



Department of Plant Pathology

PLANT PATHOLOGY GRADUATE PROGRAM HANDBOOK

M.S. and Ph.D.

Online (pdf): plantpath.osu.edu/graduate/grad-handbooks

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THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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Common acronyms and terms

- APS** – American Phytopathological Society, the premiere professional society for plant pathologists
- APT** – Appointments, Promotion and Tenure document that details criteria and procedures regarding faculty appointments
- ASV** – American Society for Virologists
- ATI** – Agricultural Technical Institute, two-year technical college on the campus of the Ohio Agricultural Research and Development Center in Wooster, part of CFAES
- Buckeyelink** – access enrollment and other student records at buckeyelink.osu.edu
- Carmen, or CarmenCanvas** – the online learning management system for courses (carmen.osu.edu). Note, not all instructors use CarmenCanvas for their courses.
- ESGP** – Environmental Sciences Graduate Program (multi-disciplinary; some of our faculty advise ESGP graduate students)
- FTE** – Full time equivalent, describe the number of full-time hours in a hired appointment
- GE** – General Education, refers to undergraduate curricula
- GRA** – Graduate Research Associate (graduate funded work appointment)
- Gradforms** – gradforms.osu.edu, where most Graduate School forms can be accessed
- GSC** – Graduate Studies Committee (Plant Pathology committee)
- HCS** – OSU Department of Horticulture and Crop Science
- IDI** – OSU Infectious Diseases Institute
- MCIC** – Molecular and Cellular Imaging Center; provides equipment and services for microscopy, genomics and molecular biology
- MPHM** – Master in Plant Health Management, a professional degree administered by the Department of Plant Pathology and the Department of Entomology
- MSA** – Mycology Society of America
- OTDI** – Office of Technology and Digital Innovation (it.osu.edu). Technology and computer support for the Ohio State community.
- OSP** – Office of Sponsored Programs, handles research administration for sponsored projects at OSU
- OSU** – a common but unofficial abbreviation for The Ohio State University (not to be confused with Oregon State University or Oklahoma State University). Use The Ohio State University on first mention; thereafter refer to as Ohio State.
- OSU Extension** – statewide network and disseminator of research and technologies to stakeholders and Ohio citizens
- PI** – Principal Investigator
- PPGSA** – Plant Pathology Graduate Student Organization
- SAC** – Student Advisory Committee
- SENR** – OSU School of Environment and Natural Resources, part of CFAES
- SON** – Society of Nematologists
- USDA** – U.S. Department of Agriculture
- USDA NIFA** – USDA National Institute of Food and Agriculture
- USDA ARS** – USDA Agricultural Research Service; research arm of this agency
- Workday** – Human resources system for hiring and benefits (workday.osu.edu). Funding accounts are designated by “worktags.”

Preface

Welcome to the Department of Plant Pathology. Graduate education is very important to our mission and a major focus of our department. We value the strong and positive interactions between students, faculty and staff. Although this handbook is a guide for your degree program, it is your advisor and others who will help you develop your program and answer questions that arise.

We recognize that each student has individual interests and strengths. Although there are specific graduate program requirements in the department, your individual program will reflect your specific objectives and goals.

Typically, students will have a major advisor assigned before starting the graduate program, although occasionally a student will need to select an advisor after enrolling. The selection of your major advisor is very important and should be done as early as possible. Your advisor will be a mentor and supervisor, and will be an important guide for you throughout your graduate program and career.

In addition to the Plant Pathology Graduate Student Handbook, you should retain a copy of the university's Graduate School Handbook: gradsch.osu.edu/handbook. The Graduate School Handbook "contains the rules, policies, and guidelines applicable to the graduate community at The Ohio State University." Additional rules and requirements are specified by the Department of Plant Pathology's Graduate Studies Committee (GSC).

There are periodic policy changes, so always refer to the current online version of the Graduate School Handbook: gradsch.osu.edu/handbook

Early in your program you should consult with your major advisor and establish a Student Advisory Committee (SAC). You, your major advisor and SAC should meet to determine the courses to be taken for your graduate degree. This list of courses should be put on Student Plan of Study and placed in your file. It is important to discuss thesis or dissertation research with your SAC as early as possible. We hope the following guidelines will be helpful to you in development of your graduate program. Although some of the departmental policies given in this edition of the Handbook may change, you will be expected to fulfill the degree requirements that are in effect at the time you begin your graduate program. In the case of substantial revisions to program requirements, the Graduate School and/or the Department of Plant Pathology will clarify how this may impact your program requirements.

Graduate Student Code of Research Standards and Misconduct

Source: Graduate School Handbook, Appendix C

Graduate students and Graduate Faculty aspire to professional behavior that is consistent with the highest ethical and moral standards. The Graduate School at The Ohio State University expects that graduate students will demonstrate responsibility and integrity in pursuing their creative and scholarly interests. The academic enterprise is dependent upon such behavior. Graduate students are responsible for learning about appropriate standards for ethical research and scholarly conduct and for following all university policies related to ethical research and scholarly conduct.

When graduate students join the Ohio State community, they become members of disciplinary, scholarly, and professional communities that extend beyond the university. Graduate students are expected to learn, respect, and abide by the professional codes of ethics and responsibilities that are commonly accepted in their field of study or area of research. These codes include but are not limited to the following: a responsibility to contribute an original body of work to one's chosen discipline and the recognition that one's work is based on the work of others which must be respected and properly acknowledged. Graduate students also have the responsibility to treat university faculty, staff, and other students respectfully and professionally.

Graduate Faculty, advisors, and graduate programs should actively encourage their students to participate as members of their chosen disciplinary, scholarly, and professional communities. Graduate students should be encouraged to seek and share knowledge wherever and whenever possible. Academic advisors and other faculty members should educate graduate students through example and discussion, addressing such issues as academic honesty, research, publication, recruitment, and hiring practices, and applicable fellowship and graduate associateship responsibilities. Disciplinary codes of ethics and norms should be discussed among graduate students and faculty. Such communication is a means of setting high standards of behavior in graduate study and beyond.

Graduate students are expected to be familiar with relevant policies and procedures at The Ohio State University. Detailed information may be found in the University's Code of Student Conduct is available online (studentlife.osu.edu/resources/). Graduate School staff may be contacted at (614) 292-6031 for additional assistance.

Academic Standards

Policies for academic standards are set by the Graduate School and the Department of Plant Pathology. The minimum Academic and Professional Standards established by the Graduate School are described in the Graduate School Handbook, Section 5



What is "good standing?" What grades do I need to maintain?

Good Standing 5.1

To be in good standing in the Graduate School, a student must maintain a graduate cumulative point-hour ratio (CPHR) of 3.0 or better in all graduate credit courses and must maintain reasonable progress toward Graduate School or graduate program requirements. A doctoral student who has had two unsatisfactory attempts at the candidacy examination or the final oral examination or professional doctoral examination is not in good standing.

Professional Standards 5.2

Graduate students are required to observe professional ethical standards in their graduate studies and research. Graduate students should talk with their advisors and their Graduate Studies Committee (GSC) Chair if they have questions about the specific expectations of the local graduate program. The Graduate Student Code of Research and Scholarly Conduct (Appendix C) describes the Graduate School's general expectations for ethics and conduct in graduate research and scholarship. University processes exist to address allegations of research misconduct by graduate students. Graduate students have the responsibility to be aware of and to follow these standards.

Admissions

Admission to the Plant Pathology Graduate Program is administered by the department's GSC. In addition to the university online application, students must submit transcripts of all college/university-level coursework, three letters of recommendation, a statement of intent describing experience and professional interests, and a curriculum vita. Applicants whose native language is not English must submit an approved English proficiency examination. Specific university requirements can be found on the Graduate Admissions website: gpadmissions.osu.edu/intl/english-proficiency.html.

A four-year baccalaureate or higher degree, or its equivalent, from an accredited college or university is required prior to beginning graduate studies. Applicants normally should have a cumulative grade point average of 3.0 or higher in all previous college coursework. All available information is considered by members of the GSC for a decision regarding admission. Prior to acceptance of the applicant, one or more members of the Graduate Faculty in Plant Pathology must tentatively agree to advise the student.

International students must provide evidence that they have sufficient financial support as a condition for admission. A Graduate Research Associateship (GRA) offer can be used as evidence of financial support. This requirement is administered by the Graduate and Professional Admissions Office.

Graduate Studies Committee (GSC) Responsibilities

The GSC is responsible for the conduct and administration of graduate programs. General responsibilities are given in Section 13 of the Graduate School Handbook and the Plant Pathology Pattern of Administration (oaa.osu.edu/appointments-reappointments-promotion-and-tenure). The GSC of the Plant Pathology graduate program is charged with:

1. making decisions on admitting students to the Plant Pathology graduate program;
2. awarding departmental Graduate Associateships;
3. monitoring departmental resources allocated to graduate student support by the Department Chair;
4. ensuring that graduate program assessment procedures are appropriate and applied consistently; and
5. keeping the Department Chair apprised of the status of all aspects of the departmental graduate program.

Who is on the Plant Pathology GSC?

Plant Pathology's Graduate Studies Committee (GSC)

The GSC consists of four members of the Graduate Faculty and one Ph.D. graduate student (Plant Pathology Pattern of Administration). The Department Chair and Associate Chair are non-voting members of the GSC.

Faculty members of the committee are elected to four-year terms. The graduate student member is appointed to a one-year term. At the request of the Department Chair, two candidates for this position are submitted by the Plant Pathology Graduate Student Association for faculty vote. The student member is a full voting member of the committee except in any area that, in the opinion of the GSC Chair, might compromise confidentiality. Approval to admit or offer financial support requires four out of five favorable votes.

Part Time Students

Students who wish to pursue a graduate degree on a part-time basis (i.e., students registered for 7 credit hours or less per semester prior to their Candidacy Exam) will be admitted only when there is evidence that the student can make timely progress toward the desired degree.

Graduate Student Funding

Stipend rates - The department has two stipend rates for Graduate Research Associateship appointments, an M.S. and pre-candidacy Ph.D. stipend rate, and a post-candidacy Ph.D. stipend rate. A minimum stipend rate is established by the Graduate School.

Funding sources - Funding for support of graduate students comes from various sources including department funds, College and University fellowships, extramural grants and contracts, foreign government scholarships/fellowships, or private foundations. The department and the graduate

faculty do not have an obligation to provide financial support to every student who has been admitted to the graduate program, but the graduate program strives to provide funding support to students through the degree completion. When funding is provided by grants or contacts, the student holding such an appointment will be selected by the faculty member, and continued support will depend on availability of funds and student performance (i.e., being in good standing, including making reasonable progress to degree).

Appointments and renewal - Graduate appointments are entered each semester/term in the Workday system. Renewal is based in part on the student's progress as documented in annual review of the student's progress. However, at the discretion of the GSC Chair and faculty advisor, funding may be awarded on a semester-by-semester basis in cases where a student is expected to complete their degree in less than one year.

M.S. students who wish to pursue a Ph.D. in Plant Pathology should consult with their faculty advisor regarding graduate funding support (preferably a year in advance of projected completion of M.S.) as satisfactory completion of the M.S. degree will not assure that funds will be available for the Ph.D. program.

Except in unusual circumstances, students will not be supported by departmental funds beyond 7 semesters for completion of an M.S. degree, or beyond 13 semesters for completion of a Ph.D. degree (inclusive of the time to earn a Master's degree in this program). Renewal will also depend upon reasonable progress by the student as determined by the annual student evaluation, being in good standing, and the continued availability of department funds. Students who will not continue to be supported will be notified one semester in advance. The GSC may consult with faculty advisors regarding alternative sources of support (e.g., grants).



How many credits should I take?

Students holding 50% FTE GRA appointments receive a full tuition and fee authorization as described in the Graduate School Handbook (Section 9). The Graduate School specifies the *minimum* registration requirements for Graduate Associateships, however, Plant Pathology recommend maximum credits enrollment for students on graduate appointments (see below). The credits include PLNTPTH 7999/8998/8999 – Research Credits.

Credit recommendations for 12-month GRAs and Graduate Fellows		
There may be exceptions to the examples below.		
	Autumn and Spring	Summer*
M.S. and pre-candidacy Ph.D. GRAs and Fellows	18 credits GRAs and Fellows	4 credits – GRAS 6 credits – Fellows
Post-candidacy Ph.D. students	3 credits GRAs and Fellows post- candidacy, 3 credits = full- time	3 credits GRAs and Fellows post- candidacy, 3 credits = full-time
*Students funded by government or Fulbright scholarships or fellowships should consult with their funding sponsor for summer enrollment requirements		

Benefits

Students holding 50% FTE GRA appointments and Fellowships receive a full fee authorization as described in the Graduate School Handbook (Section 9). “Fee authorization” means that your graduate appointment will pay the Instructional and General fees, Technology fee, and nonresident tuition. Other fees, including Columbus-based fees, parking and late penalties, must be paid by the student. (GAs may be appointed at 25 percent time, averaging 10 hours per week; however, only one half of their fees will be authorized.)

Additional guidelines from the Graduate School Handbook, Section 11.2:

GRAs and Fellows on 50% Full-Time Equivalent (FTE, or 50% time) are considered part-time and do not accrue vacation or sick leave. Nevertheless, it is expected that students on 12-month graduate appointments will need time off. Since students are expected to do research during semester breaks, time off must be scheduled with the faculty advisor to prevent any major disruption regarding the GRA duties or progress of the student’s graduate program (Section 11.2).

- Graduate associates are not required to work on legal holidays noted on the university calendar. When university offices are required to maintain services on certain holidays and graduate associates are scheduled to work on a holiday (e.g. for research or they must be given an alternate day off (Section 11.2.2).
- The Graduate School Handbook has additional guidelines for sick/bereavement leave, personal leave, professional development leave, and parental leave (Section 11.2.3), unpaid leave (11.2.5) and Military Leave (11.2.6).

Other benefits that are available to eligible graduate student employees are detailed in the Graduate School Handbook (Section 11) and on the Graduate School web site: gradsch.osu.edu/pursuing-your-degree/graduate-associates. This web site also includes information on student health insurance and health plan coverage for graduate associateships. The Student Health Insurance web site also has

additional details and contact information: shi.osu.edu.

Plant Pathology – Professional Development - The department makes every effort to provide graduate students with transportation to national or regional meetings of the American Phytopathological Society or another appropriate organization) when these meetings are within driving distance. In some cases, faculty, the Plant Pathology Graduate Students Association or other funding sources may also offset the cost of travel.

Responsibilities of Students on GRA Appointments

Students on regular GRA appointments (50% Full Time Equivalent, or FTE) may be required to provide up to 20 hours of service per week to the department. Specific Graduate Research Associateship responsibilities are determined by the appointing units and faculty advisor. On occasion, a student receiving financial support from the department may also be required to assist in teaching lab sections and preparing materials for courses.

However, students are expected to put in hours well beyond these requirements in their coursework and research. Consistent with this, students on 50% GRA appointments are generally not allowed to engage in outside employment. A graduate student's principal objective is to earn a graduate degree, and it is expected that other time, after satisfying the GRA commitment, will be devoted to their graduate education. A GRA provides financial support and valuable working experience.

Teaching Experience

Graduate Students and Teaching

The department values all aspects of teaching to include classroom and Extension-outreach teaching and student advising/mentoring. Because of this core commitment to teaching, the department believes strongly in providing graduate students with meaningful opportunities to both explore their interests and aptitudes for teaching and to enhance their teaching effectiveness. Similarly, the department has a rich tradition of service-oriented leadership and believes that a strong commitment to service is a key quality of those graduating from the Plant Pathology Graduate Program.

Service in Teaching

Regardless of personal interest in classroom teaching, any graduate student who is or has received department support be asked to help support the teaching mission of the department. The Department Chair and the Plant Pathology Academic Affairs Committee chair will work with faculty members to determine the teaching support needs in the department.

Teaching service may take many forms including: preparation of laboratory material (media, microbe cultures, etc.), literature reviews to support lecture preparation, proctoring of examinations, and grading of examinations and student assignments. Preparing and delivering lectures, serving as a mentored laboratory instructor, or working with a faculty mentor to offer online or distance education courses may also be acceptable for PLNTPTH 8901 – Mentored Teaching Experience.

Teaching Experience: Developing Skills and Building Experience. Teaching is an important aspect of the mission of the Department of Plant Pathology whether it is classroom teaching or Extension/outreach. It is also an important part of graduate education and the department is

committed to ensuring that our graduate students have ample opportunities to explore this aspect of their professional development.

Teaching opportunities in the department are varied and encompass both classroom and Extension/outreach teaching. We strongly encourage all students to develop skills related to teaching.

PLNTPTH 8901 (Mentored Teaching in Plant Pathology) and PLNTPTH 8902 (Mentored Extension/Outreach Teaching in Plant Pathology)

The intellectual rigor and time commitment of the teaching experiences pursued will vary but should be the equivalent of a 3-5 credit course. For students seriously interested in teaching, the department offers two mentored teaching courses – **PLNTPTH 8901 (Mentored Teaching in Plant Pathology)** and **PLNTPTH 8902 (Mentored Extension/Outreach Teaching in Plant Pathology)** – designed to provide professional classroom and extension/outreach teaching opportunities, respectively. Students that successfully complete these courses will have their teaching experience documented on their transcripts. Details of these two courses are provided in Appendix I and II. An abbreviated overview of how students plan for their mentored teaching experiences is provided below.

Planning a teaching or Extension experience - Students interested in pursuing mentored teaching experiences should discuss their goals with their advisor and SAC.

The amount of credit will vary based on the intellectual rigor and time commitment involved. The mentor for these teaching experiences may be the course instructor or student's faculty advisor.

The following activities, although related to and in support of the department's teaching mission, are *not by themselves* typically considered appropriate for PLNTPTH 8901 credit: literature reviews to support the preparation of lecture materials, proctoring of examinations, grading of examinations and/or assignments, or preparation of laboratory materials (media, cultures, plant materials, etc.).

Requesting Mentored Teaching or Mentored Extension/Outreach enrollment - Prior to enrolling in Mentored Teaching (PLNTPTH 8901) or Mentored Extension/Outreach (PLNTPTH 8902), the student should meet with the course instructor or mentor to discuss Desired Outcomes, Means of Evaluation, and the number of credits. This information is documented on a Mentored Teaching/Extension form, available on plantpath.osu.edu/grad-corner. The form should be submitted to the Teaching Experience Coordinator or the Extension/Outreach Experience Coordinator, who are department faculty appointed on an annual basis by the Department Chair.

The Teaching Coordinator is a faculty member in the department who is appointed on an annual basis by the Department Chair. This summary must be reviewed and signed by both the student seeking credit and the faculty mentor working with the student. This summary serves as an agreement between the student and the faculty mentor.

The Teaching Experience Coordinator's primary role is to review each request to ensure fairness and equity in the amount of credit approved across the range of teaching experiences undertaken.

The Extension Coordinator is a faculty member in the department who is appointed on an annual basis by the Department Chair. This summary shall be reviewed and signed by both the student seeking credit and their mentor. This summary serves as an agreement between the student and mentor.

The Extension Experience Coordinator's primary role is to review requests on a case-by-case basis

to ensure fairness and equity in the amount of credit approved across the range of extension/outreach teaching experiences undertaken.

Criteria for a Mentored Teaching or Mentored Extension/Outreach experience – The following criteria should be considered in a Mentored Teaching request: (a) the intellectual scope and rigor of the experience proposed; (b) the time commitment required by the student to successfully complete the experience; (c) the amount of coaching and evaluation done on the part of the faculty mentor; and (d) the level and credit hours associated with the course in which the student is assisting .

For example, students working with a faculty mentor to deliver a laboratory session of General Plant Pathology Lab (PLNTPTH 3002 – 2-credit laboratory) which involves 10-20 hours of pre-semester planning and preparation, attendance at three, 1-hour class sessions per week, active participation in two 80-minute lab sessions per week, co-development of quizzes (with faculty mentor), maintenance of scheduled office hours, grading (for review by the faculty instructor), and weekly assessment meetings with the student’s faculty mentor, would be considered a 2-3-credit PLNTPTH 8901 experience.

Mentored Teaching in Plant Pathology

Plant Pathology 8901 (PLNTPTH 8901)

Instructors: Faculty in the Department of Plant Pathology

Credit: 1-3 credit hr (G) – repeatable to a maximum of 9 credits or 3 completions. Graded S/U.

Semesters Offered: All semesters- Arranged

Prerequisites: Graduate standing and completion of the Teaching Orientation offered by Ohio State’s Drake Institute for Teaching and Learning. Completion of EDUPL 7404: College Teaching is encouraged.

Overview: Course participants will work either one-on-one or in small groups with a faculty mentor to gain experiences focused on direct interactions with students and on the scholarly aspects of teaching. Because no two students are identical, the breadth and scope of the teaching experiences undertaken will be individualized depending on the mutual interests and strengths of the students and faculty mentors.

Students work with faculty members to gain intensive hands-on and mentored experiences focused on direct interaction with students and on the scholarly aspects of teaching.

Course Learning Goal and Outcomes:

By the end of this course, students will:

Learning Goal 1: Become familiar with teaching techniques by completing a mentored teaching experience.

As a result, students will be able to:

Learning Outcome 1.1: Deliver clear instruction in a classroom or laboratory setting following the highest professional and ethical standards.

Learning Outcome 1.2: Design high quality curriculum materials.

Course Logistics: PLNTPTH 8901 is designed to provide a learning opportunity and credit for those interested in classroom teaching.

Evaluation and Assessment: Graded S/U. Regardless of the intensity or duration of the teaching experience undertaken, some formal means of assessing and documenting the student's teaching effectiveness and quality is required to receive a satisfactory grade in PLNTPTH 8901.

The specific means of assessment and feedback is determined by the student and faculty mentor. Examples may include the use of the Student Evaluation of Instruction (SEI) Form, subjective evaluations completed by students, periodic classroom or laboratory assessments by the faculty mentor, or evaluation of course materials, teaching notes, etc. The key is that some form of assessment be planned, implemented, summarized and shared with the student in a timely fashion to maximize impact and learning.

Mentored Extension/Outreach Teaching in Plant Pathology

Plant Pathology 8902 (PLNTPTH 8902)

Instructors: Faculty, Extension Associates and/or OSU Extension Educators

Credit: 1-3 credit hr (G). Repeatable to a maximum of 5 credit hours or 5 completions. Graded S/U

Semesters Offered: All semesters - Arranged

Prerequisite: Graduate standing

Overview of Course: PLNTPTH 8902 (Mentored Extension/Outreach Teaching in Plant Pathology) is designed to provide graduate students interested in Extension/Outreach Educational Programming with intensive hands-on opportunities that culminate in both the exploration of their aptitude as extension educators and the development of their skills and effectiveness in this area. The long-term goal of Plant Pathology 8902 is to prepare students to be effective extension educators in plant health science and plant pathology.

Course participants will work either one-on-one or in small groups with a faculty/staff mentor to gain experiences focused on direct interactions with growers and/or industry groups and on the scholarly aspects of developing and / or delivering extension-outreach programs and educational materials. The breadth and scope of the extension/outreach experiences undertaken will be individualized depending on the mutual interests and strengths of the student and faculty/staff mentor.

Course Learning Goal and Outcomes:

By the end of this course, students will:

Learning Goal 1: Understand the fundamental tenets and practices of extension and outreach.

As a result, students will be able to:

Learning Outcome 1.1: Develop stakeholder-targeted extension/outreach materials and activities.

Learning Outcome 1.2: Employ effective communication around topics in plant pathology or

related fields (food safety, plant health, diagnostics etc.).

Course Logistics: Plant Pathology 8902 is designed to provide a learning opportunity and credit for those interested in Extension-outreach teaching.

The student, faculty advisor and Student Advisory Committee (SAC) should discuss desires/expectations for participating in a mentored Extension experience.

Evaluation and Assessment: Graded S/U. Regardless of the intensity or duration of the extension/outreach experience undertaken, some formal means of assessing and documenting the student's teaching effectiveness and the quality of any educational materials developed by the student is required in order to receive a satisfactory grade in PLNTPTH 8902.

The specific means of assessment and feedback is entirely up to the student and mentor but should provide a means for students to gauge their own extension/outreach teaching effectiveness and serve as a useful learning tool. Methods for assessment of student performance may include the OSU Extension Evaluation of Effective Extension Teaching (EET) materials, subjective evaluations completed by growers, peers or other audience participants, periodic assessments by mentors, or other effective means of evaluation.

The key is that some form of assessment is planned, implemented, summarized and shared with the student in a timely fashion to maximize impact and learning.

Office Space

It is the policy of the department to provide office space for all graduate students in our program. Occasionally, lack of available space may temporarily prevent this, particularly in Columbus. In the case of limited office space in Columbus, priority will be given to Columbus-based graduate students based on seniority. We believe student interaction is a valuable part of a graduate student's experience, and effort will be made to provide desks or working space for all students.

Student Advisory Committee (SAC)

All students will have a Student Advisory Committee to advise them during their degree program. In most cases students will be admitted to a graduate program under the direction of a faculty advisor. The faculty advisor and student will discuss suggestions for the SAC Committee.

The SAC consists of at least three faculty members, including the major advisor. The major advisor serves as the SAC chair.

Including the major advisor, at least two of the SAC members must be regular faculty in the Department of Plant Pathology. SAC members also serve on the M.S. Final Examination for M.S. students, and the Ph.D. Candidacy Examination, the Ph.D. Dissertation and Examination Committee for Ph.D. students.

The SAC members should be listed on Student Plan of Study to the GSC Chair.

Early in your program, you should meet with your advisor and SAC members to collectively select the courses to be taken for the degree sought and to discuss thesis or dissertation research and writing. The major advisor is responsible for directing the student's research and approving the research problem; however, the final responsibility for the content of the thesis or dissertation lies with the

student.

The student and the major advisor are encouraged to seek the advice of all SAC members and to keep them posted as to the student's progress. SAC members are encouraged to play an active role in advising the student, and it is recommended that each student meet with their SAC at least every six months. In cases involving petitions to the GSC or the Graduate School regarding the student's academic standing, or disputes between the student and his/her advisor, the SAC may be asked to make a written recommendation to the GSC.

Selecting or changing advisors. Occasionally a student may be given the opportunity to choose a faculty advisor depending on their program interests, however this opportunity will be associated with a departmental associateship and it will be stated at the time the associateship is offered. A temporary advisor will be appointed by the GSC Chair at the initiation of the term of residence for these students. The faculty advisor should be selected as soon as possible and no later than the end of the second term of residence.

Students will be allowed to change major advisors if another graduate faculty member in the program is willing to advise them. If considering such a change, students should consult with the GSC Chair. It is the student's responsibility to locate a new advisor and the new advisor will not necessarily be obligated to continue any financial support paid to the student by his/her previous advisor. For students who earn both M.S. and Ph.D. degrees in Plant Pathology, there is no expectation that the same faculty member serve as advisor for both degrees.

Coursework and Substitutions to Program Requirements

By the end of the first year, with the guidance and approval of the advisor and SAC, students should have determined their proposed coursework. This is to be documented in the Student Plan of Study and submitted to the GSC Chair for the student's file.

The coursework content should meet the graduate program requirements as outlined below for the M.S. or Ph.D. degrees. Occasionally, the student and SAC may decide that substitutions for these requirements are justified. Such substitutions should be clearly documented, with a short justification, on the Student Plan of Study. Subsequent modifications to the plan should be justified in writing and submitted to the GSC Chair.

First Year Research Proposal Requirements

All Ph.D. students and M.S. thesis degree plan students should develop a research proposal in the first full year. The proposal format will be determined by the student's major advisor and SAC.

First Year Student Symposium – Spring. Upon approval of the proposal by the student's major advisor and SAC, the student will be expected to undertake two additional requirements.

1. First, all first-year students will present their proposals to the department in an oral seminar (20 minutes in length) during an annual symposium held late spring/early summer. This symposium will be organized by the current Plant Pathology Seminar Committee with the involvement of the Plant Pathology Graduate Students Association.

All graduate students are required to attend the Spring Symposium for First-Year Graduate

Students. This is an essential element of the overall PLNTPH 8899 experience. It is very important that our first-year students have the support and feedback from senior students, faculty and staff.

2. A second requirement is that the student will present their research proposal to their SAC and defend the proposal in an oral exam by the SAC. This presentation and defense will normally take at least an hour, but may last up to 2 hours. This oral defense is not a candidacy exam of any kind, but simply a means by which the SAC can determine the student's proficiency and further needs for development in coursework or research. Recommended modifications to the proposal should be made within a month of this exam.

Academic English Writing Assessment Requirements

Incoming international students may be required to demonstrate writing proficiency in academic English. Students who do not meet specific exemptions will be required to take the Academic English Writing Assessment for Graduate Students (ielp.ehe.osu.edu/aewp/graduate-assessment/).

The test is administered by the Intercultural English Language Program prior to the student's first semester. It is a one-hour writing test that assesses familiarity with university-level writing. More information on the exam is available online: ielp.ehe.osu.edu/aewp/graduate-assessment/.

After taking the ESL Composition Placement Test, the student may be placed in Advanced English as a Second Language (EDUTL 5901) or Academic Writing in English as a Second Language (EDUTL 5902). Students who achieve a score rated Qualify ("80Q") are not required to take academic writing coursework.

Students who are placed in EDUTL 5901 will have to successfully complete the course and then take 5902.

M.S. in Plant Pathology - Advising Sheet (suggested)

For students without previous plant pathology coursework, PLNTPTH 6001 – Advanced Plant Pathology (2 credits, Online, 7-weeks) may be recommended for an overview of general plant pathology. AU=Autumn, SP=Spring, SU=Summer.

Course number	Course Title	Credits	Term
CORE			
PLNTPTH 5010	Phylobacteriology	2	AU Year 1
PLNTPTH 5020	Introductory Plant Virology	2	AU Year 1
PLNTPTH 6010	Advanced Plant Pathology Laboratory - Bacteriology	0.5	AU Year 1
PLNTPTH 6020	Advanced Plant Pathology Laboratory – Virology	0.5	AU Year 1
PLNTPTH 5040 & PLNTPTH 5041	Science of Fungi: Mycology Lecture (3 cr) & Science of Fungi: Mycology Lab (1 cr)	4	AU Year 1
OR			
PLNTPTH 5050	Plant Pathogenic Fungi	3	SP Year 1
PLNTPTH 5030	Plant Nematology	2	SP Year 1
PLNTPTH 6030	Advanced Plant Pathology Laboratory – Nematology	0.5	SP Year 1
PLNTPTH 6050	Advanced Plant Pathology Laboratory – Plant Pathogenic Fungi	0.5	SP Year 1
PLNTPTH 5685	Plant Disease Diagnosis	2	SU Year 1 or 2
PLNTPTH 5603	Plant Disease Management	3	SP Year 2
Variable	Statistics class, as determined in consultation with *SAC	3	AU or SP Year 2
ELECTIVES	Determined in consultation with SAC	Varies	
Academic English Writing courses (may be required for international students depending on writing placement)			
EDUTL 5901	Intro to Academic Writing for Multilingual Grad Students (if required)	3	Year 1
EDUTL 5902	Advanc Academic Writing for Multilingual Grad Students (if required)	3	Year 1
SEMINAR			
PLNTPTH 8899	Seminar (1 credit) each Autumn and Spring semester.....	AU, SP	
RESEARCH CREDITS			
Students will enroll in PLNTPTH 7999 Graduate Research Master's each term (variable credits), including Summer, to fulfill full-time enrollment requirements for associateships/fellowships <u>Varies AU, SU, SP</u>			

**TOTAL CREDITS

* **Student Advisory Committee (SAC).** The SAC consists of the major advisor and at least two graduate faculty, including the major advisor. At least two of the SAC members must be regular faculty in the Department of Plant Pathology. The SAC can approve electives, schedule changes or course substitutions. Course substitutions should be clearly documented, with a brief justification, on the Student Plan of Study and submitted to the GSC Chair.

****TOTAL CREDITS:** The M. S. credit requirement is 30 graduate credits (semester), including research (8999) and seminar (8899) credits, with a minimum cumulative GPA of 3.0. Eighty (80) percent of those required credits must be completed at Ohio State over a period of at least two semesters (Graduate School Handbook). Full-time students on graduate appointments typically exceed 30 total credits.

M.S. Thesis Degree Plan

As specified by the SAC, a typical M.S. thesis degree plan *may* include 20 to 25 credits of courses, not including seminar (PLNTPTH 8899) or research credits (PLNTPTH 7999). After meeting with the student to determine the student's proficiency and needs for coursework, and during the development of the Student Plan of Study, the SAC may reach the decision to recommend substitutions in courses listed above with other courses that are appropriate for the student's graduate program. Such changes should be listed and individually justified on the Student Plan of Study, and a copy sent to the GSC Chair for approval. Often changes in coursework are also necessary later in a student's program of study. Justification for these substitutions should be listed as an amendment to the Student Plan of Study, again subject to approval by signature by the GSC Chair.

The Master's degree final oral examination in defense of the thesis will be given by the SAC. The examination can be comprehensive in nature and need not be confined to the thesis topic. The student is considered to have passed the Master's Examination successfully only when the decision of the Examination Committee is **unanimously** affirmative.

If the final oral examination for the Master's degree is judged unsatisfactory, the rules pertaining to a second examination described in the Graduate School Handbook (Section 6) must be followed.

Master's Non-Thesis Degree Plan (Plan B)

The Master's non-thesis degree plan is available in Plant Pathology. The requirements and restrictions for this degree are as follows:

a) Graduate School requirements include:

- Completion of minimum of 30 graduate credits, with a cumulative GPA 3.0 or greater
- Satisfactory performance on a written examination (2 hours) and oral examination (2 hours), is administered by the student's advisory committee as a test of the student's mastery of the field.

b) Plant Pathology additionally requires special projects in two of three areas: Teaching, Extension or Research. The nature of each project is determined by the SAC, with formal written reports approved by the SAC. To meet these requirements, the student will enroll in PLNTPTH 8901 - Mentored Teaching in Plant Pathology (3 - 5 credits), PLNTPTH 8902 - Mentored Extension/Outreach Teaching in Plant Pathology (3 credits), or PLNTPTH 6193 - Individual Studies (3 - 5 credits), depending on the project subject area of Teaching, Extension or Research, respectively. These hours will count toward the 30 credit hours required by the Graduate School.

Descriptions of PLNTPTH 8901 and 8902 are included in this handbook.

c) No PLNTPTH 7999 - Research credits will be included in the 30 credits required.

Students should work with their advisor and SAC to determine the plan for the special projects (Teaching, Extension or Research) and submit to the GSC Chair.

Master's Degree Based on Candidacy Examination

Upon the recommendation of the adviser and SAC, a Ph.D. student may earn an M.S. degree on the

basis of satisfactorily completing the doctoral Candidacy Examination, if he/she does not already hold an equivalent Master's degree in Plant Pathology. The student must apply for this degree following completion of the Candidacy Examination as outlined in the Graduate School Handbook (Section 6.1.8: Earning Master's Degree On the Basis of Candidacy Examination). The form should be submitted by the next Application to Graduate deadline.

Doctor of Philosophy (Ph.D.) Degree Requirements

Doctoral degree programs give students the opportunity to achieve a high level of scholarly and technical competence. The doctoral degree program consists of selected courses, and laboratory and/or field-based research. Success in coursework does not guarantee success in dissertation research, which must constitute *an original and significant contribution* to the field of plant pathology. Normally, a dissertation should include or be equivalent to multiple publications in peer-reviewed scientific journals.

The student and SAC should meet to determine the student's proficiency and coursework needs (documented in the Student Plan of Study). The SAC may recommend course substitutions with courses more appropriate for the student's graduate program. These changes should be listed and justified on the Student Plan of Study, and a copy sent to the GSC Chair for approval. If changes in coursework are necessary later in a student's program of study, justification for these substitutions should be listed as an amendment to the Student Plan of Study and sent to the GSC Chair.

A typical Ph.D. degree program may include \approx 40-50 credits of coursework, not including PLNTPH 8899 – Seminar, but this is not an absolute credit requirement.

√ The recommendation for a \approx 40-50 credits of coursework comes from the department, not the Graduate School. The SAC has great flexibility here. For instance, the SAC may grant "credit" to a student for graduate courses taken at another institution prior to enrolling at Ohio State, depending on the course content. This is not an official credit transfer that will appear on the student transcripts, but an internal acknowledgment that some of the core course requirements have been met. **The specific courses taken, as well as the exact number of credits in courses, are determined by the SAC and the student.**

Graduate credits taken elsewhere may be transferred to The Ohio State University, provided they meet the conditions specified by the Graduate School (Graduate School Handbook, Section 4, Course Credit, Marks, and Credit-Hour Ratio). This requires approval of the advisor, the SAC, and the GSC, and should be done within the first year. A "Transfer of Graduate Credit Form" is submitted on gradforms.osu.edu for this request.

> However, in most cases, a formal transfer is not needed because full-time Ph.D. students usually end up with more than the 80 credits required for graduation. The exception could be for part-time students or students enrolling for the minimum number of credits, and for PhD students who have completed several of the core plant pathology courses in an MS program. See more details and important requirements for these transfers below under "Important Residency Requirements."

Ph.D. in Plant Pathology - Advising Sheet (suggested)

For students without previous plant pathology coursework, PLNTPTH 6001 – Advanced Plant Pathology (2 credits, Online, 7-weeks) may be recommended for an overview of general plant pathology.

Course number	Course Title	Credits	Term
CORE			
PLNTPTH 5010	Phytobacteriology	2	AU Year 1
PLNTPTH 5020	Introductory Plant Virology	2	AU Year 1
PLNTPTH 6010	Advanced Plant Pathology Laboratory - Bacteriology	0.5	AU Year 1
PLNTPTH 6020	Advanced Plant Pathology Laboratory – Virology	0.5	AU Year 1
PLNTPTH 5040 & PLNTPTH 5041	Science of Fungi: Mycology Lecture (3 cr) & Science of Fungi: Mycology Lab (1 cr)	4	AU Year 1
OR			
PLNTPTH 5050	Plant Pathogenic Fungi	3	SP Year 1
PLNTPTH 5030	Plant Nematology	2	SP Year 1
PLNTPTH 6030	Advanced Plant Pathology Laboratory – Nematology.....	0.5	SP Year 1
PLNTPTH 6050	Advanced Plant Pathology Laboratory – Plant Pathogenic Fungi.....	0.5	SP Year 1
PLNTPTH 5685	Plant Disease Diagnosis	2	SU Year 1 or 2
PLNTPTH 5603	Plant Disease Management	3	SP Year 2
Statistics class, as determined in consultation with *SAC		3	AU or SP Year 2
PLNTPTH 5003	Principles of Molec Plant Host-Microbe Interactions (7 wk Sess 1)	2	SP Year 2
PLNTPTH 5004	Current Topics Molec Plant Host-Microbe Interactions (7 wk Sess 2)...	2	SP Year 2
ELECTIVES	Determined in consultation with SACVaries		
Academic English Writing courses (may be required for international students depending on writing placement)			
EDUTL 5901	Intro to Academic Writing for Multilingual Grad Students (if required) ...	3	Year 1
EDUTL 5902	Advanc Academic Writing for Multilingual Grad Students (if required) ..	3	Year 1
SEMINAR			
PLNTPTH 8899	Seminar (1 credit) each Autumn & Spring semester	1	AU, SP
RESEARCH CREDITS			
Students will enroll in Research credits, either PLNTPTH 8998 (Pre-candidacy Ph.D.) OR 8999 (Post-candidacy Ph.D.), (variable credits), including Summer, to fulfill full-time enrollment requirements for <u>associateships/fellowships AU, SU, SP</u> <u>Varies AU, SU, SP</u>			

****TOTAL CREDITS**

* **Student Advisory Committee (SAC).** The SAC consists of the major advisor and at least two graduate faculty. Including the major advisor. At least two of the SAC members must be regular faculty in the Department of Plant Pathology. The SAC can approve electives, schedule changes or course substitutions. Course substitutions should be clearly documented, with a brief justification, on The Student Plan of Study and submitted to the GSC chair.

****TOTAL CREDITS:** The Ph.D. credit requirement is 80 graduate credits, *including* research (8998, 8999) and seminar (8899) credits, with a minimum cumulative GPA of 3.0. At least 50 of those graduate credits must be completed beyond the master's degree (Graduate School Handbook). Full-time students on graduate appointments typically exceed 80 total credits.

Important Credit Hour and Residency Requirements

For PhD students, the following Graduate School requirements must be fulfilled after the master's degree has been earned OR after the first 30 hours of graduate credit have been completed.

From Graduate School Handbook, Section 7, Doctoral Degree Programs:

Credits and Residency Requirements 7.2

Minimum Hours. A minimum of 80 graduate credits beyond the baccalaureate degree is required to earn a doctoral degree. If a master's degree has been earned by the student, then a minimum of 50 graduate credits beyond the master's degree is required. (Note: this can include 8998 or 8999 research credits.) If the master's degree was earned at another university, course credits may be transferred to Ohio State so that the actual credits will count towards the doctoral degree. The request is documented in a *Transfer of Graduate Credit* form (gradforms.osu.edu) and submitted to the Graduate School. The SAC must approve of the graduate credit transfer. The Transfer of Graduate Credit form requires the approval of the GSC Studies Chair and the student's advisor.

A student must be registered for at least three graduate credits during each semester session or term in which the candidacy examination is taken, the final oral examination is taken, and the semester or term of expected graduation.

Master's Credit. When a doctoral student has completed a master's degree at this university and has earned graduate credit in excess of the minimum required for that degree, the student, with the approval of the student's advisor and the GSC, can request a Transfer of Graduate Credit (gradforms.osu.edu). The request generally should be done the end of the first semester after completion of the master's degree. Such graduate credit hours would be those normally earned as part of the doctoral degree program.

Petition. The GSC Committee may petition the Graduate School for an exception of the 80 graduate credit-hour requirement when it imposes an undue delay on a student's doctoral program. The student must fulfill all other doctoral degree requirements (note, this is rare for fully-funded, full-time graduate students).

Residency. The purpose of the residency requirements is to give students the opportunity to engage in intensive, concentrated study over an extended period of time in association with faculty members and other students in an atmosphere conducive to a high level of intellectual and scholarly activity. The following requirements must be fulfilled after the master's degree has been earned or after the first 30 semester hours of graduate credit have been completed:

1. A minimum of 24 graduate credit hours required for the Ph.D. must be completed at this university
2. A minimum of two consecutive pre-candidacy semesters or one semester and a summer session with full time enrollment must be completed while in residence at this university
3. A minimum of six graduate credit hours over a period of at least two semesters or one semester and a summer session must be completed after admission to candidacy

Registration Requirements for Post-Candidacy Ph.D. Students

Please be aware of the following registration requirements for post-candidacy students:

Admission to Candidacy. Provided that the student is in good standing at the end of the semester or summer session in which the candidacy examination is completed, satisfactorily completing that examination admits the student to candidacy for the doctoral degree in that program at the end of that semester or session.

A student is normally expected to enroll primarily in 8998 or in program-approved courses after satisfactorily completing the candidacy examination. **Post-candidacy doctoral students must enroll for at least three credit hours (full time).** Post-candidacy doctoral students must also fulfill the post-candidacy residency requirement of a minimum of six graduate credit hours over a period of at least two semesters or one semester and summer session after admission to candidacy. Candidacy status established in one doctoral program is not transferable to another doctoral program.

Continuous Enrollment. This policy is effective for all students who were admitted to the Graduate School Autumn 2008 and after.

All students who successfully complete the doctoral candidacy examination will be required to be enrolled in every semester of their candidacy (summer session excluded) until graduation. Students must be enrolled for at least three credits per semester. While the Graduate School and the individual graduate programs will monitor the enrollment of all post-candidacy students, it ultimately will be the responsibility of each student to ensure that they are meeting the enrollment provisions of this policy.

Can a post-candidacy doctoral student register for additional credit hours above three?

Yes. A decision to register for more than three credits should be made following discussions between the student and his or her advisor and should meet with the approval of the student's graduate program. In making such decisions, advisors and graduate programs should consider the academic and professional relevancy of the additional credits for individual doctoral students, and not simply budget implications for the department. The expectation is that enrollment above three credits should be made for academic and professional reasons, including opportunities for a graduate student to pursue a graduate interdisciplinary specialization or a graduate minor.

For post-candidacy students, the request to register for over 3 credits must be submitted to the GSC Chair in Plant Pathology prior to registration.

In the situation where a post-candidacy student wishes to enroll in a course, the advisor can direct the student to enroll in the desired course, research (PLNTPTH 8999) and seminar (PLNTPTH 8899). However, in the situation that official registration for PLNTPTH 8899 is not possible, attendance in seminar is still expected of all students.

Candidacy Examination



For Ph.D. students, the Candidacy Examination is a test of the student's comprehension of plant pathology and allied areas of biology and agricultural science, and the ability to engage in critical thinking and express ideas clearly. The Candidacy Examination is comprehensive and consists of both written and oral parts. The exam is given after the student has completed all or nearly all of the required coursework.

Students must discuss and arrange with their SAC committee when to take the written and oral portions of the examination.

The Application for Candidacy Examination form (available on gradforms.osu.edu) must be approved by the advisor and GSC Chair and submitted to the Graduate School **at least two weeks** prior to the date of the oral examination.

- The Graduate School requires that the student be in GOOD STANDING (i.e., cumulative grade point average [CGPA] of 3.0 or greater and making reasonable progress) before this examination can be scheduled. Reasonable progress is defined in the Graduate Student Review section.
- In Plant Pathology it is expected that the student demonstrates research ability and aptitude before scheduling the exam.
- The committee for the Ph.D. Candidacy Examination shall consist of at least four Graduate Faculty members. Members of the SAC serve on this committee. At least two members of the examining committee shall be from the Department of Plant Pathology and the major advisor will serve as chair of the committee. In the case of a second candidacy exam attempt, the examination will also include a Graduate School Representative appointed by the Graduate School.

gradforms.osu.edu

Application for Candidacy Examination

The form is initiated by the student and requires approval by the advisor and the GSC Chair at least 2 weeks prior to the oral examination.

Important: Before submitting the form, please inform the GSC Chair and confirm that your advisor approves of the action.

Candidacy Exam Format -The written portion of the Ph.D. Candidacy Examination shall either be in the form of exam questions submitted by each of the committee members, OR a research proposal. For a research proposal, the proposal topic shall be agreed upon by the members of the committee and cannot be directly related to the candidate's dissertation research. It is important to note that the SAC, and not the student, chooses the type of candidacy exam.

In the Plant Pathology graduate program, the student must demonstrate a mastery of a significant body of knowledge *and* that the student is adequately prepared for, and capable of, carrying out original, independent dissertation research. The Candidacy Examination should test for depth in an area of specialization and breadth in related fields of biology. In addition, students should demonstrate critical thinking skills.

Choice for the Written Exam and Expectations - The student's advisor and SAC will make the decision on the type of written exam for the Candidacy Examination. This decision will be made at least 6 weeks prior to the anticipated start of the written examination. The student should be told what the

expectations of the SAC will be regarding the written examination.

The Written Proposal - If the proposal option is selected, these expectations should specify: the coverage and depth of the proposal, the format of the proposal, the time allocated to writing the proposal, and how the evaluation of the proposal will be made. The student will also be told whether they will have the option to revise the proposal if the first submission is unacceptable. The time for revision, if any, is part of the total time allocated for the proposal writing. In addition, the student should be advised regarding how much coursework to review.

Prior to the General Examination the candidate will prepare a written research proposal in lieu of answering written questions submitted by each SAC member. Since this is formally the written part of the examination, the Graduate School must be notified of the start and expected completion dates of the written portion of the examination.

The subject of the proposal will be decided upon by the student and the advisor and then approved by all members of the SAC before the student begins writing. The actual hypotheses and objectives of the proposal should represent the student's own ideas.

The proposal should not be in an area directly related to the student's own dissertation topic, but can be in the same general area (e.g., physiology, disease resistance, bacterial genetics, virology, or epidemiology). The SAC and advisor should decide what is appropriate for each student. Specifically, the proposal should involve a significantly different biological (host/pathogen) system, and the student should avoid using essentially the same strategies and techniques that are part of his/her dissertation research.

The proposal should be prepared in a format similar to that used by USDA, NSF, SARE, or other competitive grant programs, as suggested by the SAC. Students generally should be given one or more example proposals to demonstrate the format and style of proposals for particular programs. The proposal should include a literature review, justification and experimental plan. Since few actual proposals are funded without preliminary results, the student may be allowed to use hypothesized results, as justified, to narrow or focus the problem. The amount of research proposed should be equivalent to two calendar years or more.

Students should be instructed that the research questions (i.e., the objectives) are fundamental to the proposal and the foundation for a good proposal. Clearly written, well thought-out and testable hypotheses must accompany the objectives so that the student can demonstrate that he/she can design experiments with appropriate controls and use alternative approaches to testing the same hypothesis.

The student should also demonstrate that he/she knows what prior preliminary results are sufficient to convince a grant review panel that the hypotheses are sound and the approach is feasible. Although much good research involves hypothesis building following careful and systematic data collection and analysis, this type of study is not necessarily a suitable proposal because the student can only propose to go on a "fishing trip."

Although the preparation of the proposal is obviously "open book," it should represent the sole work of the student. However, unlike other written examinations, the student is free to consult with others. The advisor and SAC members may give the student their feedback by pointing out strengths and weaknesses and suggesting readings, but they should refrain from directly telling the student what to write or specifying all the basic ideas in the proposal. No one, other than the student, may

edit the proposal prior to submission to the committee.

After the proposal is submitted to the SAC, the members should decide within one week if it is acceptable. An evaluation form may be used by the SAC. If the proposal is acceptable, written feedback should be given to the student in the same manner as in the standard written exam to identify points that need to be corrected or improved, but not by “giving” the answers. If the proposal is unacceptable, the student should be notified by the SAC as to: 1) whether this is considered a failure of the written portion of the exam; or 2) whether he/she should revise or substantially re-write the proposal, after being given a general idea of how much more is expected. An acceptable proposal should be completed within the time allotted for the written portion of the examination. Additional time will not be given to revise the proposal. If 4 weeks are given to write the proposal, and the student submits the proposal after 3 weeks, he/she could be given a week to modify the proposal after the SAC committee members review it if a modification option was originally specified by the SAC and the SAC decided that modification was required for a passing grade. If the proposal was submitted on the last day of the allotted time, no further revisions will be allowed. If the student fails the written exam, it is the decision of the SAC as to whether or not the student can take the examination again. If a new written examination is given, the advisor and SAC will decide on the type of written exam.

The Oral Examination for the Research Proposal Option. The written research proposal should serve as a starting point for the questioning and a “springboard” to examine the breadth and depth of the student's knowledge of topics introduced in the proposal. The student may take a **maximum of 10 minutes** to summarize the proposal or respond to written comments/criticisms by the SAC before the commencement of questions.

In addition to defending the experimental plan itself and addressing specific errors or omissions flagged by the SAC, the student is expected to answer questions concerning the theory behind the hypotheses and any techniques used, the significance of the topic, and any relevant biology.

Questions are not limited to the proposal and in later rounds of questioning the SAC members may ask any type of question. A broad, well documented proposal will serve as a better basis for the oral examination than a narrow limited one, so the need for unrelated questions will vary on a case-by-case basis. It is important that the SAC ascertain that the candidate has mastered a sufficient body of knowledge and is prepared for independent research. It is suggested that the first hour of questioning should be related to the proposal, and the second hour should allow questioning on a broader topic area.

The student should be familiar with 8000-level course material and current literature related to the proposal topic (in the broad sense) **and** be able to discuss the major concepts from 4000 through 8000 level courses in plant pathology and related areas. However, the amount of detailed general information that the student is expected to recall and the amount of time spent on this type of questioning would not be as great as in a standard comprehensive examination.

The written portion of the exam shall be scheduled so that the answers or proposal can be returned to the respective members of the committee at least two weeks in advance of the date scheduled for the oral part of the examination. Members of the examining committee shall mark their portions of the written examination or the proposal either satisfactory or unsatisfactory on the Gradform. The written portion of the exam will be returned to the student prior to the oral exam. The written and oral portions of the Candidacy Examination constitute a single examination.

The oral portion of the Candidacy Examination, held after completion of the written portion, will last two hours. The oral portion must be completed within one month after the written portion.

Videoconferencing. A petition to the Graduate School has historically been required if more than one committee member will be connecting from a distance.

However, the petition requirement was suspended during the COVID pandemic, and thus exams via Zoom do not require prior approval or a petition (as of AU 2023). This rule is subject to change, so students should verify when preparing for the candidacy exam.

All doctoral candidacy oral examinations involving video conferencing must adhere to the Graduate School's guidelines for videoconferencing (Graduate School Handbook, Appendix B - Guidelines for Video Conferencing Relating to Master's and Doctoral Examinations).

The student is considered to have successfully completed the Candidacy Examination successfully when the decision of the Candidacy Examination Committee is **unanimously** affirmative. If the examination is judged unsatisfactory, Graduate School policies pertaining to **Results of the Candidacy Examination** will be followed (Graduate School Handbook, [Section 7, Doctoral Degree Programs](#)).

gradforms.osu.edu

Report on Candidacy

The Graduate School will send this form to committee members by e-mail on the date and time of the oral examination. Committee members need to record their individual decisions by following the hyperlink in the e-mail at the conclusion of the oral candidacy examination.

Dissertation Committee

The Dissertation Committee is made up of *at least* four faculty with the major advisor serving as the chair. The members of the SAC serve on this committee.

The student is required to have the Ph.D. dissertation draft in the hands of each member of the dissertation committee at least two weeks prior to submission to the Graduate School (i.e., four weeks before the Final Oral Examination).

The dissertation draft should be presented to the assigned Graduate Faculty Representative no less than one week before the Final Oral Examination.

Committee members may find it necessary to recommend changes before an examination can be scheduled. It is the duty of each member of the committee to certify whether the Ph.D. dissertation draft represents a significant contribution to knowledge of sufficient importance to warrant holding a Final Oral Examination.

After approval by the dissertation committee, a complete draft of the dissertation must be submitted to the Graduate School no later than two weeks before the final oral examination. The decision regarding final approval of the dissertation will be made following the final oral examination.

gradforms.osu.edu

Application for Final Examination

The form is initiated by the student and requires approval by the advisor, co-advisor (if applicable), and all committee members at least 2 weeks prior to the Final Oral Examination.

In addition, a complete paper draft copy of the dissertation must be brought to the Graduate School for the format review.

Final Ph.D. Seminar

Ph.D. students are required to give a public seminar covering their research accomplishments prior to receiving their degree. This seminar may be given as part of PLNTPTH 8899 or as a separate seminar usually presented on the day of their Final Oral Examination. Based on the recommendation of the SAC, the seminar can be given before or as part of the Final Oral Examination in accordance with rules in the Graduate School Handbook (Section 7.10, Final Examination).

Final Oral Examination

After approval of the Application for Final Examination by the Graduate School, the Graduate School Representative will be selected by the Graduate School.

The student is considered to have completed the Final Oral Examination successfully after a *unanimous* affirmative vote by the Final Oral Examination Committee members. The results of this exam are reported on the Final Oral Examination Report form.

If the examination is judged unsatisfactory, the Final Oral Examination Committee must decide whether the student will be permitted to take a second Final Oral Examination and must report that decision on the Final Oral Examination Report form. For policies relating to the second Final Oral Examination, refer to the Graduate School Handbook.

Assessment Rubric – Final Examination

Committee members will be asked to assess the graduate program with a rubric, to be completed during and after the oral examination. The advisor should obtain paper copies of the rubric prior to the examination. The rubric is used for assessment of the graduate program (not the individual student).

The Graduate School requires that the final approved version of the dissertation be completed within five years after successfully completing the Candidacy Examination. This is a maximum time limit set by the University. In Plant Pathology, it is expected that the dissertation be completed in substantially less time than five years after the candidacy exam if the student is making reasonable progress. Ph.D. degree graduation requirements are provided in the current edition of the Graduate School Handbook.

gradforms.osu.edu

Report on Final Examination

The Graduate School will send this form to the committee members by e-mail on the date and time of the final examination

Committee members need to record their individual decisions by following the hyperlink in the e-mail within 24 hours of the oral examination.

The student should verify that the results of the form have been recorded within 24 hours after the final examination.

Report on Final Document

The Graduate School will send this form to the committee members by e-mail. Committee members must record their individual decisions by clicking on the link in the e-mails

Department Seminar



Graduate students are required to register for Plant Pathology Seminar (PLNTPH 8899) during Autumn and Spring semesters of each academic year. If a student has a direct conflict with another scheduled class, or if the student is teaching (TA-ing) at the same day/time, the student should contact the faculty seminar coordinators and GSC Chair to discuss arrangements that may involve viewing the seminar recordings and complete related assignments. It is expected that the student would still be required to register in PLNTPH 8899 and abide by the course rules established by the seminar coordinators.

In all cases, absence from seminar must be approved by the faculty seminar coordinators and GSC Chair.

The PLNTPH 8899 grade (Satisfactory or Unsatisfactory) will be based on attendance and participation, as described by the faculty seminar coordinators.

Student Presentation Requirements. Except for first year students (see section on First Year Research Proposal Requirements), graduate students are required to deliver a presentation each year at a public venue to meet degree requirements.

The presentation of a minimum of one seminar for the M.S. degree (usually, but not always, a final research report) and two seminars for the Ph. D. degree (usually, but not always, a research proposal and a final research report) is required in PLNTPH 8899.

Other seminar presentations to meet the one-per-year requirement may be made outside of PLNTPH 8899, but the audience must consist of more than their immediate laboratory research group. Examples of seminars or presentations that would be appropriate include oral presentations at scientific meetings (e.g. American Phytopathological Society, American Society of Plant Biologists, American Society for Microbiology, Society Of Nematologists), Extension presentations to clientele groups, and research focus group presentations (Kowlett seminar series in Columbus; or OSU Molecular Microbe and Plant Interactions).

Classroom teaching does not fulfill this requirement. The faculty advisor is responsible for monitoring the number and type of seminars given by their students in order to fulfill requirements. A plan for meeting the seminar degree requirement will be proposed on the Student Plan of Study and reviewed by the SAC. The date and type of seminar presented will be recorded on the student's Annual Progress Report.

Based on the number of open PLNTPH 8899 seminar dates available, seminar coordinators will schedule students to present seminars as needed to complete the seminar schedule. When requested by the seminar coordinators, students are expected to present a seminar regardless of whether or not they have already met minimum requirements by giving a seminar in another venue. The topics and student presenters are to be determined by the faculty seminar coordinators in consultation with students and their faculty advisors.

Registration Guidelines for PLNTPH 7999/8998/8999 RESEARCH

Research is an integral part of graduate student training in Plant Pathology. Both M.S. and Ph.D. students in Plant Pathology are required to take the maximum number of credit hours of PLNTPH

7999 (M.S.), 8998 (Pre-candidacy) and 8999 (Post-candidacy) each semester. Our department strongly encourages all full-time M.S. students and *pre-candidacy* Ph.D. students to register for the maximum of 16-18 credit hours in Autumn and Spring semesters, and 4 credits hours during Summer.

Tuition/fees are a flat rate for 8-18 credits for Autumn and Spring semesters, therefore registering for up to 18 PLNTPH 7999/8998 credits does not result in increased expenses for full time students. Students enrolled in more than 18 credit hours will be billed for credits beyond 18, in addition to billing for full-time enrollment. The "Over 18 Hours" rate is the same as the per credit hour rate up to 12 hours, and applies only to instructional, general and non-resident fees (registrar.osu.edu/policies/feesexplanation.asp)

Refer to page 9 for guidelines to determine the number of credit hours of PLNTPH 7999, 8998 or 8999 to register for in any particular term.

Student Plan of Study

All students must file in the department office a copy of the Student Plan of Study (formerly called Form 1 – Graduate Program Requirements). This plan is available on the Plant Pathology website: plantpath.osu.edu/grad-corner.

The Student Plan of Study must be sent to the GSC Chair for approval, generally by the end of the student's second term of enrollment during the academic year. After approval by the SAC, the plan will be the approved course schedule for the student's entire degree program. This plan will be presented to the committee for any oral examination related to the degree program and will serve as the basis for the request to take the Ph.D. Candidacy Examination. Information in this form may be used by the GSC for periodic review of each student's progress. It is the duty of the graduate student, in consultation with the major advisor, to see that all records are correct and up-to-date. Students completing the M.S. degree and continuing for a Ph.D. need to complete a new Student Plan of Study.

Maintaining a Research Notebook

All graduate students pursuing thesis or dissertation research are expected to maintain a detailed and comprehensive research notebook, and make it available upon request by the advisor or SAC. The exact format of the notebook should be determined by the advisor. Keeping such a notebook is an essential element in graduate research training and for effective communication between the student and advisor. All original data, notebooks and research materials are the property of the University and will be left with the advisor when a student leaves the laboratory.

Student Annual Performance Review, Evaluation and Denial of Further Registration



Graduate students in the department are evaluated formally and informally in various ways. The Graduate School monitors cumulative grade point average (CGPA) every term (Graduate School Handbook, Section 5. Academic and Professional Standards). **To be in good standing in the Graduate School, a student must maintain a graduate cumulative point-hour ratio (CPHR) of 3.0 or better in all graduate credit courses and must maintain reasonable progress toward Graduate School or graduate program requirements.**

A student with fewer than 9 earned hours of graduate credit whose CPHR is below 3.0 will receive a “poor performance” letter from the Graduate School urging consultation with the advisor. A student whose graduate CPHR falls below 3.0 after 9 graduate credit hours is placed on probation by the Dean of the Graduate School. A student on probation in the Graduate School may not be appointed or reappointed as a graduate associate. A student on probation whose record continues to deteriorate will be warned that dismissal is likely if the record does not improve. Special warnings include performance criteria tailored to the individual student, usually in consultation with the GSC Chair.

The advisor and SAC informally evaluate the student throughout the year with every interaction. There is also a formal review of each graduate student that occurs yearly which is under the auspices of the GSC. During this review, the Student Plan of Study is updated and the Student Annual Performance Review (formerly called Form 3 - Student Evaluation, Goal Setting and Progress), is completed by the advisor for each student regardless of the source of financial support. The GSC Chair may contact the advisor and/or the student if issues are raised in the annual review that warrants attention.

Although completing the Student Annual Performance Review is mandatory for each student on an annual basis, advisors may use this form at any time to monitor student progress, to address unsatisfactory performance, or when the student fails to meet academic standards (See section on Academic Standards). If the faculty advisor indicates that a student is not making reasonable progress, then a copy of the completed review is given to all members of the student’s SAC, and a new Student Annual Performance Review must be completed within a minimum of 5 weeks. The student or the faculty advisor may request a meeting of the SAC when a review indicates unsatisfactory progress. The completed Student Annual Performance Review will be placed in the student's permanent file and copies will be made available to all faculty members on the GSC.

A student who is evaluated by the faculty advisor as not making reasonable progress after two evaluations will be notified by the GSC Chair of the consequences of the unsatisfactory performance. The GSC chair will also send copies of Student Annual Performance Review and a letter indicating the student is not making reasonable progress to the Graduate School. As described in the Graduate School Handbook, Section, Academic and Professional Standards, Reasonable Progress: A student who does not maintain reasonable progress toward a degree or who does not fulfill other graduate program requirements, including those regarding professional standards and misconduct, may be denied further registration in that program by the Graduate School on the recommendation of the GSC chair. No student may be denied further registration in a graduate program without first being warned by the Graduate School that such action may take place. The Graduate School specifies the conditions the student must satisfy in order to demonstrate reasonable progress and to continue enrollment in the graduate program. Conditions consist of completion of course work or other requirements as approved by the GSC. A student who has been warned that further registration in the graduate program may be denied and who then satisfies the specified conditions is placed in good standing by the Graduate School.

A student who is judged as not making reasonable progress towards the degree may seek an alternative faculty advisor. It is not the GSC’s responsibility to identify or appoint another faculty advisor. Continuation in a departmental graduate degree program with a new faculty advisor must be approved by the GSC. Additionally, a student that has not made reasonable progress towards a degree cannot be appointed as a departmental Graduate Associate and the current associate

appointment funding will be terminated. Student financial support supplied by a faculty advisor is at the discretion of the faculty advisor. Graduate Associate appointments may be terminated prior to the end of the appointed period only with written approval of the Graduate School.

Thesis and Dissertation Binding

Department photocopy machines may be used for making preliminary copies of the thesis or dissertation for reading committee use, however, graduate students are responsible for the cost of bound copies of their thesis or dissertation. Students must provide good quality, bound copies of their thesis or dissertation to the department and to the major advisor(s). The departmental copies are to be bound in a permanent cloth-backed binding. More information on binding is available from the CFAES Library in Columbus or Wooster, or can be printed from an online vendor such as Thesis on Demand.

Publication of Thesis or Dissertation Research

Graduating students are expected to work with their major advisors to prepare manuscripts for publication from suitable portions of their thesis or dissertation research and submit these manuscripts to appropriate professional journals. Ph.D. students along with their advisor are required to have at least one manuscript submitted to a peer reviewed journal prior to the students' dissertation defense. A copy of the submitted manuscript must be given to the members of the SAC at least two weeks prior to the final exam. Ph.D. students are strongly encouraged to have at least one manuscript accepted prior to graduation.

Grievance Procedures

Concerns and all points of grievance should be resolved through discussion with the major advisor, the SAC, the GSC Chair and the Department Chair, in this order of priority. When resolution of a problem is not possible through this normal pathway, further recourse may be obtained using grievance procedures established by the Council on Research and Graduate Studies. Grievance procedures are described in the Graduate School Handbook, Appendix D – Graduate Student Grievance Review Guidelines.

Ownership of Research Data and Intellectual Property

Research is an integral part of graduate student education. Students participating in the research efforts of the Department have a unique privilege that requires ethics and a high degree of integrity. Additionally, students should recognize that they are conducting research for educational purposes only and that all data and intellectual property are owned by The Ohio State University. Students do not "own" the research data they generate during their graduate program.

Sole ownership of research data and intellectual property is clearly defined as the property of The Ohio State University in the following University Rules and Federal and State laws.

University Rules: The policy on Patents and Copyrights established by the Board of Trustees pursuant to University Rule 3335-13-06 govern the University's ownership of all intellectual property created by OSU faculty and students.

Federal Law: The Bayh-Dole Act (1980) created a uniform federal policy that gives universities the right to retain title to inventions made under federally-funded research programs.

State Law: The Ohio Revised Code section 3345.14 provides that all rights to discoveries and inventions that result from research or investigation conducted at a state university, or by employees of a state university acting within the scope of their employment, or with funding, equipment or infrastructure provided by or through a state university, shall be the sole property of that University.

Forms and Resources

List of Department and Graduate School Forms and Publications

Plant Pathology - Forms

Plant Pathology forms are posted on our website: plantpath.osu.edu/grad-corner

Student Plan of Study

Student Annual Performance Review

Student Annual Resumé

PLNTPTH 8901 - Mentored Teaching Form

PLNTPTH 8902 – Mentored Extension/Outreach Form

A pdf file of this handbook is available on the Department of Plant Pathology website:

plantpath.osu.edu/graduate/grad-handbooks

Graduate School - Forms and Publications

Forms that are submitted by the student online (gradforms.osu.edu)

Mostly commonly used forms:

Application for Candidacy

Application for Certificate Completion

Application to Graduate

Application for Final Exam

Committee and Examination Petition

Minors and Interdisciplinary Specialization

Delay of Final Document

Report on Candidacy

Report on Final Examination

Report on Final Document

Minors and Interdisciplinary Specializations
Specialization

Transcript Designation Request

Late Course Petition

Transfer of Graduate Credit

Transfer of Graduate Program

Graduate School website resources

Career Building Strategies and Skill Development

gradsch.osu.edu/career-building-strategies-and-skill-development

Accelerate to Industry (A2i)

Preparing Future Faculty

Preparing Future Professionals

Three Minute Thesis

Mentoring Workshops

Graduate Associate Teaching Award

Graduate Associate Leadership Award

Graduate Associate Performance Award

University Wide Resources

Versatile PhD – Explore non-academic career options

Handshake – Ohio State’s position posting system (search and apply for jobs)

AlumniFire – Online community for networking, mentoring, career connections et al.

Research Resources

gradsch.osu.edu/current-students/graduate-student-experience/social-wellness-and-student-life/graduate-student-2

Research Commons

Edward F. Hayes Graduate Research Forum

University Libraries

Office of Research

Copyright Resources Center

Funding Opportunities

Graduate Student Code of Research and Scholarly Conduct

Guidelines for Academic Success

General Research and University Policies

Training for Researchers

Social, Wellness and Student Life

gradsch.osu.edu/pursuing-your-degree/social-wellness-student-life

Graduate Student Guide

Council of Graduate Students

Student Organizations

Disability Services

Office of Diversity and Inclusion

Student Wellness Center

Additional Resources

- Arts and Culture

- Childcare

- Code of Student Conduct

- Counseling and Consultation Service

- Disability Services

- Fitness and Recreational Sports

- Health Insurance

- Office of Diversity and Inclusion

- Office of Institutional Equity

Policies and Guidelines

Student Conduct, including academic and research misconduct

- **Code of Student Conduct**
studentaffairs.osu.edu/csc/
- **Student Conduct, Office of Student Life (formerly Student Judicial Affairs)**
studentconduct.osu.edu
- **Office of Academic Affairs, Committee on Academic Misconduct**
oaa.osu.edu/coam.html
- **University Policy and Procedures Concerning Research Misconduct**
research.osu.edu/research-responsibilities-and-compliance/research-misconduct
- **Guidelines for the Review and Investigation of Allegations of Scholarly Misconduct by Graduate Students** - available from the Graduate School, 250 University Hall, Columbus
- **Drugfree Workplace Policy**
hr.osu.edu/public/documents/policy/policy730.pdf

Research Policies and Resources

- **Office of Research**
research.osu.edu
- **Office of Sponsored Programs**
osp.osu.edu
- **Responsible Conduct of Research**
orpp.osu.edu/irb/training-requirements/rcr/
- **Technology and Commercialization Office**, including policies and guidelines related to patents, copyrights, conflicts of interest, plant varieties, consulting, entrepreneurship, intellectual property, and technology transfer
oied.osu.edu/technology-commercialization
- **Human Subjects**, Office of Responsible Research Practices, Institutional Review Board
orpp.osu.edu/irb/
- **Animal Care and Use**, Office of Responsible Research Practices, Institutional Animal Care and Use Committee (IACUC)
orpp.osu.edu/iacuc/

- **Biosafety**, Office of Responsible Research Practices, Institutional Biosafety Committee
orpp.osu.edu/ibc/
- **Conflict of Interest**, Office of Research Compliance
orc.osu.edu/regulations-policies/coi/

Student Records and Privacy

- **Family Educational Rights and Privacy Act (FERPA)**
The Ohio State University's Policy Concerning Privacy and Release of Student Education Records,
registrar.osu.edu/policies/releaseinfo.asp

Policies (Human Resources)

hr.osu.edu/policies-forms

Information Technology Policies and Services

- **Office of Technology and Digital Innovation**
it.osu.edu
- **Policies and Standards**
it.osu.edu/policies-and-standards

University Libraries

library.osu.edu

Disability Services

- **Student Life Disability Services**
slds.osu.edu/
- **Office of Institutional Equity**
equity.osu.edu/policies-and-standards

Graduate Advising Best Practices

From: Graduate School Handbook, Appendix H

Overview

Section H.1

Graduate advising is best understood as a relationship between graduate student and faculty advisor where both parties can expect that the other party will follow best practices in fulfilling his or her responsibilities as graduate student or advisor.

The relationship between a graduate student and advisor is one that can have a great impact on the academic achievements and life of a graduate student. This relationship can greatly encourage the academic pursuits of the graduate student, proving to be one of the most influential interactions of the scholar's life. A relationship in which mutual expectations are not understood, however, may diminish a graduate student's potential.

This document outlines the minimum expectations for best practices in graduate advising at The Ohio State University. It is meant to be a springboard for each graduate program to discuss, develop, or reevaluate its local advising expectations and practices. This document was created in 2012 by the Council of Graduate Students in consultation with the Graduate School and approved by the Graduate Council.

Communication and Graduate Advising

Section H.2

Regular and clear communication is essential to good graduate advising. It is recommended that as much communication as possible occur in person or over the phone to enhance clarity, reduce ambiguity and misunderstanding, and to resolve conflict. Written communication, e.g. via mail and e-mail, is appropriate, especially to document situations and potentially contentious issues. Problems that arise should be addressed immediately and clearly so that both parties can work to remedy issues in an expedient manner. Graduate students and advisors should recognize that social media can blur the line between professional and personal lives and should be used only if deemed appropriate by both parties.

Graduate Student Responsibilities

Section H.3

- Conduct academic pursuits in an ethical manner and develop professionally
 - uphold Ohio State's Code of Student Conduct
 - pursue opportunities that advance career as a graduate student and beyond
- Take ownership of academic progress
 - devote significant and productive time toward degree completion
 - stay abreast of requirements for degree completion through active and regular discussions with advisor
 - communicate career goals and concerns related to academic progress clearly
 - initiate communication with the advisor
- Respect the responsibilities of the advisor
 - maintain open communication with advisor
 - allow sufficient time for the advisor to provide feedback in advance of deadlines
 - maintain professionalism by keeping up with graduate student responsibilities even when advisor is not present

Graduate Advisor Responsibilities

Section H.4

- Conduct advising in an ethical manner, including when recruiting advisees
 - Communicate clear intentions, expectations, and requirements to potential and current advisees, including how long the advisor expects to stay in his or her current position and the amount of funding support available to advisees
 - Address problems immediately so both parties can remedy issues expediently
 - Maintain communication and interact with graduate students in a professional manner
 - Communicate clear expectations for time to degree completion and publication expectations
 - Provide periodic and regular evaluations of progress toward degree
 - Provide timely written feedback on advisee's professional writing (article drafts, dissertation chapter drafts, etc.)
 - Give students appropriate credit for their work, e.g. as reflected in author strings in journal articles or books

- Aid in preparing students to be the best professional they can be
 - Initiate conversations about academic progress and stay current about degree requirements and procedures
 - Initiate conversations with advisee about career goals
 - Support traditional and non-traditional career goals
 - Help graduate students develop professional skills that will make them competitive for employment in their given field
 - Encourage students to take part in activities that will enrich their academic development, e.g. by participating in professional conferences and other networking activities
- Respect advisees' academic and non-academic commitments and responsibilities
 - Provide prompt and honest feedback on student's work
 - Allow reasonable time for students to prepare requested materials
 - Do not require that a student continue to provide a service (e.g. teaching, laboratory management, mentoring of other students, etc.) under terms that can hinder a student's degree completion

Graduate Program Responsibilities

Section H.5

- Establish graduate advising best practices that pertain specifically to the local graduate program and its graduate degrees
- Maintain a graduate program handbook, including the steps and processes for students to complete degree requirements and grievance procedures for graduate students and advisors
- Create and maintain an easily accessible online list of information for graduate students that contains links to the Graduate School Handbook and other relevant university resources
- Provide yearly written review of performance for graduate students and advisors
- Maintain clear communication with students and advisors
- Hold a yearly orientation to familiarize new students and faculty with the graduate program and the university

Plant Pathology M.S. Learning Goals and Outcomes

Goal 1.0

Use critical thinking when reviewing and solving problems.

Outcome 1.1

Demonstrate ability to critically evaluate findings in plant pathology.

Measure 1.1.1

Thesis Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 1.1.2

First Year Seminar – Collected Assessment Form.

Outcome 1.2

Demonstrate problem solving skills in plant health management.

Measure 1.2.1

Thesis Oral Examination – Collected Assessment Form.

Goal 2.0

Use effective communication strategies, including oral and written communication skills, using current informational resources.

Outcome 2.1

Select proper current primary informational resources used in plant health management associated project area.

Measure 2.1.1

Written Thesis – Collected Assessment Form.

Outcome 2.2

Explain scientific data clearly to both scientific and general audiences in written and oral forms.

Measure 2.2.1

Written Thesis – Collected Assessment Form.

Measure 2.2.2

Thesis Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 2.2.3

First Year Seminar – Collected Assessment Form.

Outcome 2.3

Prepare and defend thesis/project of original plant health research.

Measure 2.3.1

Thesis Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 2.3.2

First Year Seminar – Collected Assessment Form.

Goal 3.0

Understand the fundamental and advanced applications of the scientific method as it relates to plant health research.

Outcome 3.1

Generate hypotheses on a central plant health research question.

Measure 3.1.1

Written Thesis – Collected Assessment Form.

Measure 3.2.2

Thesis Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 3.2.3

First Year Seminar – Collected Assessment Form

Outcome 3.2

Design plant health research experiments using good laboratory/field/computer practices and standard operating procedures.

Measure 3.2.1

Written Thesis – Collected Assessment Form.

Outcome 3.3

Develop plant health research hypotheses following good research practices.

Measure 3.3.1

Thesis Oral Examination – Collected Assessment Form.

Outcome 3.4

Produce plant health research information in an organized and timely manner.

Measure 3.4.1

Thesis Oral Examination – Collected Assessment Form.

Outcome 3.5

Analyze plant health research data using appropriate measures and techniques.

Measure 3.5.1

Thesis Oral Examination – Collected Assessment Form.

Goal 4.0

Understand ethical issues in academia and industry.

Outcome 4.1

Perform scholarly or professional plant health activities in an ethical manner.

Measure 4.1.1

Thesis Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 4.1.2

First Year Seminar – Collected Assessment Form.

Goal 5.0

Understand the fundamental tenets and practices of plant pathology, plant health management, and experimental design.

Outcome 5.1

Design research projects and analyze data using appropriate statistical measures and techniques.

Measure 5.1.1

Thesis Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 5.1.2

First Year Seminar – Collected Assessment Form

Outcome 5.2

Examine the biology and ecology, of the major pathogen groups (fungi, oomycetes, bacteria, viruses, and nematodes) and epidemiology of the diseases they cause.

Measure 5.2.1

PLNTPTH 6001 – Final Exam.

Outcome 5.3

Generate plant disease diagnoses using classical and modern techniques.

Measure 5.3.1

PLNTPTH 5685 – Unknown disease sample exercise.

Outcome 5.4

Evaluate integrated plant disease management strategies.

Measure 5.4.1

PLNTPTH 5603 – Portion of First Writing Assignment.

Plant Pathology Ph.D. Learning Goals and Outcomes

Goal 1.0

Use critical thinking when reviewing and solving problems.

Outcome 1.1

Demonstrate ability to critically evaluate findings in plant pathology.

Measure 1.1.1

Graduate Candidacy Exam – Collected Assessment Form.

Measure 1.1.2

Dissertation Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 1.1.3

First Year Seminar – Collected Assessment Form

Outcome 1.2

Demonstrate problem solving skills in plant health management.

Measure 1.2.1

Dissertation Oral Examination – Collected Assessment Form.

Measure 1.2.2

Graduate Candidacy Exam – Collected Assessment Form.

Goal 2.0

Use effective communication strategies, including oral and written communication skills, using current informational resources.

Outcome 2.1

Select proper current primary informational resources used in plant health management associated project area.

Measure 2.1.1

Written Dissertation – Collected Assessment Form.

Outcome 2.2

Explain scientific data clearly to both scientific and general audiences in written and oral forms.

Measure 2.2.1

Written Dissertation – Collected Assessment Form.

Measure 2.2.2

Graduate Candidacy Exam – Collected Assessment Form.

Outcome 2.3

Prepare and defend dissertation of original plant health research.

Measure 2.3.1

Dissertation Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 2.3.2

Frist Year Seminar – Collected Assessment Form.

Goal 3.0

Understand the fundamental and advanced applications of the scientific method as it relates to plant pathology research.

Outcome 3.1

Generate hypotheses on a central plant health research question.

Measure 3.1.1

Written Dissertation – Collected Assessment Form.

Measure 3.2.2

Dissertation Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 3.2.3

Frist Year Seminar – Collected Assessment Form.

Outcome 3.2

Design plant health research experiments using good laboratory/field/computer practices and standard operating procedures.

Measure 3.2.1

Written Dissertation – Collected Assessment Form.

Outcome 3.3

Develop plant health research hypotheses following good research practices.

Measure 3.3.1

Dissertation Oral Examination – Collected Assessment Form.

Outcome 3.4

Produce plant health research information in an organized and timely manner.

Measure 3.4.1

Dissertation Oral Examination – Collected Assessment Form.

Outcome 3.5

Analyze plant health research data using appropriate measures and techniques.

Measure 3.5.1

Dissertation Oral Examination – Collected Assessment Form.

Outcome 3.6

Demonstrate a depth of knowledge in a specific field of study.

Measure 3.6.1

Graduate Candidacy Exam – Collected Assessment Form.

Goal 4.0

Understand ethical issues in academia and industry.

Outcome 4.1

Perform scholarly or professional plant health activities in an ethical manner.

Measure 4.1.1

Dissertation Oral Presentation (exit seminar) – Collected Assessment Form.

Measure 4.2.2

Frist Year Seminar – Collected Assessment Form.

Goal 5.0

Understand the fundamental tenets and practices of plant pathology, plant health management, and experimental design.

Outcome 5.1

Design research projects and analyze data using appropriate statistical measures and techniques.

Measure 5.1.1

Graduate Candidacy Exam – Collected Assessment Form.

Measure 5.1.2

Dissertation Oral Examination – Collected Assessment Form.

Outcome 5.2

Examine the biology and ecology, of the major pathogen groups (fungi, oomycetes, bacteria, viruses, and nematodes) and epidemiology of the diseases they cause.

Measure 5.2.1

PLNTPTH 6001 – Final Exam.

Measure 5.2.2

Graduate Candidacy Exam – Collected Assessment Form.

Outcome 5.3

Generate plant disease diagnoses using classical and modern techniques.

Measure 5.3.1

PLNTPTH 5685 – Unknown disease sample exercise.

Outcome 5.4

Evaluate integrated plant disease management strategies.

Measure 5.4.1

PLNTPTH 5603 – Portion of First Writing Assignment.

Outcome 5.5

Construct an integrated plant disease management program.

Measure 5.5.1

PLNTPTH 6001 – Plant Disease Lesson.

Measure 5.5.2

PLNTPTH 5603 – Final Oral presentation.

Goal 6.0

Demonstrate the ability to conduct independent research.

Outcome 6.1

Develop novel and relevant hypotheses.

Measure 6.1.1

Graduate Candidacy Exam – Collected Assessment Form.

Outcome 6.2

Demonstrate evidence of independent ideas.

Measure 6.2.1

Graduate Candidacy Exam – Collected Assessment Form.

Goal 7.0

Demonstrate scientific writing ability.

Outcome 7.1

Develop and publish peer-reviewed research or review articles.

Measure 7.1.1

Publication of peer-reviewed research or review article(s) – Collected Assessment Form.