**PLANT BREEDING AND PLANT GENETICS (PBPG)**

**Certification for Ph.D. Degree**

# Copy distribution

**Chair of PBPG**

**ACADEMIC HISTORY**

Name: Date of Certification:

Undergraduate Work:

Institution(s): Dates Attended:

Major Subjects: Degree (with date):

Previous Graduate Work:

Institution(s): Dates Attended:

Major Subjects: Degree (with date):

**GENERAL REQUIREMENTS**

List course numbers, titles, credits, and institution for the courses offered in fulfillment of requirements. If any requirements are not yet absolved, enter “to be taken*”.* Each course must appear on college transcript(s). Documented college credit received by passing a placement test for a course may count toward a general requirement, if recorded in the college transcript*.*

Biology - Four courses distributed among at least three of the following areas:

1. Biochemistry:

2. Genetics:

3. Structure and/or function of organisms:

4. Population or ethology of organisms:

Statistics - A one-semester course in statistics:

Chemistry - Two semesters of general chemistry.

Two out of four of the following:

1. Physics - A course in physics to include electricity and light:

2. Chemistry - A course in organic chemistry:

3. Mathematics - A course in calculus or matrix algebra:

4. Computer programming – A course covering a compiled or scripting language

**MAJOR COURSE REQUIREMENTS**

Students must satisfy four overlapping sets of requirements:

1. The Graduate School requires 51 credits for the PhD, of which at least 50% (26 credits) must be from courses designed for graduate work. All courses numbered 700 or higher (including 990) count toward the 26-credit requirement, as well as many courses numbered 300 to 699; check the online course guide (<https://public.my.wisc.edu>) to determine if a course meets the "Graduate 50%" requirement.
2. Students must complete 11 credits from courses in the PBPG Core Curriculum (Appendix 1) and document their coursework plan in **Table 1**. There are four categories in the Core Curriculum (A, B, C, D), and at least 2 credits from each of the first three categories (A, B, C) are required. Students can petition to substitute equivalent graduate courses from other institutions to meet Core Curriculum requirements by listing them in Table 1 and appending course syllabi to the certification form. (Note that substitution of courses from other institutions to fulfill category requirements does not reduce the overall credit requirements of the Graduate School.)
3. Students must complete 17 credits of graduate coursework at UW-Madison, excluding 990 and 957 courses. All courses listed in the PBPG Core Curriculum meet this requirement. Students should list non-Core courses that they propose to count toward the 17-credit requirement in **Table 2**.

4. Three credits of PBPG Seminar (Agron/Hort 957) are required. Indicate in the following space which semesters are planned for the seminar course: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Note that a separate *Seminar Completion Form* must be approved by the student's thesis committee at the beginning of the preliminary exam.

**Table 1. Core Curriculum Requirements**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Course Number & Title** | **UW credits** | **Non-UW graduate credits** | **Semester & Year**  |
| **A** |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **B** |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **C** |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **D** |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Total\*** |  |  |  |

**\*Sum of UW and non-UW credits must be ≥11.**

**Table 2. Additional UW graduate courses to complete 17-credit requirement.** (Only needed if sum of UW credits in Table 1 is < 17.Research 990 and Seminar 957 credits do not count.)

|  |  |  |
| --- | --- | --- |
| **Course Number & Title** | **UW credits** | **Semester & Year**  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**MINOR REQUIREMENTS**

Please indicate minor option:

* A (Focused minor in another department/program)
* B (Distributed minor: no additional course work required)

Joint Major or Minor Option A: Joint Major or Minor Professor:

1. Courses completed elsewhere:

2. Courses completed at Wisconsin:

3. Courses to be completed at Wisconsin:

**TIMETABLE FOR ASSESSMENT OF PROGRESS**

|  |  |  |
| --- | --- | --- |
| **Event** | **Recommendation** | **Proposed Date (month, year)** |
| Certification | Before end of 3rd semester |  |
| Research proposal | Before end of 2nd year |  |
| Prelim |  |  |
| Defense & Exit Seminar |  |  |

Summary of research plan (200 word maximum):

Approved by Certification Committee

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Major Professor Student

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Member Member

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Member Member

### PBPG Core Curriculum – updated June 2020

|  |  |
| --- | --- |
| **A** | **Plant Breeding** |
|  | Hort/Agron 501 | Principles of Plant Breeding (3 cr; fall even years) |
|  | Hort/Agron 502 | Techniques of Plant Breeding (1 cr; TBD) |
|  | Agron/Hort 812 | Selection Theory (2 cr; spring even years) |
| **B** | **Genetics** |
|  | Genetics 631  | Plant Genetics (2 cr; fall odd years) |
|  | Hort/Genetics 550 | Molecular Approaches for Potential Crop Improvement (3 cr; every spring) |
|  | Hort/Agron/Genetics 615 | Genetic Mapping (3 cr; spring odd years) |
|  | Plant Path 517 | Plant Disease Resistance (3 cr; fall even years) |
|  | Botany 840 | Regulatory Mechanisms in Plant Development (3 cr; fall even years) |
| **C** | **Biometry** |
|  | Hort/Stat 572 | Statistical Methods for Bioscience II (4 cr; every spring) |
|  | Agron 771 | Experimental Designs (1 cr; spring odd years) |
|  | Agron 772 | Applications in ANOVA (1 cr; spring odd years) |
|  | Agron/Hort 811 | Biometrical Procedures in Plant Improvement (3 cr; fall odd years) |
| **D** | **Additional Courses** |
|  | Plant Path 505  | Molecular Plant-Microbe Interactions (3 cr; every spring) |
|  | Biochem 621 | Plant Biochemistry (3 cr; spring odd years) |
|  | Genetics 633 | Population Genetics (3 cr; spring even years) |
|  | Botany 500  | Plant Physiology (3-4 cr; every spring) |