

# AGRONOMY

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Not all courses are offered every semester. Refer to the schedule of courses for each term's specific offerings.

More Info (<http://registrar.ufl.edu/soc/>)

*Courses at the University of Florida, with the exception of specific foreign language courses and courses in the online Master of Arts in Mass Communication program, are taught in English.*

## Department Information

The Department of Agronomy's vision is to improve and sustain food production while conserving natural resources and promoting healthy and active lives by creating and disseminating knowledge in the plant sciences. The department's mission is to achieve excellence in the science of using plants for food, feed, fuel, fiber and turf, as well as in the management of weed species, through research, teaching, and outreach programs that serve the people of Florida, our nation, and the world.

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

### CONTACT

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Map (<http://campusmap.ufl.edu/#/index/0496>)

### Curriculum

- Combination Degrees
- Golf and Sports Turf Management Minor
- Plant Science

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## Courses

### AGG 3501 Environment, Food and Society 3 Credits

**Grading Scheme:** Letter Grade

Global issues and trends in population growth, natural resource (soil, water and plant genetic biodiversity) utilization, climate change and potential impacts of current trends on agriculture, natural resources, global food security and sustainability. (B)

**Attributes:** General Education - Biological Science

### AGR 3303 Genetics 3 Credits

**Grading Scheme:** Letter Grade

The science and physical basis of inheritance, genes as units of heredity and development, and the qualitative and quantitative aspects of genetic variation. (B)

**Prerequisite:** basic course in biology, botany or zoology.

**Attributes:** General Education - Biological Science

### AGR 4212 Alternative Cropping Systems 3 Credits

**Grading Scheme:** Letter Grade

Examines alternative cropping systems, focusing on issues of sustainability, against a backdrop of trends occurring in conventional agriculture.

### AGR 4214C Applied Field Crop Production 3 Credits

**Grading Scheme:** Letter Grade

Students will plant and manage a group of field crops. Experience in soil sampling, interpretation of nutrient and nematode test results, fertilization, pest control and harvesting are gained. Students will submit a term report.

### AGR 4231C Forage Science and Range Management 4 Credits

**Grading Scheme:** Letter Grade

Scientific and technological developments in the selection, production and utilization of forage crops, and in the development and management of grazing areas. (B)

**Attributes:** General Education - Biological Science

### AGR 4304 Plant Chromosomes and Genomes 3 Credits

**Grading Scheme:** Letter Grade

Concepts of plant DNA organization in chromosome structure, the principles and technologies of cytogenetics, the plant genomic DNA structure and function, concepts of transcriptome, the plant genomic databases, the DNA sequencing technologies and the basic tools for nucleotide sequence analysis.

**Prerequisite:** AGR 3303 or PCB 3063.

### AGR 4320 Plant Breeding 3 Credits

**Grading Scheme:** Letter Grade

The science and technology of plant improvement.

**Prerequisite:** AGR 3303 or PCB 3063.

### AGR 4512 Physiology and Ecology of Crops 3 Credits

**Grading Scheme:** Letter Grade

Introduces the fundamental processes of crop plants, as well as the environmental and physical limitations to crop growth, development and yield. Focus is on physiology and ecology of agronomic crop plants. (B)

**Prerequisite:** AGR 3005 or the equivalent.

**Attributes:** General Education - Biological Science

### AGR 4900 Supervised Extension in Agronomy 0-3 Credits

**Grading Scheme:** S/U

Firsthand, authentic extension experiences in agronomy under the supervision of a faculty member. Projects may involve program planning, development, implementation, and evaluation. (S-U)

### AGR 4905 Individual Study 1-3 Credits

**Grading Scheme:** Letter Grade

Scientific study of individual problems in crop production, weed science, genetics or plant breeding.

**Prerequisite:** minimum of one course in agronomy and instructor permission.

### AGR 4911 Supervised Research in Agronomy 0-3 Credits

**Grading Scheme:** S/U

Firsthand, authentic research in Agronomy under the supervision of a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application. (S-U)

### AGR 4915 Honors Thesis Research in Agronomy 0-3 Credits

**Grading Scheme:** S/U

Independent research in agronomy leading to an honors thesis. Student will be mentored by a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application. (S-U)

**Prerequisite:** junior standing, upper division GPA of 3.75 or higher and completed honors thesis proposal on file.

### AGR 4932 Agronomy Topics 1-3 Credits

**Grading Scheme:** Letter Grade

Critical review of selected topics in specific agronomic areas.

**ALS 4154 Global Agroecosystems 3 Credits**

**Grading Scheme:** Letter Grade

Focuses on the principles of agroecology and presentation of topics that integrate ecological with agricultural principles to optimize resource conservation, productivity, societal benefit, and profitability.

**Prerequisite:** SWS 3022 and ALS 3153 and AGR 4214C or the equivalent.

**ALS 4914 Project Team Research: Building Skills in Agrobiology 3 Credits**

**Grading Scheme:** Letter Grade

Hands-on experience in addressing a real-world problem faced by an agricultural industry partner. Production of a detailed plan, project design, and preliminary data for evaluating and solving the problem. Offered every term.

**Prerequisite:** Junior standing or higher.

**PCB 2441 Biological Invaders 3 Credits**

**Grading Scheme:** Letter Grade

Introduces plants and animals that are invading Florida and the U.S. Why biological invaders are second only to habitat destruction as threats to natural ecosystems, what makes some species invasive, how to control or prevent invasions, where international commerce may be regulated, and who is affected by such issues. (B)

**Attributes:** General Education - Biological Science

**PLS 2003C Plants That Feed the World 3 Credits**

**Grading Scheme:** Letter Grade

Introduces 25 of humankind's most important food crop plants with emphasis on soil and climatic adaptations, major producers and consumers, nutritional attributes, processing needs and types of products. Students will see the plants and seeds, and the food and industrial products of the crop plants under study. This is an introductory course for majors and non-majors who have no previous academic experience with food crop plants. (B)

**Attributes:** General Education - Biological Science

**PLS 3004C Principles of Plant Science 3 Credits**

**Grading Scheme:** Letter Grade

Introduces the principles and practices of plant production systems. An overview of plant evolution, anatomy, physiology, improvement, pest, water and nutrient management as applied to a variety of plant production systems. (B)

**Prerequisite:** BOT 2010C or BSC 2010.

**Attributes:** General Education - Biological Science

**PLS 4601C Principles of Weed Science 3 Credits**

**Grading Scheme:** Letter Grade

Introduces basic and applied aspects of weed science. Topics include weed biology and ecology, herbicide physiology and weed control techniques. The lab covers weed identification, herbicide application technology and other aspects of weed science.

**PLS 4613 Aquatic Weed Control 3 Credits**

**Grading Scheme:** Letter Grade

Florida's aquatic weed problems and methods of chemical, biological, mechanical and physical weed control. Topics include plant biology/ecology, herbicide residue, lake reclamation, fish-plant interactions and laws regulating aquatic weed control.

**Prerequisite:** refer to the department.

**PLS 4941 Practical Work Experience 1-3 Credits**

**Grading Scheme:** S/U

Practical, hands-on experience in the plant sciences through a paid internship in the industry. This must be a new experience and related to the student's field of study. One month of full-time work is required for each credit.

**Prerequisite:** Plant Science major of junior standing or higher.

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