

Plant Biology

Course offerings in diverse areas of plant biology, ranging from the molecular to the ecosystem scale. Research opportunities and facilities are available in the following areas: cell biology, cellular imaging, cellulose biology, cellular signaling, developmental biology, plant hormones, epigenetics, systems biology, genetic engineering, transgene regulation and silencing, stress biology, plant gravitropism, phytochemistry, metabolic engineering, plant-microbe interactions, aquatic ecology, toxic dinoflagellates, endangered species, community ecology, physiological ecology, tropical ecology, evolutionary ecology, population ecology, paleobotany, plant systematics, evolution of flowering plants, and ethnobotany.

Master's and Doctoral Degree Requirements

The M.S. requires a total of 30 credit hours (20 of the 30 credit hours must be from 500-, 600-, 700/800-level courses; 18 credit hours must be letter graded); the Master of Plant Biology requires a total of 36 credit hours. The Ph.D. requires a total of 72 credit hours. Two core courses (Functional Plant Biology and either Plant Functional Ecology or Systematic Botany) are required. Other requirements include: a Plant Biology Colloquium, Plant Anatomy, an additional plant biology course, a graduate statistics course, a graduate ethics course, a thesis (for the M.S., but not the Master of Plant Biology) or dissertation (for the Ph.D.), written and oral preliminary examinations (Ph.D.), oral thesis or dissertation defense, and a one (M.S.) or two semester (Ph.D.) teaching experience. Students must maintain a "B" average in all course work.

Other Relevant Information

Graduate research and teaching assistantships and tuition remission information are available from the department. New students supported by departmental research/teaching assistantships may elect to rotate through three laboratories during their first semester. At the end of the semester, they will choose a laboratory for their research activities consistent with their interests and available research projects. Cooperative research in more than one laboratory is encouraged. Graduate students are expected to attend and participate in the seminar program every semester they are in residence. The department participates in training grants in biotechnology.

Plant Biology Program Website (<http://www.cals.ncsu.edu/botany/>)

Admission Requirements

Students entering the graduate program in plant biology should have a bachelor's degree in plant biology or a related undergraduate program that includes biological, physical and mathematical science training including undergraduate courses in organic chemistry, calculus and genetics, as well as biology. All applications are screened by a departmental committee, and the best qualified applicants will be accepted until all available spaces are filled.

Applicant Information

- **Delivery Method:** On-Campus
- **Entrance Exam:** None
- **Interview Required:** None

Application Deadlines

- **Fall:** January 15 (Aid); June 25 (Adm. only)
- **Spring:** November 25 (Adm. only)
- **Summer 1:** March 25
- **Summer 2:** May 10

Degrees

- Plant Biology (MR) (<http://catalog.ncsu.edu/graduate/agriculture-life-sciences/plant-biology/plant-biology-mr/>)
- Plant Biology (MS) (<http://catalog.ncsu.edu/graduate/agriculture-life-sciences/plant-biology/plant-biology-ms/>)
- Plant Biology (PhD) (<http://catalog.ncsu.edu/graduate/agriculture-life-sciences/plant-biology/plant-biology-phd/>)
- Plant Biology (Minor) (<http://catalog.ncsu.edu/graduate/agriculture-life-sciences/plant-biology/plant-biology-minor/>)

Associate professors

Jose Miguel Alonso

Richard L. Blanton

Joann M. Burkholder

Robert Graham Franks

Amy Michele Grunden

Candace Hope Haigler

Linda Kay Hanley-Bowdoin

Christine Veronica Hawkes

William A. Hoffmann

Shuijin Hu

Heike Inge Ada Sederoff

William F. Thompson

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Tzung Fu Hsieh

Alexander Krings

Xu Li

Terri A. Long

Marcela Pierce

Rosangela Sozzani

Anna N. Stepanova

Jillian Marie De Gezelle

Chad Victor Jordan

Imara Yasmin Perera

Carole H. Saravitz

Assistant Professors

Orlando Arguello-Miranda

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Colleen Jennifer Doherty

Manuel Kleiner

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William Kevin Petry

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Seema Nayan Sheth