PLANT BIOLOGY (PHD)

Graduate School

Program Website (https://cals.cornell.edu/school-integrative-plant-science/degrees-programs/msphd-graduate-fields/phd-field-plant-biology/)

CIP: 26.0301 | **HEGIS:** 0402.00 | **NYSED:** 13094

Graduate Field

Plant Biology (https://catalog.cornell.edu/graduate-school/plant-biology/)

Program Description

Programs in the Field of Plant Biology range from the molecular/genetic investigation of fundamental plant processes and mathematical modeling of plant development to study of plant diversity and evolution. In addition to studying a major subject in the Field of Plant Biology, students also take course work in two other minor subjects of their choice, either in or outside the field. The field has no language requirement.

Students who want to major in plant ecology are encouraged to apply through the Field of Ecology and Evolutionary Biology.

Research Facilities

The field provides equipment and expertise in all research programs related to the special interests of the faculty. Instrumentation of modern molecular and biochemical techniques, visible and electron microscopy, biological spectrometry, and computing equipment are available. Growth chambers, cell culture and transformation facilities, greenhouses, and field plots are also readily available. L. H. Bailey Hortorium Herbarium, adjacent to the Plant Science Building, houses one of the nation's major systematics resources.

Concentrations

- Cytology
- Paleobotany
- Plant biochemistry
- Plant biotechnology
- Plant cell biology
- Plant ecology
- Plant molecular biology
- Plant morphology, anatomy, and biomechanics
- Plant physiology
- Systematic botany

Program Information

- Instruction Mode: In Person
- Location: Ithaca, NY
- Minimum Credits for Degree: 80

Program Requirements

- Minimum Semesters for Degree: 6

Graduate School Milestones

- Responsible Conduct of Research Training: Required
- Open Researcher and Contributor ID (ORCID): Required
- Student Progress Reviews (SPR) begin: Second year
- Examination for admission to candidacy (A Exam): Spring of third year
- Defense of Dissertation (B Exam): Spring of seventh year

Field Specific Milestones

- One semester of teaching assistantship required

Course Requirements

Additional course requirements may be set by the student's Special Committee. Program specific requirements that apply to all students are included below.

Year 1 (Fall)

- PLSCI 6410 Laboratory in Plant Biology
- PLSCI 6831 Concepts and Techniques in Plant Biology

Year 1 (Spring)

- PLSCI 6841 Plant Form and Function: Anatomy, Cell Biology, and Development
- PLSCI 7410 Problems in Plant Biology

University Graduation Requirements Requirements for All Students

In order to receive a Cornell degree, a student must satisfy academic and non-academic requirements.

Academic Requirements

A student's college determines degree requirements such as residency, number of credits, distribution of credits, and grade averages. It is the student's responsibility to be aware of the specific major, degree, distribution, college, and graduation requirements for completing their chosen program of study. See the individual requirements listed by each college or school or contact the college registrar's office (https://registrar.cornell.edu/service-resources/college-registrar-directory/) for more information.

Non-academic Requirements

Conduct Matters. Students must satisfy any outstanding sanctions, penalties or remedies imposed or agreed to under the Student Code of Conduct (Code) or Policy 6.4. Where a formal complaint under the Code or Policy 6.4 is pending, the University will withhold awarding a degree otherwise earned until the adjudication process set forth in those procedures is complete, including the satisfaction of any sanctions, penalties or remedies imposed.

Financial Obligations. Outstanding financial obligations will not impact the awarding of a degree otherwise earned or a student's ability to access their official transcript. However, the University may withhold issuing a diploma until any outstanding financial obligations owing to the University are satisfied.

Learning Outcomes

- Conduct original, publishable research in the field.
- Demonstrate a broad knowledge across several sub-disciplines as well as in-depth knowledge in at least one area of expertise of theory and research in the field.
- Demonstrate a degree of independence in research.
- Write and speak effectively to professional and lay audiences about issues in the field.
- Demonstrate teaching competence through TA experience.