

PLANT MOLECULAR AND CELLULAR BIOLOGY MINOR

The Horticultural Sciences Department facilitates this interdisciplinary minor, a cooperative effort of the departments of Agronomy, Environmental Horticulture, Horticultural Sciences, Plant Pathology and Microbiology and Cell Science. It is particularly appropriate for students majoring in horticultural science, microbiology and cell science, and plant science, although it is available to students in other majors.

About this Program

- **College:** Agricultural and Life Sciences (<http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/>)
- **Credits:** 17-20 | Completed with minimum grades of C
- **Contact:** Email (zxin@ufl.edu) | 352.273.4773

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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P.O. Box 110690

2550 Hull Road

FIFIELD HALL

GAINESVILLE FL 32611-0690

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 minor offers academic training and hands-on experience in current laboratory techniques and helps students prepare for graduate school or lab positions in plant biotechnology.

Prerequisites

| Code | Title | Credits |
|---------------------|-----------------------------------------------------------------------------------------|---------|
| Select one: | | 4 |
| BOT 2011C | Plant Diversity | |
| BSC 2011 & 2011L | Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 | |
| CHM 2210 | Organic Chemistry 1 | 3 |
| CHM 2211 | Organic Chemistry 2 | 3 |

Required Courses

| Code | Title | Credits |
|-----------------------|-----------------------------------------------|--------------|
| HOS 3305 | Introduction to Plant Molecular Biology | 3 |
| HOS 4313C | Laboratory Methods in Plant Molecular Biology | 2 |
| Biochemistry elective | | 4 |
| Genetics elective | | 3 |
| Physiology elective | | 3 |
| Approved elective | | 2-5 |
| Total Credits | | 17-20 |

Approved Electives

Biochemistry Electives

| Code | Title | Credits |
|----------|----------------------------------------------------|---------|
| BCH 3025 | Fundamentals of Biochemistry | 4 |
| BCH 4024 | Introduction to Biochemistry and Molecular Biology | 4 |
| CHM 3217 | Organic Chemistry/Biochemistry 1 | 4 |

Genetics Electives

| Code | Title | Credits |
|----------|----------------------------|---------|
| AGR 3303 | Genetics | 3 |
| MCB 4304 | Genetics of Microorganisms | 3 |
| PCB 3063 | Genetics | 4 |
| PCB 4522 | Molecular Genetics | 3 |

Physiology Electives

| Code | Title | Credits |
|----------|--------------------------------------------|---------|
| BOT 3503 | Physiology and Molecular Biology of Plants | 3 |
| HOS 4304 | Horticultural Physiology | 3 |

Electives

| Code | Title | Credits |
|-----------|-------------------------------------------------|---------|
| MCB 3020 | Basic Biology of Microorganisms | 3 |
| MCB 5305L | Microbial Genetics and Biotechnology Laboratory | 2 |
| PLS 4242C | Micropropagation of Horticultural Crops | 4 |
| XXX 4905 | Individual Studies in PMCB ¹ | 3-5 |

¹ Individual studies courses are registered by the department prefix appropriate to the student's major.
