

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 |

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| 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.