PLANT BIOLOGY, MS

for the degree of Master of Science in Plant Biology

The Department of Plant Biology offers two graduate degrees, the Master of Science and the Doctor of Philosophy. There are two paths to completing the Master of Science degree, the traditional thesis and a non-thesis option. Students accepted directly into the MS program are expected to complete an MS thesis. The department also participates in the interdepartmental graduate program: the Program in Ecology, Evolution and Conservation Biology (http://sib.illinois.edu/peec/).

The Department teaches and conducts foundational research in plant biology. Its focus is integrative. Biological processes are investigated at multiple levels of organization using molecular, biochemical, physiological, morphological, and ecological approaches.

Areas of specialization within the department include:

- biochemistry
- biodiversity
- bioinformatics
- cell biology
- conservation biology
- development
- ecology
- environmental physiology
- evolution
- genetics
- genomics
- modeling
- molecular biology
- mycology
- paleobotany
- paleoecology
- photosynthesis
- phytochemistry
- population biology
- biotechnology
- systems biology
- systematics

Graduate students receive broad biological and professional training and acquire expertise in their areas of specialization.

The Plant Biology Departmental website (http://www.life.illinois.edu/plantbio/) provides additional information about the department, its admissions procedures, degree requirements, facilities, and the research interests of its faculty.

Admission

Prospective students are encouraged to identify faculty member(s) whose research specialty(ies) most closely coincide(s) with their interests and to correspond directly with them. Acceptance the Master of Science graduate program is based on the applicant's academic achievement and research potential. While departmental requirements do not specify particular courses as prerequisites for admission, applicants should have had undergraduate coursework in biology or related sciences. Admission to the graduate program requires an undergraduate grade point average of at least 3.0 (A = 4.0). Graduate Record Examination (GRE) scores (or approved equivalent) are not required but may be submitted to strengthen application package; however no minimum scores are specified for admission. International students should have a Test of English as a Foreign Language (TOEFL) score of 600 or above on the paper-based test, or 102 or above on the internet-based test (iBT). The IELTS exam is also accepted, and applicants should have a score of 7.0 or higher.

Facilities and Resources

The Plant Biology Department's diverse state-of-the-art research laboratories are located in Morrill Hall, Edward R. Madigan Laboratory, and the Institute for Genomic Biology. In addition, the department maintains extensive plant growth-chamber facilities, environmentally controlled greenhouses, a conservatory with live teaching and research collections, herbaria, a center for paleobotanical collections, and diverse local and remote field sites including SoyFACE (http://soyface.illinois.edu/). The University also offers exceptional research support services including the Roy J. Carver Biotechnology Center (http://www.biotech.illinois.edu/), service laboratories in the Institute for Genomic Biology (http://www.igb.illinois.edu/facilities-services/), the Beckman Institute (http://www.beckman.illinois.edu/), and the University Library (http://www.library.illinois.edu/), one of the world's largest.

Financial Aid

Fellowships, teaching assistantships, and research assistantships are available for qualified MS and PhD students in Plant Biology. Fellowships are awarded on a competitive basis.

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Thesis Option

Plant Biology Thesis option: The requirement of a thesis for the M.S. degree in Plant Biology is determined in consultation with the candidate's adviser. The program is normally completed within two years. Candidates are expected to complete at least 32 semester hours of graduate coursework and research agreed upon with a faculty adviser.

For additional details and requirements, please refer to the Plant Biology Department's online Graduate Handbook (http://www.life.illinois.edu/plantbio/gradhandbook.htm) and the University's Graduate College Handbook (http://www.grad.illinois.edu/gradhandbook/).

Thesis Option

Code	Title	Hours
Course hours distributed among three of the following areas: anatomy, biochemistry, development, ecology, evolution, genetics, molecular biology, physiology, and systematics (4 of these hours must be outside the immediate research interests of the student)		12
Electives in consultation with and by permission of advisor		12-20
PBIO 599	Thesis Research (8 max applied toward degree)	8
Total Hours		**32**

Other Requirements

Requirement	Description
Other requirements may overlap	
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

Non-Thesis Option

Code	Title	Hours
Course hours distributed among three of the following areas: anatomy, biochemistry, development, ecology, evolution, genetics, molecular biology, physiology, and systematics (4 of these hours must be outside the immediate research interests of the student)		12
IB 590	Individual Topics (8 max applied toward degree)	8
Electives in consultation with and by permission of advisor		12-20
Total Hours		**32**

Other Requirements

Requirement	Description
Other requirements may overlap	
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

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1. Design and implement independent research and integrate and apply core knowledge related to their field in 3 approved core areas out of 9 (anatomy, biochemistry, development, ecology, evolution, genetics, molecular biology, physiology, and systematics)
2. Demonstrate effective oral and written communication skills
   a. Presentations
   b. Publications
3. Apply rigorous statistics/analytical methods that typify their area of study
4. Professional skills
   a. Data management
   b. Citation management
   c. Mentoring
   d. Ethics
   e. Professionalism
   f. Networking

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Department of Plant Biology

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College of Liberal Arts & Sciences

College of Liberal Arts & Sciences website (https://las.illinois.edu/)

Admissions

Graduate College Admissions & Requirements (https://grad.illinois.edu/admissions/apply/)