

# PLANT BREEDING AND PLANT GENETICS, PHD

## REQUIREMENTS

### MINIMUM GRADUATE SCHOOL REQUIREMENTS

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

### MAJOR REQUIREMENTS

#### MODE OF INSTRUCTION

| Face to Face | Evening/<br>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: <a href="https://policy.wisc.edu/library/UW-1244">https://policy.wisc.edu/library/UW-1244</a> ( <a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a> ). |
| Overall Graduate GPA Requirement        | 3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1203">https://policy.wisc.edu/library/UW-1203</a> ( <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a> ).                                    |

**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. Of the required 51 credits, students must complete a minimum of 17 credits of coursework (not research credit) and at least 11 credits must come from the Core Curriculum, including at least 2 credits in each of Sections A, B, and C. Students must also complete 3 credits of Plant Breeding seminar (HORT 957).

#### Core Curriculum

| Code   | Title                                      | Credits |
|--|--|---------|
| <b>A. Plant Breeding</b>                     |  |         |
| HORT 501                                     |  | 3       |
| HORT 502                                     |  | 1       |
| HORT 812                                     |  | 2       |
| <b>B. Genetics</b>                           |  |         |
| HORT 550                                     |  | 3       |
| AGRONOMY 615                                 |  | 3       |
| PL PATH 517                                  | Plant Disease Resistance                   | 2-3     |
| GENETICS/<br>BIOCHEM 631                     | Plant Genetics and Development             | 3       |
| GENETICS/<br>BIOCHEM/<br>BOTANY 840          | Regulatory Mechanisms in Plant Development | 3       |
| <b>C. Quantitative Genetics and Biometry</b> |  |         |
| HORT 572                                     |  | 4       |
| HORT 811                                     |  | 3       |

|                                |  |   |
|--------------------------------|--|---|
| AGRONOMY 771<br>& AGRONOMY 772 | and  | 2 |
| AN SCI 865                     | Design and Analysis of Biological<br>Studies | 4 |

**D. Additional Core Courses**

|                              |   |     |
|------------------------------|---|-----|
| PL PATH/BOTANY/<br>ENTOM 505 | Plant-Microbe Interactions:<br>Molecular and Ecological Aspects | 3   |
| BIOCHEM/<br>BOTANY 621       | Plant Biochemistry  | 3   |
| GENETICS 633                 | Population Genetics   | 3   |
| BOTANY 500                   | Plant Physiology  | 3-4 |