PLANT BREEDING AND PLANT GENETICS, PHD

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (https://guide.wisc.edu/graduate/#requirementstext) and policies (https://guide.wisc.edu/graduate/#policiestext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirement	Detail
Minimum Credit Requirement	51 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	26 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	PhD candidates should maintain a 3.0 GPA in all core curriculum courses and may not have any more than two Incompletes on their record at any one time.
Assessments and Examinations	Doctoral students must pass both the oral preliminary and final thesis exams. Doctoral students must pass two exams to advance to candidacy. • The first is a written qualifying exam which tests a student's breadth of knowledge in plant science. Students must attempt the qualifying exam within the first two years of enrolling in the PhD program. • The second is an oral preliminary exam which allows the student's thesis committee to critique their research proposal and test the student's knowledge base for the proposed research. Students must also pass a final thesis defense and exam.
Language Requirements	No language requirements.
Graduate School Breadth Requirements	The doctoral minor or graduate/professional certificate is not required for students in the Plant Breeding and Plant Genetics degree. Students who wish to complete a cohesive body of work outside the major may wish to obtain a doctoral minor or graduate/professional certificate, and should declare them at the certification meeting. Requirements are determined by the minor or certificate department or program.

REQUIRED COURSES

The specific program of study toward a doctoral degree is developed by the student and their major professor. Considerable flexibility in the selection of courses is permitted to meet the needs and interests of the candidate.

Code	Title	Credits
Coursework		
Chosen in consultation with advisor, students must complete at least 17 credits of coursework, including 11 credits of core curriculum coursework. Research (990) credits cannot be applied toward this requirement. This coursework must be graded (no pass-fail or satisfactory-unsatisfactory)		17
Core Curriculum		
Students must complete at least 11 credits from the core curriculum, including 2 credits from section A, B and C. Students may fulfill the remaining 5 credits by completing courses in any of the sections (A, B, C or D).		
Section A. Plant Breeding (minimum 2 credits)		
PLANTSCI 501	Principles of Plant Breeding	
PLANTSCI 502	Techniques of Plant Breeding [1]	
PLANTSCI 812	Selection Theory for Quantitative Traits in Plants	
Section B. Genetics (minimum 2 credits)		
PL PATH 517	Plant Disease Resistance	
PLANTSCI 550	Molecular Approaches for Crop Improvement	

PLANTSCI/ GENETICS 615	Genetic Mapping	
GENETICS/ BIOCHEM 631	Plant Genetics and Development	
GENETICS/ BIOCHEM/ BOTANY 840	Regulatory Mechanisms in Plant Development	
Section C. Quantitative Genetics and Biometry (minimum 2 credits)		
F&W ECOL/ STAT 572	Statistical Methods for Bioscience II	
PLANTSCI 811	Biometrical Procedures in Plant Breeding	
PLANTSCI 771 & PLANTSCI 772	Experimental Design and Analysis and Applications in ANOVA and Mixed Models	
AN SCI 865	Design and Analysis of Biological Studies	
Section D. Additional Courses		
PL PATH/ BOTANY/ ENTOM 505	Plant-Microbe Interactions: Molecular and Ecological Aspects	
BIOCHEM/ BOTANY 621	Plant Biochemistry	
GENETICS 633	Population Genetics	
BOTANY 500	Plant Physiology	
Seminar [2]		
Students must complete 3 credits of seminar by taking the following course three times.		3
PLANTSCI 957	Seminar in Plant Breeding and Plant Genetics	
Additional Coursework		
Students must complete 31 credits of additional coursework to satisfy the 51-credit minimum requirement. Courses are chosen in consultation with advisor and may be a combination of research and/or courses related to a student's needs and interests.		31
Research		
Research (990) credits may be applied towards degree requirements. Students will register for research credits in the home department of their faculty advisor.		
Total Credits		**51**

1 Students who complete this course must complete a second course in Section A to satisfy the 2-credit requirement.

2 With committee approval, students may substitute 1-credit of seminar with a different graduate-level seminar class.