete 2 additional critical-tracking courses, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 5

- Complete all critical-tracking courses, including labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Model Semester Plan

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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<tr>
<td>IUF 1000</td>
<td>What is the Good Life (Gen Ed Humanities)</td>
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<td>MAC 1147</td>
<td>Precalculus Algebra and Trigonometry (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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<td>State Core Gen Ed Social and Behavioral Sciences</td>
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Semester Two

Select one: 3-4

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<th>Course</th>
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<tr>
<td>AEB 2014</td>
<td>Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)</td>
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<td>ECO 2013</td>
<td>Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)</td>
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<td>ECO 2023</td>
<td>Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)</td>
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<td>CHM 2045 &amp; 2045L</td>
<td>General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; State Core Gen Ed Biological Sciences and Physical Sciences)</td>
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<td>State Core Gen Ed Humanities</td>
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Semester Three

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<td>AEC 3033C</td>
<td>Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)</td>
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Commodity electives or approved electives

HOS 4933
HOS 4341
HOS 4283C

Semester Eight

Commodity elective or approved elective

& 3022L
SWS 3022
HOS 4304
HOS 3281C

Semester Seven

Commodity electives or approved electives

HOS 3430C
AGR 4212
AGR 3303

Semester Six

Commodity electives or approved electives

PLP 3002C
HOS 3020
& 3005L
ENY 3005

Semester Five

Electives

Select one:

AEC 3030C

Semester Four

Commodity elective or approved elective

& 3022L
SWS 3022
HOS 4304
HOS 3281C

Semester Seven

Commodity electives or approved electives

PLS 4601C Principles of Weed Science (fall semester)

Total Credits 120

Approved Electives

Commodity Electives

Code Title Credits
Select 20-21 credits from the following: 20-21
FRC 3212 Introduction to Citrus Culture and Production (fall semester odd years) 15-16
FRC 3252 Tropical and Subtropical Fruits (fall semester even years) 15-16
FRC 3274 Tree and Small Fruit Production (fall semester, odd years) 15-16
HOS 3222C Greenhouse and Protected Agriculture (spring semester, even years) 15-16
VEC 3221C Vegetable Production (fall semester) 15-16
For other approved electives, see advisor

Practical Work Experience

Code Title Credits
Select one of the following: 15-16
HOS 4905 Independent Study in Horticultural Science 15-16
HOS 4941 Practical Work Experience in Horticultural Sciences 15-16

Other practical work experience course options, such as relevant study abroad experiences, may be approved by the advisor

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 3020 Principles of Horticulture Crop Production 3
  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

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<tr>
<th>Courses</th>
<th>SLO 1</th>
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Assessment Types
- Class project
- Writing assignments
- Exams
- Final grades