

AGRONOMY

Program Information

The Agronomy Department offers the degrees of Doctor of Philosophy and Master of Science (thesis and non-thesis option) in agronomy with specializations in plant physiology, ecology, management and nutrition, weed science (terrestrial and aquatic), and plant breeding and genetics.

Graduate programs emphasize the development and subsequent application of basic principles in each specialization to the management of plants in Florida and throughout the world. The continuing need for increased plant production for food, fiber and energy to meet the demands of a rapidly escalating population is reflected in departmental research programs. When compatible with a student's program and permitted by prevailing circumstances, some thesis and dissertation research may be conducted wholly or in part in other countries.

Students seeking a graduate program in the Agronomy Department should hold a Bachelor of Science degree from an accredited college or university with a major in an area of plant science, or closely related discipline. A science background with basic courses in biology, botany, mathematics, chemistry, and physics is required of new graduate students.

Degrees Offered

Degrees Offered with a Major in Agronomy

- Doctor of Philosophy
 - without a concentration
 - concentration in Global Systems Agroecology
 - concentration in Toxicology
 - concentration in Tropical Conservation and Development
- Master of Science
 - without a concentration
 - concentration in Agroecology
 - concentration in Geographic Information Systems
 - concentration in Tropical Conservation and Development

Requirements for these degrees are given in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

Courses

Agronomy Departmental Courses

Code	Title	Credits
AGR 5230C	Florida Grassland Agroecosystems	4
AGR 5266C	Field Plot Techniques	3
AGR 5277C	Tropical Crop Production	3
AGR 5307	Molecular Genetics for Crop Improvement	3
AGR 5321C	Genetic Improvement of Plants	3
AGR 5444	Ecophysiology of Crop Production	3
AGR 5511	Crop Ecology	3
AGR 6233	Tropical Grassland Agroecosystems	3
AGR 6237C	Research Techniques in Forage Evaluation	3
AGR 6305	Plant Chromosomes and Genomes	3
AGR 6322	Advanced Plant Breeding	3
AGR 6325L	Plant Breeding Techniques	1
AGR 6422C	Environmental Crop Nutrition	3
AGR 6442C	Physiology of Agronomic Plants	4
AGR 6905	Agronomic Problems	1-5

AGR 6913	Supervised Extension-Agronomy	3
AGR 6932	Topics in Agronomy	1-3
AGR 6933	Graduate Agronomy Seminar	1
AGR 6940	Supervised Teaching	1-5
AGR 6971	Research for Master's Thesis	1-15
AGR 7979	Advanced Research	1-12
AGR 7980	Research for Doctoral Dissertation	1-15
ALS 5155	Global Agroecosystems	3
ALS 5932	Special Topics	1-4
ALS 6031	Project Team Research: Building Skills in Agrobiology	3
IPM 5305	Principles of Pesticides	3
PLS 5625	Upland Invasive Plant Management	3
PLS 5632C	Integrated Weed Management	3
PLS 5633	Aquatic Plant Management	3
PLS 6626	Invasive Plant Ecology	3
PLS 6655	Plant/Herbicide Interaction	3

College of Agricultural and Life Sciences Courses

Code	Title	Credits
ALS 5156	Agricultural Ecology Principles and Applications	3
ALS 5905	Individual Study	1-4
ALS 5932	Special Topics	1-4
ALS 6046	Grant Writing	2
ALS 6166	Exotic Species and Biosecurity Issues	3
ALS 6921	Colloquium on Plant Pests of Regulatory Significance	1
ALS 6925	Integrated Plant Medicine	4
ALS 6931	Plant Medicine Program Seminar	1
ALS 6935	Topics in Biological Invasions	3
ALS 6942	Principles of Plant Pest Risk Assessment and Management	3
ALS 6943	Internship in Plant Pest Risk Assessment and Management	1-10
ANS 6936	Graduate Seminar in Animal Molecular and Cell Biology	1-2
BCH 5045	Graduate Survey of Biochemistry	4
STA 6093	Introduction to Applied Statistics for Agricultural and Life Sciences	3
STA 6329	Matrix Algebra and Statistical Computing	3

Student Learning Outcomes

Agronomy (PhD)

- SLO 1 Knowledge
Describe and explain theories and concepts in the basic plant sciences and in a chosen specialization (Crop Genetics and Breeding; Crop Physiology and Ecology; Crop Nutrition and Management; Weed Science).
- SLO 2 Knowledge
Design and execute an innovative research plan and analyze, synthesize and interpret research results using appropriate experimental designs and statistical analyses.
- SLO 3 Knowledge
Address and solve issues related to crop production and resource management in preparation for leadership roles in the discipline (in academia, government or the private sector).

SLO 4 Skills

Communicate effectively and professionally in oral and written form and in interpersonal relationships.

SLO 5 Professional Behavior

Conduct all scholarly activities, including teaching, research and outreach with collegiality, cultural sensitivity, and ethical practices.

Agronomy (MS)

SLO 1 Knowledge

Describe and explain theories and concepts in the basic plant sciences and in a chosen specialization (Crop Genetics and Breeding; Crop Physiology and Ecology; Crop Nutrition and Management; Weed Science).

SLO 2 Knowledge

Design and execute an innovative research plan and analyze, synthesize and interpret research results using appropriate experimental designs and statistical analyses.

SLO 3 Knowledge

Address and solve issues related to crop production and resource management in preparation for leadership roles in the discipline (in academia, government or the private sector).

SLO 4 Skills

Communicate effectively and professionally in oral and written form and in interpersonal relationships.

SLO 5 Professional Behavior

Conduct all scholarly activities, including teaching, research and outreach with collegiality, cultural sensitivity, and ethical practices.