BOTANY

Program Information

Chair: M. L. Wayne
Graduate Coordinator: J. (Gordon) Burleigh

The Department of Biology offers graduate work in Botany leading to the degrees of Master of Science, Master of Science in Teaching, and Doctor of Philosophy.

The Department offers studies in the areas of biochemistry, molecular biology, cell biology, physiology, ecology, systematics, and evolution. Specific areas of specialization include anatomy/morphology with emphasis on extant and fossil vascular plants; ecology and environmental studies including ecosystem ecology, conservation biology and genetics, fire ecology, exotic invasive species, and tropical botany and ecology; cell biology with emphasis on the cytoskeleton and cell morphogenesis; physiology, biochemistry, and molecular biology with emphasis on photosynthesis, growth and development of angiosperms, protein phosphorylation and signal transduction, global analysis of spatial patterns of gene expression; plant secondary metabolism and proteomics; systematics with emphasis on DNA- and morphology-based phylogenetic analyses, phylogeographic studies, molecular evolution/development, and monographic and floristic studies. To be considered for admission to graduate studies, students should have:

- The equivalent of an undergraduate degree in botany or biology with basic course work in their area of interest
- Acceptable GRE scores (verbal, quantitative, and analytical writing)
- Letters of recommendation
- International students must submit an acceptable score on one of the following: TOEFL (Test of English as a Foreign Language: computer=213, paper=550, web=80), IELTS (International English Language Testing System: 6), MELAB (Michigan English Language Assessment Battery: 77), or successful completion of the UF English Language Institute program. The program of graduate study for each student will be determined by a supervisory committee, and deficiencies in background coursework will be made up early in the graduate program. No more than 9 credits of BOT 6905 Individual Studies in Botany (1-3 cr.) may be used to satisfy the credit requirements for a master's degree.

Degrees Offered

Degrees Offered with a Major in Botany

- Doctor of Philosophy
  - without a concentration
  - concentration in Tropical Conservation and Development
  - concentration in Wetland Sciences
- Master of Science
  - without a concentration
  - concentration in Tropical Conservation and Development
  - concentration in Wetland Sciences
- Master of Science in Teaching
  - without a concentration
  - concentration in Tropical Conservation and Development
  - concentration in Wetland Sciences

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

Courses

Botany Courses

Code	Title	Credits
BOT 5225C	Plant Anatomy	4
BOT 5305	Paleobotany	3
BOT 5505C	Intermediate Plant Physiology	3
BOT 5655C	Physiological Plant Ecology	3
BOT 5685C	Tropical Botany	5
BOT 5695C	Ecosystems of Florida	3
BOT 5725C	Taxonomy of Vascular Plants	4
BOT 6566	Plant Growth and Development	3
BOT 6716C	Advanced Taxonomy	2
BOT 6726C	Principles of Systematic Biology	4
BOT 6905	Individual Studies in Botany	1-3
BOT 6910	Supervised Research	1-5
BOT 6927	Advances in Botany	1-3
BOT 6935	Special Topics	1-4
BOT 6936	Graduate Student Seminar	1-2
BOT 6971	Research for Master's Thesis	1-15
BOT 7979	Advanced Research	1-12
BOT 7980	Research for Doctoral Dissertation	1-15
PCB 5046C	Advanced Ecology	3
PCB 5338	Principles of Ecosystem Ecology	3
PCB 5356	Tropical Ecology	3
PLP 6656C	Fungal Biology	4

Biology Departmental Courses

Code	Title	Credits
BOT 6276C	Phylogenomics	4
BOT 6656	Plant Symbiosis	3
BSC 6038	Broader Impacts of Science on Society	2
BSC 6451	Computational Tools for Research in Biology	3
BSC 6895	AI in Biology	3
PCB 6675C	Evolutionary Biogeography	3
PCB 6685	Population Genetics	4
ZOO 6930	Seminar in Molecular Evolution	2

Student Learning Outcomes

Botany (PHD)

SLO 1 Knowledge
Students will identify, define, and describe basic fundamentals of biology and a thorough understanding of the fundamentals of botany

SLO 2 Skills
Students will design a research project, collect data, analyze and interpret the results. They will be able to present the results of original research in oral and written form

SLO 3 Skills
Students design a research project, collect data, analyze and interpret the results. They will be able to present the results of original research in oral and written form

SLO 4 Professional Behavior
Students will practice ethical behaviors and professional conduct

SLO 5 Professional Behavior

Students will be able to interact and communicate with professionals at scientific conferences

Botany (MS)

SLO 1 Knowledge
Students will identify, define, and describe the basic fundamentals of biology and botany

SLO 2 Skills
Students will design a research project, collect data, analyze and interpret the results and present this in written and oral form

SLO 3 Professional Behavior
Students will practice ethical behaviors and professional conduct

SLO 4 Professional Behavior
Students will interact and communicate with professionals at scientific conferences, and practice ethical behaviors and professional conduct

Botany (MST)

SLO 1 Knowledge
Students will identify, define, and describe the basic fundamentals of botany and pedagogy.

SLO 2 Skills
Students will teach botany and biology classroom sessions

SLO 3 Professional Behavior
Students will interact and communicate with professionals at scientific conferences, and practice ethical behaviors and professional conduct