

DEPARTMENT  
of  
HORTICULTURE & LANDSCAPE ARCHITECTURE  
2024-2025 Graduate Program Handbook



HLA Graduate Web Page: <https://ag.purdue.edu/departement/hla/academics/graduate-program.html>

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**{This is a living document that is subject to change}**

## **GRADUATE PROGRAMS IN HORTICULTURE**

Our graduate program offers thesis-based Doctor of Philosophy (Ph.D.), Master of Science (M.S.) and Landscape Systems and Design Master of Science (M.S.) degrees. Reflecting the research interests of our faculty, graduate students in our program engage in projects that explore fundamental concepts of plant biology, applied aspects of horticulture, and landscape management. The research program in HLA is internationally recognized for its discoveries, extraordinary publication and extramural funding records, and the strong involvement of its excellent faculty in graduate student mentoring. Areas of concentration include plant molecular genetics and epigenetics, plant physiology and stress biology, plant genetics and breeding, plant cellular and developmental biology, sustainable production horticulture, bioenergy, contained environment growing, floriculture, weed science, turf management, horticultural marketing, landscape management, and horticultural social sciences.

The purpose of this document is to serve as a guide to the requirements of the HLA Graduate program. It is the responsibility of each graduate student to comply with all the requirements mandated by the Graduate School of Purdue University. <https://www.purdue.edu/gradschool/>

Graduate school dates and deadlines can be found on the Purdue Graduate School web: <https://www.purdue.edu/gradschool/about/calendar/index.html>

## **NON-DISCRIMINATION AND ANTI-HARASSMENT POLICIES**

Purdue University is committed to maintaining a community, which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach their own potential. In pursuit of its goal, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. Purdue University prohibits discrimination against any member of the University community based on race, religion, color, sex, age, national origin or ancestry, genetic information, marital status, parental status, sexual orientation, gender identity and expression, disability, or status as a veteran. Anti-Harassment in the workplace or the educational environment is unacceptable conduct and will not be tolerated. Purdue University is committed to maintaining an educational and work climate for faculty, staff and students that is positive and free from all forms of harassment. University Policy Office website: <http://www.purdue.edu/policies/ethics/iic1.html>

## **PAID LEAVE POLICIES AND PROCEDURES**

Unless otherwise noted, you are considered Fiscal-year, Benefits-Eligible Graduate Student Staff. You will receive paid leave based on [Graduate Student Staff Benefits \(S-3\)](#) and the [Graduate Staff Employment Manual](#). All leave requests must be made through SuccessFactors. Employees access SuccessFactors by selecting the [Employee Launchpad](#) on [OneCampus](#). Once in the Employee Launchpad, select "Request Time Off" and select the type of leave. Leave balances will be displayed. At the time of submitting the request, a sufficient balance (of the leave type

chosen) must be available to cover the request. Use this [Quick Reference Guide](#) for instructions on submitting a time off request in SuccessFactors.

## **NEW GRADUATE STUDENT ADMISSION REQUIREMENTS**

### **International Student Deadlines for admissions**

- Fall – July 15<sup>th</sup>
- Spring – November 15<sup>th</sup>

### **OFFICIAL TRANSCRIPTS**

The Graduate School requires official transcripts from each college or university that was previously attended. Transcripts should be submitted by the end of the first semester. An official copy of the final transcript showing the date of graduation (title of the degree listed) is required. Transcripts must be in original language of the institution with certified English translations. Students are not allowed to register for subsequent semesters until this requirement is met.

### **WRITTEN ENGLISH PROFICIENCY**

Neither the Graduate school nor the HLA Department have requirements regarding written English proficiency. The major professor and advisory committee are responsible for evaluating student written English performance and may require, as needed, measures to improve written communication skills. Such measures could include classes offered by the Departments of English.

### **ORAL ENGLISH PROFICIENCY REQUIREMENT FOR TEACHING ASSISTANTS**

Assessments will utilize the Oral English Proficiency Test (OEPT) administered by the Oral English Proficiency Program at Purdue. All International graduate students in the department are required to pass the OEPT in order to serve as a teaching assistant. Students who do not pass the proficiency test will be required to pass English 62000 (Classroom Communication) prior to receiving certification to become a teaching assistant. Oral English Proficiency Program website: <http://www.purdue.edu/OEPP>

### **DEPARTMENT COMPUTERS**

The College of Agriculture will provide incoming graduate students with a desktop. The device will be outfitted with the basic software freely available to Purdue students (e.g., Microsoft Word, Excel, PowerPoint and Teams) and will be supported by Purdue Agriculture Information Technology (AGIT). These devices are property of the college and should be returned upon completion of the student's degree. If the major professor requests that the student have a MAC or anything other than the standard desktop, the major professor will be responsible to cover difference of cost.

### **DEGREE AND REGISTRATION REQUIREMENTS**

In order to obtain a degree from Purdue University Graduate school, it is important for a significant component of that degree to be directed by Purdue graduate faculty; therefore, the following registration requirements exist. Registration is defined as formal enrollment in courses

offered by Purdue University, including courses offered via distance learning technologies. Courses include all Purdue University graduate courses approved by the student's graduate committee, including formal coursework and research credits.

Degree requirements, a maximum of **19** credit hours will be allowed in fall/spring semesters and a maximum of **13** credits during summer semester, are permitted. Students on an assistantship are required to register for a minimum of **8** credits fall/spring and a minimum of **3** credits in summer session to keep their assistantship. The office of International Students and Scholars (ISS) has requirement for minimum credits for international students to keep their legal status: <https://www.purdue.edu/IPPU/ISS/Student/F1/legalStatus.html>

The total number of hours of academic credit used to satisfy degree requirements consists of all graduate course credit hours with a grade of C- or better (B- or better for 30000- or 40000-level courses). Those that appear on the Plan of Study and the appropriate number of research credit hours (69800 and 69900) with grades of S will appear on the Purdue transcript. Pass/No Pass courses do not count towards your credit hours nor can they be used on the Plan of Study.

**MASTER OF SCIENCE DEGREE NON-THESIS – 30 credit hours of coursework required**

- At least one-half of the total credit hours used to satisfy degree requirements must be earned while registered at Purdue University. More than 50% of the Purdue credits must be earned through the campus where the degree was completed.
- Up to 6 credits from 300- or 400-level courses; grade of B- or better required

**MASTER OF SCIENCE DEGREE – 30 total credit hours (coursework + research) required**

- **24** course credits required
- At least one-half of the total credit hours used to satisfy degree requirements must be earned while registered at Purdue University.
- More than 50% of the Purdue credits must be earned through the campus where the degree is completed.
- With the exception of PhD students who are re-classified as MS students and leave the Graduate School with the MS degree, 69900 credits may not be used towards the fulfillment of master's degree requirements.
- Up to 6 credits from 300- or 400-level courses; grade of B- or better required

**DOCTOR OF PHILOSOPHY – 90 total credit hours (coursework + research) required**

- **26** course credits required
- At least one-third of the total credit hours used to satisfy degree requirements must be earned while registered for doctoral study at Purdue University.
- 30 credits from an MS degree or professional doctoral degree from any accredited institution may be considered to contribute toward this requirement at the discretion of the student's graduate program. This policy is to provide colleges/schools, departments, and a student's advisory committee flexibility in determining what credits earned from the MS or professional doctoral degree may be applied toward the PhD degree. These credit hours are not subject to the "Five-Year Rule" that prohibits the use of out-of-date coursework on plans of study. You must notify the graduate school with the courses you want used from your Master's degree.

- Up to 6 credits from 300- or 400-level courses; grade of B- or better required

**MASTER OF SCIENCE (MS) IN LANDSCAPE SYSTEMS AND DESIGN – 30 total credit hours (coursework + research) required**

- **24** course credits required
- Completion of LA 50100 (1 credit) and LA 58200 (2 credits) required.
- 6 credits of HORT 69800 research required.
- At least one-half of the total credit hours used to satisfy degree requirements must be earned while registered at Purdue University.
- More than 50% of the Purdue credits must be earned through the campus where the degree is completed.
- With the exception of PhD students who are re-classified as MS students and leave the Graduate School with the MS degree, 69900 credits may not be used towards the fulfillment of master's degree requirements.
- Up to 6 credits from 300- or 400-level courses; grade of B- or better required

**DEPARTMENTAL SEMINAR**

All graduate students are expected to attend the departmental seminar series in fall and spring semesters. The HLA Seminar series schedule is posted at the beginning of the semester. Exceptions are those students who have a conflict in class scheduling. Students who cannot attend seminar(s) should notify the graduate program coordinator. Students with unexcused absences may forfeit eligibility for funding for travel.

**REGISTRATION PROCEDURES**

**Registration is the responsibility of the student.** The graduate program coordinator will notify graduate students regarding class registration deadlines for each term and provide the registration Pin# to the student. **Please note:** Research credit hours HORT69800 (MS) and HORT69900 (PhD) can only be entered and/or modified by the graduate coordinator. Registration information can be found at the following website: <http://www.purdue.edu/registrar/> under the Current Students tab. Full-time Purdue employees can register for a maximum of **7** credits per semester.

To be eligible to hold a graduate staff appointment during any session, an individual must be enrolled as a graduate student in a degree program and be registered for at least **3** credit hours of graduate-level course and/or research credits throughout the entire appointment period. Graduate Staff on appointment during the summer are obligated to register for a minimum of **3** credits during at least one of the summer modules. All students under faculty direction and/or utilizing University facilities must register for research credit hours during each semester or summer semester.

### **PRIVILEGED REGISTRATION**

“Privileged Registration,” for exam or degree only, is a one-time registration. If a student does not complete all degree requirements during that semester, they may register using the scheduling assistant for the next semester under normal registration guidelines. Graduate school approval is required.

### **EXAM ONLY REGISTRATION**

A student who registers for "Exam Only" must submit a positive *Report of the Final Exam* and *Thesis Receipt* by the eighth week of the semester (fourth week of summer semester), or the privileged registration will be revised to a normal registration.

### **DEGREE ONLY REGISTRATION**

A student who seeks to register for "Degree Only" must submit a positive *Report of the Final Exam* and a *Thesis Receipt* by the eighth week of the semester (fourth week of summer semester), or the privileged registration will be revised to a normal registration.

### **RESEARCH ABSENTIA**

A PhD student who has satisfied the preliminary examination requirement and needs to continue research off campus should request to register in absentia for doctoral research (69900).

### **MAJOR PROFESSOR**

Each student must have a major professor by mutual consent. The major professor is the official advisory committee chair and supervisor of the graduate student and their study program.

### **ADVISORY COMMITTEE**

The student and major professor are responsible for selection of an advisory committee, which assists in developing a Plan of Study, mentors research, professional development, and program progress. The committee consists of at least **3** members (MS) and at least **4** members (PhD), including the major professor. At least one member from outside the department, the outside member can be at Purdue or another University. **51%** of the committee members must be certified as regular graduate faculty.

### **ANNUAL ADVISORY COMMITTEE MEETING** – Required each year (before the end of May)

- The department requires each student meet with their advisory committee one time a year. **The first meeting should take place prior to the end of the 2<sup>nd</sup> semester.**
- **Annual Progress Review** form is required. Please let the coordinator know when the meeting is and the form will be sent to your major professor to be completed and turned back in. *This form is kept in the student's file.*
- *Students who fail to have annual committee meetings will not be permitted to register for future semesters until completed.*



## **PLAN OF STUDY**

Graduate students are required to file a Plan of Study before the end of their 2<sup>nd</sup> semester after they have had their first annual committee meeting. Students file their Plan of Study electronically via **MyPurdue**.

### **DEVELOPING THE PLAN OF STUDY**

Students enter with different professional objectives and varying degrees. Students are to develop Plans of Study to fit their interests and career goals. The Plan of Study should include courses leading to and including those at the highest level offered in the student's field of specialization. Students will list all courses that they take or plan to take while pursuing their degree. Grades of C- or higher are acceptable on a Plan of Study. Courses that are Pass/No Pass cannot be listed for credit on the Plan of Study. Students should maintain at least a 3.0 (B) cumulative GPA.

### **COURSE CHANGES TO THE PLAN OF STUDY**

Changes to the Plan of Study can be done electronically via **MyPurdue**. Changes will go through an electronic approval process and must be approved by advisory members/department head.

### **REQUIREMENTS APPLICABLE TO ALL PLANS OF STUDY**

Course credits earned by a student whose graduate study and/or professional activity has been inactive for five years or more cannot be used on a Plan of Study for an advanced degree. Additional requirements that depend on the status of the student when the course was taken.

### **COURSES TAKEN AS A GRADUATE STUDENT (Purdue)**

Neither 10000- nor 20000-level courses may appear on a Plan of Study. Otherwise, requirements for the numerical level (30000 through 60000) of courses are determined by each department or administrative unit subject to the restriction that not more than a total of 6 credit hours of 30000- or 40000-level courses, with a grade of B- or better, may appear on a Plan of Study.

### **COURSES TAKEN NON-DEGREE, TEACHER LICENSE, OR GRAD CERTIFICATE STATUS (Purdue)**

There is no limit to the number of course credit hours that an individual may accumulate while registered, no more than 12 total hours of credit earned in non-degree, teacher license, or graduate certificate status may be used on a Plan of Study. If an application to a degree program is approved during the semester in which a person is enrolled for the 12th credit hour as a non-degree, teacher license, or graduate certificate student, all credits taken prior to and during that semester will be eligible on a Plan of Study, providing the courses are appropriate to the degree and the courses and grades are acceptable to the Graduate school. The above limitation on course credit hours taken in non-degree, teacher license, or graduate certificate status that can be used on a Plan of Study will be modified if excess undergraduate credit also is to be applied to the Plan of Study.

### **COURSES TAKEN AS EXCESS UNDERGRADUATE CREDIT**

Graduate course credits earned while an undergrad at Purdue or other accredited institutions of higher learning may be applied toward an advanced degree if these credits are in excess of any requirements for the baccalaureate degree. Credits must be certified as available for graduate credit by the institution from which the student received his/her baccalaureate degree, but will be accepted only if:

- The student had junior or senior standing when taking the course
- The student received a grade of B or better (pass/non pass option is not acceptable)
- The course was designated as a graduate course.

At Purdue University only, if the work is completed satisfactorily, the academic advisor (or candidate coordinator or other designee) shall then complete the Academic Record Change (Registrar Form 350), which indicates that the course may be used for graduate credit, and submit the form to the registrar in the final semester. The academic advisor's signature will attest to the fact that the credit is in excess of that required for the baccalaureate degree so that the registrar can then enter the notation "available for graduate credit" on the student's record.

The sum of credits earned as undergraduate excess and the credits earned in graduate non-degree, teacher license, or graduate certificate status that can be used on a Plan of Study is limited to 12 credit hours. Any additional conditions under which excess undergraduate credit may be used for graduate credit are determined by the various departments.

### **COURSES TAKEN AT OTHER ACCREDITED INSTITUTIONS OF HIGHER LEARNING**

Subject to the restrictions stated below, credits earned for graduate study at other universities may be applied toward an advanced degree. Only credit hours associated with graduate courses for which grades of B- or better were obtained will be eligible for transfer. Any additional conditions under which credit transfers may be made are determined by the various departments.

### **RESEARCH CREDITS ARE NOT PERMITTED ON THE Plan of Study**

- HORT 69800 and HORT 69900 are not permitted on the Plan of Study.

### **REQUIREMENTS APPLICABLE TO A NON-THESIS MASTERS**

- **30** hours of coursework are required on the Plan of Study

### **REQUIREMENTS APPLICABLE TO A MASTER'S PLAN OF STUDY**

- **24** hours of coursework are required on the Plan of Study for a thesis MS degree. A maximum of **12** Purdue credit hours of coursework at the 50000 and 60000 level used to satisfy the requirements of one and only one Purdue MS degree may be used on the Plan of Study for a second Purdue MS degree. However, if an individual is admitted to a second PhD program and has at least two MS degrees, a maximum of 30 credits from the MS degree which was not used toward the individual's first PhD degree may, with the agreement of the advisory committee, be used toward the second degree.
- Coursework used to satisfy the requirements of a completed MS degree from an institution other than Purdue may not be used on a Purdue MS Plan of Study.



## **REQUIREMENTS APPLICABLE TO A PhD PLAN OF STUDY**

- **26** hours of coursework are required on the Plan of Study.
- Up to 30 credits earned from one (and only one) MS degree, Educational Specialist degree, or doctoral professional degree may be used on the Plan of Study for a PhD degree. For such credits to apply to the doctoral degree program, the number of credits to apply must be noted on the doctoral Plan of Study.

Graduate students using 12 credits from one Purdue MS degree toward another Purdue MS degree may use a maximum of 30 credits from only one of the Purdue MS degrees toward the Purdue PhD degree.

## **HLA CORE COURSE REQUIREMENTS**

Every Masters (MS) and Doctor of Philosophy (PhD) student must take a minimal "core" of courses in addition to electives decided upon with their advisory committee. These courses should be listed on your Plan of Study. Up to 6 credits from 300- or 400-level courses may be added to the Plan of Study but students must receive a grade of B- or better to pass.

- HLA MS (thesis) students are required to have 24 course credits
  - HORT MS Checklist is at the end of the handbook
- HLA MS (non-thesis) students are required to have 30 course credits
  - No Checklist; courses must be approved by student's committee
- HLA PhD students are required to have 26 course credits
  - HORT PhD Checklist is at the end of the handbook
- HLA Landscape Systems and Design MS are required to have 24 course credits
  - HORT LA -MS Checklist is at the end of the handbook

Equivalent courses taken in other departments or elsewhere may substitute for any HLA core course requirement with approval from the major professor, advisory committee and graduate chair except for GRAD612, HORT601, HORT602, HORT603 and HORT695, which are specific to our department. These exceptions approvals must be in writing.

**MS DEGREE REQUIREMENTS – 24 credits of coursework required**

**GRAD 61200:** Responsible Conduct of Research (1 credit)

**HORT 60100:** Planning and Presenting Plant Science Research (1 credit)

**HORT 60200:** Horticulture Research Seminar (1 credit)

- MS students are required to take this course one time for credit.

**HORT 69500:** Final Defense Seminar (0 credit Pass/No Pass course)

- The graduate coordinator will register for this course in your final semester. This is a 20-30-minute seminar prior to your final defense that is open to the department.
- A title, abstract and photo are due to the grad coordinator 2 weeks prior to exam date.
- This course cannot be listed on your Plan of Study.

**Analytical Tools Course** - Select from list options (must take a minimum of 3 credits)

**AGEC 65000:** Application of Quantitative Analysis: Econometrics I (3 credits)

**AGEC 65100:** Application of Quantitative Analysis: Econometrics II (3 credits)

**AGRY 54500:** Remote Sensing of Land Resources (3 credits)

**ASEC 59000:** Special problems & Academic publication (3 credits)

**ASM 54000:** Geographical Information System (3 credits)

**BIOL 58200:** Ecological Statistics (3 credits)

**COM 58500:** Qualitative Methods in Communication Research (3 credits)

**ECON 56200:** Econometrics I (3 credits)

**ECON 67100:** Econometrics I (2 credits)

**ECON 67200:** Econometrics II (2 credits)

**ECON 67400:** Micro-Econometrics (2 credits)

**ENTM 69200:** Science Writing (1 credit)

**FNR 58000:** Research Methods for Natural Resource Social Science (3 credits)

**FNR 64700:** Quantitative Methods of Ecologist (3 credits)

**HIST 61000:** Theory and Methods (3 credits)

**HORT 53000:** Introduction to Computing for Biologists (3 credits)

**HORT 53100:** Applied Plant Genomics (2 credits)

**STAT 50300:** Statistical Methods for Biology (3 credits)

**STAT 51100:** Statistical Methods (3 credits)

**STAT 51200:** Applied Regression Analysis (3 credits)

**STAT 51600:** Basic Probability and Applications (3 credits)

**PHD DEGREE REQUIREMENTS – 26 credits of coursework required**

**GRAD 61200:** Responsible Conduct of Research (1 credit)

**HORT 60100:** Planning & Presenting Plant Science Research (1 credit) take in first year

**HORT 60200:** HLA Research Seminar (1 credit) PhD (for 2 credits total)

- PhD students are required to take this course twice for credits prior to prelim exam

**HORT 60300:** Grants and Grantsmanship (1 credit)

**HORT 69500:** Final Defense Seminar (0 credit)

- The graduate coordinator will register for this course in your final semester. This is a 20-30-minute seminar prior to your final defense that is open to the department.
- A title, abstract and photo are due to the grad coordinator 2 weeks prior to exam date.
- This course cannot be listed on your Plan of Study.

**Analytical Tools Course** - Select from list options (must take a minimum of 5 credits)

**AGEC 65000:** Application of Quantitative Analysis: Econometrics I (3 credits)

**AGEC 65100:** Application of Quantitative Analysis: Econometrics II (3 credits)

**AGRY 54500:** Remote Sensing of Land Resources (3 credits)

**ASEC 59000:** Special problems & Academic publication (3 credits)

**ASM 54000:** Geographical Information System (3 credits)

**BIOL 58200:** Ecological Statistics (3 credits)

**BIOL 59500:** Ecological Statistics (3 credits)

**COM 58500:** Qualitative Methods in Communication Research (3 credits)

**ECON 56200:** Econometrics I (3 credits)

**ECON 67100:** Econometrics I (2 credits)

**ECON 67200:** Econometrics II (2 credits)

**ECON 67400:** Micro-Econometrics (2 credits)

**ENTM 64200:** Analysis of Ecological Data (3 credits)

**ENTM 69200:** Science Writing (1 credit)

**FNR 58000:** Research Methods for Natural Resource Social Science (3 credits)

**FNR 64700:** Quantitative Methods of Ecologist (3 credits)

**HIST 61000:** Theory and Methods (3 credits)

**HORT 53000:** Introduction to Computing for Biologists (3 credits)

**HORT 53100:** Applied Plant Genomics (2 credits)

**STAT 50300:** Statistical Methods for Biology (3 credits)

**STAT 51100:** Statistical Methods (3 credits)

**STAT 51200:** Applied Regression Analysis (3 credits)

**STAT 51400:** Design of Experiments (3 credits)

**STAT 51600:** Basic Probability and Applications (3 credits)

**STAT 52400:** Applied Multivariate Statistics (3 credits)

**LANDSCAPE SYSTEMS & DESIGN MS DEGREE REQUIREMENTS - 24 credits of coursework required**

**GRAD 61200:** Responsible Conduct of Research (1 credit)

**HORT 60100:** Planning and Presenting Plant Science Research (1 credit)

**HORT 60200:** Horticulture Research Seminar (1 credit)

- MS students are required to take this course one time for credit.

**HORT 69500:** Final Defense Seminar (0 credit Pass/No Pass course)

- The graduate coordinator will register for this course in your final semester. This is a 20-30-minute seminar prior to your final defense that is open to the department.
- A title, abstract and photo are due to the grad coordinator 2 weeks prior to exam date.
- This course cannot be listed on your Plan of Study.

**LA 58200:** Contemporary Issues in LA Systems, Design, & Practice (2 credits)

- A broad survey of issues affecting multiple systems, informing design methods, and shaping contemporary landscape architecture practice. Examination of factors influencing contemporary issues and their impact on application and theories. Methodological approaches for responding to issues involving the integration of multiple design factors and variables.
- Prerequisite: Accredited undergraduate degree in landscape architecture; or completion of summer course providing foundational skills and background in field of landscape architecture

**LA 50100:** Research Methods in Landscape Systems Theory and Design (1 credit)

- Developing proficiency in multiple approaches for supporting research in landscape theory and systems. Analysis tools and techniques. Modeling relationships between research variables and types of methods. Information bases for social, ecological, and physical information. Analyses of tools and techniques for both theory-driven research and systems design evaluation.
- Prerequisite: Accredited undergraduate degree in landscape architecture; or completion of summer course providing foundational skills and background in the field of landscape architecture.

## **OTHER HLA GRADUATE COURSE OFFERINGS**

**AGRY/HORT 51000:** Turfgrass Science (3 credits). Instructor: Bigelow. Typically offered in fall.

**AGRY 51200:** Integrated Turfgrass Systems (3 credits). Instructor: Patton. Typically offered in fall.

**HORT 51300:** Upper Division Undergrad and Grad course (1 credit). Instructor: Raghothama.  
Typically offered in fall.

**HORT 53000:** Introduction to Computing for Biologist (3 credit). Instructor: Varala. Typically offered spring semester.

**HORT 53100:** Applied Plant Genomics (2 credits). Instructor: Varala/Li. Typically offered fall during even-numbered years.

**HORT 55100:** Plant Responses to the Environment (3 credits). Instructor: Mickelbart. Typically offered in the fall semester.

**HORT 64000:** Metabolic Plant Physiology (3 credits). Instructors: Widhalm and Dudareva. Typically offered in the fall during odd-numbered years.

**LA 50100:** Research Methods for Design Applications (1 credit). Instructor: Thompson. Typically offered in fall semester.

### **NON-THESIS MASTER'S DEGREE EXAMINATION**

Non-thesis MS candidates may be examined over coursework (if appropriate) and directed project (optional). A form 7 must be initiated in the graduate database. This is a conference of the committee in the absence of the candidate.

### **THESIS MASTER'S DEGREE FINAL ORAL EXAMINATION**

A *Request for Appointment of Examining Committee (G.S. Form 8)*, must be submitted electronically by the graduate program coordinator at least 2 weeks prior to the examination date. The final examination committee will consist of your major professor and advisory committee.

The examination will be open to all faculty, and appropriate notice of time and place of the thesis presentation and final examination shall be announced in the department at least 5 days prior to the examination. A 30–40-minute seminar immediately before the final examination is open to the public. M.S. candidates are examined on both major and minor areas of specialization as well as their thesis research.

Upon completion of the exam, the committee will deliberate on the outcome of the examination and thesis approval. Each member of the Master's examination committee will complete the outcomes rubric. The chair will ensure that the *Report of Master's Examining Committee (G.S. Form 7)* is completed. Each committee member must also sign a *Thesis Acceptance Form (G.S. Form 9)*. If the examination is unsatisfactory, a final examination can be repeated the following semester. A new request (*G.S. Form 8*) must be submitted.

### **PRELIMINARY EXAMINATION FOR PhD STUDENTS**

PhD students are required to complete a preliminary examination, which consists of a written portion and oral defense, students must pass the written prelim before scheduling an oral exam. To become eligible to take the prelim exam, the student must have an approved Plan of Study and have satisfactorily completed most, if not all of the formal coursework required. At least 2 academic semesters (summer included) must elapse and be devoted to research between passing the preliminary examination and the final examination. For example, if the prelim exam is taken in Fall, students could register for final examination the following fall if registration is continuous (two sessions between prelim and final exam). It is recommended that full-time graduate students submit the prelim exam proposal no later than the end of the student's third year in the Ph.D. program. Students who do not comply with this timeline will need to present a plan to the chair of the graduate committee to be cleared to register for subsequent semesters.

In general, the Preliminary Examination Committee will consist of the student's Graduate Advisory Committee. The student's Major Professor will act as Prelim Exam Committee Chair. If needed, faculty outside the student's advisory committee may be solicited to serve on the Preliminary Examination Committee *In lieu of* Advisory Committee members as determined by the graduate

program chair (department head). The prelim exam committee must consist of a minimum of three members of the graduate faculty. At least 51% of prelim committee members must have regular graduate faculty certification. All members of the examining committee are to be notified of the scheduled examination. Although only three committee members are required by the graduate school, Prelim Exam Committees frequently have four voting members.

The Prelim Exam Committee Chair, after consulting with the Prelim Exam Committee, will determine on the specific format of the prelim as one of the two following:

Track I: Proposal-based; Track II: knowledge-based

### **Track I: Proposal-based preliminary examination**

The basis of the preliminary examination is an original research proposal developed by the student based on their dissertation topic. The written proposal should contain the following elements:

- Background and introduction of the research topic
- Hypothesis/research objectives
- Approaches to test the hypothesis/achieve the research objectives, and expected outcomes
- Research progress thus far to support the research objectives
- Possible caveats and alternatives
- References

The length of proposals generally falls within 15 to 20 pages (including figures and tables but not including references). Students are encouraged to take HORT 60300 (Grants and Grantsmanship) prior to the preliminary examination to assist in preparation of the written document.

The student initiates the process for their preliminary examination by submission of a 1-page preproposal abstract to the graduate program coordinator. The graduate program coordinator will distribute the preproposal abstract to the Student's Advisory Committee and verify each member's participation on the Preliminary Examination Committee. The Preliminary Examination Committee Chair, in consultation with the committee, must approve the abstract in order for the student to proceed with development of the full proposal.

The Preliminary Examination Committee Chair will meet with the student to facilitate preparation of the full proposal. When the full proposal is approved by the Chair, it will be submitted to the graduate coordinator for distribution to the full Preliminary Examination Committee.

The written proposal will be evaluated by the Prelim Exam Committee. Each member will submit comments and a "pass" or "fail" assessment of the proposal to the graduate program coordinator. The Prelim Exam Committee Chair will transmit the evaluations to the student within 2 weeks after submission. A minimum of 3 passing assessments must be obtained before proceeding to the oral examination. If a student's proposal is not approved by the Prelim Exam Committee, the student may revise and resubmit the proposal for reconsideration.



Upon approval (pass) of the written proposal by the Prelim Exam Committee, the graduate program coordinator will request to the Graduate school that an oral exam be held. Graduate School form 8, *Request for Appointment of Examining Committee*, will be submitted by the graduate program coordinator. The examination must be scheduled with the Graduate school at least two weeks prior to the intended date of the oral examination.

During the oral phase of the Prelim exam, the committee will examine the student on the proposal submitted, but may ask questions related to the written phase of the exam and topics beyond but relevant to the immediate specialization area of the proposal. All Preliminary Examination Committee members have voting status and will judge the student's performance during the oral examination. No more than one dissenting vote is allowed for a student to pass the exam, regardless of the number of preliminary exam committee members. If a student fails the Prelim Exam, they may petition the head of the departmental graduate program for a second and final opportunity to attempt the examination the following semester. Graduate School approval is required to take the prelim exam a third time after not passing the first two attempts.

### **Track II: Knowledge-based preliminary exam**

The student should first consult with the Prelim Exam Committee to determine a date when the knowledge-based exam questions will be sent to the student from the committee. The student then initiates the process by contacting the graduate coordinator to provide this date. The graduate coordinator will confirm with all advisory committee and verify each member's participation on the preliminary examination committee.

Exam questions will be designed by each committee member to test general knowledge of the field, with emphasis on the student's particular sub-discipline, coordinated by the exam committee chair. Questions will be sent to the student on the agreed date by the committee chair through email. The student will submit a written response to all questions following a timeline up to two weeks directed by the committee chair. Each committee member will submit comments and a "pass" or "fail" assessment of the written exam to the Prelim Exam Committee Chair and the graduate program coordinator.

The Prelim Exam Committee Chair will transmit the evaluations to the student within 2 weeks after the submission of student responses. A minimum of 3 passing assessments must be obtained before proceeding to the oral examination, and the Prelim Exam Committee Chair will guide the student to coordinate the date of the oral exam. The student should inform the graduate program coordinator of the date of the oral examination at least two weeks ahead of time. If a student's written exam is not approved by the Prelim Exam Committee, the student may revise and resubmit the answers for reconsideration following a timeline determined by the chair.

Upon approval (pass) of the written exam by the Prelim Exam Committee, the graduate program coordinator will request to the Graduate School that an oral exam be held. Graduate School form 8, *Request for Appointment of Examining Committee*, will be submitted by the graduate program coordinator. The examination must be scheduled with the Graduate School at least two weeks prior to the intended date of the oral examination.

During the oral preliminary examination, the student will be asked to respond to questions of a general and specific nature. Questions are expected to examine the student's general knowledge and the specific knowledge of his or her field of research. Questions related to the responses provided in the written preliminary examination may also be asked.

All Preliminary Examination Committee members have voting status and will judge the student's performance during the oral examination. No more than one dissenting vote is allowed for a student to pass the exam, regardless of the number of preliminary exam committee members. If a student fails the Prelim Exam, they may petition the head of the departmental graduate program for a second and final opportunity to attempt the examination the following semester. Graduate School approval is required to take the prelim exam a third time after not passing the first two attempts.

### **Ph.D. FINAL EXAMINATION**

At least 2 academic semesters must elapse and be devoted to research between passing the preliminary examination and the final examination.

*A Request for Appointment of Examining Committee (Form 8)*, must be submitted electronically by the graduate program coordinator **at least 2 weeks prior to the examination date**. A final oral examination will be held in which the candidate defends the dissertation and demonstrates adequate performance for receiving the Ph.D. The examining committee consists of the advisory committee and the major professor. There must be at least four members on the examining committee, one of whom must be from outside the department. The examination will be open to all faculty, and appropriate notice of time and place of the dissertation presentation and final examination shall be announced in the department at least 5 days prior to the examination. A 20-30minute seminar before the final examination is open to the department. Confidential information can be excluded from the opening presentation.

Upon completion of the exam, the committee will deliberate on both the outcome of the examination and of the dissertation approval. Each member of the examination committee will complete the rubric forms provided by the graduate coordinator via email. The chair ensures that the *Report of the Final Examination (Form 11)* is completed. Each committee member must also sign a *Thesis Acceptance Form (Form 9)*.

If the examination is unsatisfactory, a candidate must wait at least until the following semester (including summer semester) to repeat the final examination. A new request (*Form 8*) must be submitted.

### **THESIS/DISSERTATION**

Thesis M.S. and all Ph.D. students must submit an approved thesis or dissertation, respectively. Thesis/dissertation procedures can be found at (recommend to follow Purdue guidelines)

<https://www.purdue.edu/gradschool/research/thesis/index.html>

A first draft of the thesis should, ideally, be in the hands of the major professor at least **six** weeks before the end of the session in which conferral of the degree is expected. An electronic copy of the thesis/dissertation must be submitted to the major professor at least three weeks before the end of the session in which the degree is to be conferred. Each member of the examining committee must receive a copy of the thesis/dissertation at least two weeks before the date of the final oral examination. Upon passing the final examination and thesis/dissertation approval, the student should prepare a final copy of the thesis or dissertation, incorporating required modifications designated by the examining committee.

Final deposition is arranged by contacting the Graduate school Thesis Office. A copy of the filed document is provided to the major professor and to members of the advisory committee upon request.

Plagiarism Screening using iThenticate by the major professor must take place prior to completing the online form for dissertation approval. Major professors can obtain iThenticate accounts from the Graduate School.

A *Thesis Receipt (G.S. Form 16)* from the Thesis Format Office, acknowledging proper deposit of the thesis, must be received by the Graduate School no later than 4 p.m. on the last working day of the academic semester of graduation. A thesis may be held in confidential status for a limited period of time.

### **THESIS/DISSERTATION AND PUBLICATION REQUIREMENTS**

The Horticulture & Landscape Architecture Department expects each M.S. thesis and Ph.D. dissertation to result in at least one publication in a refereed journal. It is recommended that the thesis include an abstract, literature review (as Chapter I), and manuscripts Chapters with citations. Appendices may be included as desired that might contain no publishable material, improvement of methods, etc. <https://www.purdue.edu/gradschool/research/thesis/index.html>

### **GRADES AND INDEX REQUIREMENTS**

A graduate student is expected to maintain a grade point average of B (3.0/4.0 GPA) or better. Indices below this level are marked “less than good standing” on the transcript.

A student who falls below a 2.0 semester GPA and/or possesses less than a 2.0 cumulative GPA will be placed on academic probation. Any student on academic probation whose spring semester GPA and cumulative GPA (at the close of the spring semester) falls below 2.0 will be dropped from the university.

If a graduate student is on academic probation and the semester GPA or the cumulative GPA is 2.0 or above, the student will remain on probation. Academic standing is not addressed during Summer Session. This University Senate-approved policy will be administered as follows:

- If: Semester GPA and Cumulative GPA are  $\geq 3.0$  = Good Standing
- If: Semester GPA or Cumulative GPA is 2.0 - 2.99 = Less than Good Standing
- If: Semester GPA or Cumulative GPA is  $< 2.0$  = Probation
- If: On probation and both Semester GPA and Cumulative GPA are  $< 2.0$  = Drop
- If: On probation and Cumulative GPA is  $< 2.0$  but Semester Index is  $\geq 2.0$  = Probation
- If: On probation and Semester GPA is  $< 2.0$  but Cumulative GPA is  $\geq 2.0$  = Probation
- If: On probation and Semester GPA is  $\geq 2.0$  and Cumulative GPA is  $\geq 2.0$  = Off Probation  
(Less than Good Standing may be applicable.)

Any grade changes made after the initial GPA calculations will result in a recalculation of GPAs and academic standing or drop status. A graduate student appropriately dropped from the university must reapply. A graduate student who has been dropped for the first time is not eligible to register for at least one fall or spring semester (and summer session if applicable) following drop status. Graduate students dropped a second time will normally not be considered for readmission to Purdue University Graduate School for at least one year. For more information, see: [http://www.purdue.edu/studentregulations/regulations\\_procedures/scholdeficiency.html](http://www.purdue.edu/studentregulations/regulations_procedures/scholdeficiency.html)

A graduate student is also expected to earn S grades for research registration. Two consecutive semesters of U grades for research registration mandate that the department take formal action and inform the student, in writing, and the Graduate School with regard to discontinuation or conditions for continuation of the student's graduate study. In any event, the student's progress should be reviewed each semester by the student's department. The student's progress also may be reviewed by the Graduate School. Should the student fail to perform in either coursework or research on a level acceptable to the advisory committee, the departmental graduate committee, or the dean of the Graduate School, they may be asked to discontinue graduate study at Purdue.

The GPA for graduate students includes all grades earned in 50000- and 60000-level courses taken while enrolled as a graduate student, except FR, GER, RUSS, or SPAN 60100, 60300, or 60500 plus grades received in 30000- or 40000-level courses taken while in the graduate program (once they are approved as part of the graduate Plan of Study). When 30000- and 40000-level courses are listed on the approved Plan of Study, and completed with a B- or better grade, grades associated with those courses will be added into the graduation index. If a student receives less than a B- in a 30000- or 40000-level course, then the course must be retaken or removed from the Plan of Study.

If a non-repeatable Purdue course taken by a graduate student is repeated for a grade, the Registrar's Office will delete the first grade from a student's graduation index, providing that specific course was originally taken while the student was enrolled as a graduate student. Neither excess undergraduate Purdue courses nor courses transferred from another institution are used in computing the graduation index.

Courses taken as pass/not pass or satisfactory/unsatisfactory are unacceptable on plans of study. Grade option changes will not be approved by the Graduate School except in cases of a clerical or mechanical error during the normal drop/add period. Coursework required for a degree will be complete when a student obtains grades for all courses on the Plan of Study that meet grade requirements of the department and the Graduate school.

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*Graduate Council Report 17-18a Approved by the Graduate Council on May 8, 2017*

<https://www.purdue.edu/gradschool/documents/gpo/council/GCdoc17-18aGradFacultyAdvising-MentGuidelines.pdf>

### **Guidelines for Graduate Student Mentoring and Advising**

Preamble: Purdue University is committed to providing its graduate students with a world-class education and equipping them to become leaders in society and in the global workforce. Key to success is the relationship between the student and major professor. The advisory role of the major professor is arguably the most significant factor influencing quality of education, development of professional skills, and overall career success for Purdue graduate students. Consequently, it is imperative that graduate faculty members provide mentoring and advising concomitant with a preeminent university. The principles articulated in this document were endorsed by the Graduate Faculty via approval by the Graduate Council to help assure that every graduate student receives the best educational experience Purdue has to offer.

### **General Advising Guidelines**

Serving as a major professor involves being supportive and engaged in promoting academic and career success for Purdue graduate students.

1. Although the Graduate School offers orientation programming for new students and departments and colleges typically also provide orientation semesters, most students are not fully aware of academic expectations, the best ways to navigate their graduate program, and the employment opportunities available to them when they graduate. Major professors should:
  - o work with their students to develop an academic plan (to include periodic milestones along the way) that will help them progress through their degree program in a timely manner and properly prepare them for success after graduation;
  - o encourage participation in professional development activities, relevant to their students' professional goals;
  - o assist their students in assembling their advisory and examining committees; and
  - o discuss with their student's long-term career objectives and provide guidance in securing summer internships (when appropriate) and permanent job placement. This assistance may include introductions to colleagues in industry, government, or at other universities, and/or referrals to resources on campus, such as the Center for Career Opportunities.
2. On occasion, major professors may have to change the nature of their advisory relationship with their student. This can occur when professors retire or move to another university, or when students change major professors. In such cases, major professors should do all that is possible to ensure that their students have a pathway to completion and assist their students during the transition.
3. Research style and organization can vary widely among faculty. Students are often not aware of what is expected and how progress is measured. Major Professors should make their expectations for research and their view of what constitutes satisfactory progress clear. Furthermore, at the onset of thesis/dissertation research, students should be given a clear picture of the accomplishments expected for degree completion.

4. An important part of developing as a scholar and successfully progressing through a degree program involves receiving feedback. Major Professors should provide progress reviews to their students at least annually and should be accessible so that students can receive input when needed.

### **Guidelines for Supervising Graduate Staff**

Graduate faculty oversee research, but in many cases, they also supervise graduate teaching assistants, graduate research assistants, and other graduate staff. In these cases, faculty members have additional responsibilities.

1. Faculty supervisors should be familiar with department, college, Graduate School, and university policies regarding graduate staff employment and should refer students to the appropriate sources for employment information, such as the *Graduate Staff Employment Manual*, department resources (if available), and the Office of Human Resources.
2. Faculty should provide graduate staff working as research, administrative, and/or teaching assistants clear expectations of the roles, responsibilities, and professional benefits that come with that employment, and the associated time commitments should be consistent with university policy. For example, students on 50 CUL and 25 CUL appointments are expected to work approximately 20 and 10 hours per week respectively.
3. A common source of stress among graduate students is the uncertainty associated with funding. Loss of funding or gaps in funding can result in student attrition. Major Professors should discuss the funding situation with their students, keep the students apprised of any anticipated changes as soon as this information becomes known, and discuss contingency options in the event funding becomes unavailable. Where possible, the academic unit should ensure continuity of funding, except in cases of poor academic or work performance.
4. Faculty members, departments, and colleges should regularly review graduate student salary levels to assure that they are appropriate.

### **Guiding Principles**

A good student-advisor relationship is an important ingredient in helping students to be productive in their research and requires establishing reasonable expectations. While it is difficult to define “reasonable expectations” in a broad sense, the following principles and practices can be helpful in achieving a positive climate for discovery in which graduate students can thrive.

1. Major Professors should take care in not overburdening their graduate students: there should be realistic expectations, recognizing that students have the right to a personal and social life outside of work and time off, periodically, to rest and relax. Major Professors should avoid working conditions that preclude their students from having a manageable work-life balance, as this is not in the best interest of Purdue’s graduate students.
2. The best major professors are understanding, supportive, and empowering, providing enough guidance to allow students to explore and discover without over directing or micromanaging. Students should be encouraged by their major professors to interact with their advisory and examining committees, as these committee members can provide multiple perspectives that can be beneficial. They should also encourage other types of mentoring relationships where appropriate.
3. The best major professors put their students first amid competing priorities.
4. Students should be given opportunities to attend and participate in professional development activities as these are important to prepare them for the competitive job market.

Projects in which faculty members involve students should be appropriate and consistent with providing a valuable educational work or research.

