

Graduate Student Handbook
Department of Plant Pathology
University of Kentucky
Revised August 2019

Copies of this handbook are available from the Director of Graduate Studies, and available online via links to the Department of Plant Pathology Home Page, located at <http://www.ca.uky.edu/agcollege/plantpathology/index.html>.

NOTE: Any information provided here will be superseded by the rules of the University of Kentucky Graduate School. Consult the Graduate School Bulletin and other documentation at < <http://www.research.uky.edu/gs/> > for the most recent information.

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An Open Letter to Our New Graduate Students

Dear Graduate Student:

Welcome to the University of Kentucky and to the Department of Plant Pathology. As a graduate student, you are expected to undergo a significant philosophy change, from being just a student to being a knowledgeable scientist. Although grades in academic work will remain important, emphasis will be directed to using scientific knowledge and creative thinking in original research, and reporting this research in a thesis or dissertation and scientific publications. As part of this process, you will develop strong personal and professional relationships with the faculty and other graduate students that you will likely maintain for the rest of your life.

Our mission in the department is two-fold. First, to help you develop to your fullest potential as a person; and second, to contribute to the body of scientific knowledge. The Graduate Student Handbook contributes to these objectives by presenting the policies with which you should be familiar as you progress through your program.

While I encourage you to be familiar with all the items in this document, pay special attention to the duties and responsibilities of a Graduate Assistant and the Departmental policies regarding graduate committees. Your advisor will be your primary source of information; any concerns should be directed to him/her first, and then to the Director of Graduate Studies (DGS) and Department Chair if a resolution cannot be obtained.

While there are certain requirements determined by the Graduate School and Department, there is much flexibility in how one progresses. Each advisor will direct a graduate student differently. This variability is a reflection of personal philosophy, the discipline involved, and resources available to the professor and student. This flexibility is one of the strengths of a graduate program. It allows the student to develop to his/her fullest potential and it places that responsibility of pursuing knowledge upon the student.

As DGS, I have an open door policy. I welcome your comments and suggestions, as well as personal visits on how you are doing. Again, welcome to the Department of Plant Pathology at the University of Kentucky.

Sincerely,

Professor and Director of Graduate Studies

INTRODUCTION

This handbook is a guide to the major rules and procedures of the Graduate School and the University of Kentucky (U.K.) Department of Plant Pathology. Its contents reflect the current understanding of the Director of Graduate Studies (DGS) and department faculty. However, rules can change. ***It is the responsibility of each student to be familiar with and follow the rules of the Graduate School and the Department. The Graduate School will not waive regulations or grant exceptions if a student is unaware of the rule, even if the information was not presented to the student by Department representatives or other authorities.*** Graduate School rules and policies are described in more detail in the most recent Graduate School Bulletin: <http://www.research.uky.edu/gsbulletin/bullinfo.shtml>. University regulations are contained in the U.K. Administrative Regulations and Governing Regulations, located at: <http://www.uky.edu/regs/>.

Graduate Degree Programs

The Department of Plant Pathology offers graduate work leading to the Master of Science and Doctor of Philosophy degrees. All students must complete a program that involves original research. Plant Pathology is considering a non-thesis option degree (Plan B). A Master's degree should typically take not less than two, and not more than three years to complete, while a Ph.D. degree should generally require not less than four, and not more than five years to finish. If both the M.S. and Ph.D. are done at U.K., the Ph.D. typically requires two or three years beyond the M.S. to complete.

Organization and Administration

Graduate Faculty

The Graduate Faculty consists of the Dean of the Graduate School and all persons appointed thereto by the University President. Full Members of the Graduate Faculty can serve on Masters and Doctoral committees, and direct Masters theses and Doctoral dissertations. Associate Members of the Graduate Faculty can serve on Masters and Doctoral committees, direct Masters theses, and co-chair Doctoral committees with a Full Member. The DGS can petition the Graduate School to have faculty at other universities appointed as Associate Members of the U.K. Graduate Faculty so that they can serve on Advisory Committees.

Dean of the Graduate School

The Dean of the Graduate School is charged with the administration of the policies adopted by the Graduate Faculty and the University Senate relating to graduate studies.

Director of Graduate Studies (DGS)

For each graduate program, the Dean of the Graduate School appoints a DGS after nomination and approval by the Department Chair and PPA faculty. The DGS administers the rules of the Graduate School as they pertain to the graduate program of the department, and serves as a liaison between the Graduate Dean and the faculty and students of the program.

Major Professor and Advisory Committee: M.S.

Each M.S. student's program is guided by a Major Professor (Thesis Director) and an Advisory Committee. The M.S. Advisory Committee consists of the Major Professor as chair, and at least two other members. At least two committee members (including the chair or a co-chair) must be members of the Graduate Faculty, and at least one of these must be a Full member. At least two of the committee members should be from the Department of Plant Pathology. Although not required, it is recommended that a faculty member from outside PPA be a committee member. The committee should be chosen and submitted to the DGS for approval before the end of the second semester of the student's tenure for the M.S. degree. The Advisory Committee should meet at least once a year with the student. It is the responsibility of the student to schedule these meetings. A written record of each meeting of the student and their advisory committee, signed by the student and by the Major Professor, must be provided to the DGS by the Major Professor within two weeks after the meeting, and a copy will be placed in the student's file. No less than two weeks prior to the Final Examination, the DGS will recommend to the Dean of the Graduate School the appointment of the Advisory Committee to serve as the Examination Committee.

Major Professor and Advisory Committee: Ph.D.

Each Ph.D. student's program is guided by a Major Professor (Dissertation Director) and an Advisory Committee throughout the student's graduate career. The purpose of the Advisory Committee is to give the student continuity of direction and counsel and provide intellectual stimulation throughout residency to completion of the doctorate.

The DGS, or a designee (usually the Major Professor), serves as advisor to beginning graduate students until the Advisory Committee is appointed. Most students enter the program having already committed to a Major Professor; however there is an option for an incoming Ph.D. student who is supported on departmental assistantship or fellowship money to do two or three short lab rotations before choosing a Major Professor. This option is not available to students who are supported on individual grant funds. The Advisory Committee should be appointed before the end of the student's second semester. It MUST be appointed no less than one year prior to the Qualifying Examination. The Major Professor and Advisory Committee must be recommended to the Graduate School by the DGS. The DGS will approve the committee only if it meets all Graduate School requirements (below), provides a reasonable breadth and balance of expertise in the major and related disciplines, and presents no

obvious conflicts of interest. Once the DGS has approved and recommended the committee, it will be officially appointed by the Graduate Dean. The Dissertation Director and the Advisory Committee specifically set requirements (within the rules and regulations of the Plant Pathology program, Graduate School, and University), which the student must meet in pursuit of the doctorate.

The Ph.D. Advisory Committee has a core of four members. This core consists of the Major Professor (Dissertation Director) as chair, two other faculty members from Plant Pathology, and at least one representative from outside the Plant Pathology Department. At least one representative must be from a minor area(s), different from the student's major research focus. All members of the core must be members of the Graduate Faculty of the University of Kentucky, and at least three (including the chair or a co-chair) must possess Full Graduate Faculty status. Additional faculty members can serve as members of the Advisory Committee. The core of the Advisory Committee must be kept at its full complement throughout the graduate career of the individual student. Thus, in the event of an unforeseen vacancy on the committee, an appropriate replacement must be made prior to any subsequent committee decisions. The DGS must recommend any replacements or changes to an Advisory Committee to the Graduate School. All decisions of the Advisory Committee are by majority vote of its Graduate Faculty members. Advisory Committee decisions are reported promptly to the DGS, who then transmits them to the Dean of the Graduate School.

In addition to advising and program planning, the Advisory Committee also administers the Qualifying Examination, supervises the preparation of the dissertation and, along with the Outside Examiner (selected by the Graduate School), administers the Final Examination. Regular committee meetings are essential both before and after the Qualifying Exam. **Each student must meet with her or his Advisory Committee at least once a year to present a written and oral progress report.** At a meeting prior to the submission of the thesis or dissertation to the Advisory Committee, agreement should be reached on the extent of additional research to be conducted for the completion of the thesis or dissertation. **It is the responsibility of the student to schedule all necessary meetings with his or her Advisory Committee.** A record of each meeting that includes the written progress report, signed by the student and the Major Professor, will be provided to the DGS by the Major Professor within two weeks of the meeting, and a copy will be placed in the student's file.

Requirements for Degrees

Departmental Requirements

Prerequisite Coursework: All graduate students pursuing an advanced degree in the Plant Pathology program ideally should have, or should obtain, a background in the following areas: mathematics through differential and integral calculus; physics; chemistry, including analytical, organic, and biochemistry; and the equivalent of introductory courses in botany, plant physiology, genetics,

molecular biology, statistics and microbiology. The Academic Program Committee will inform the Major Professor and the student, in writing, of any relevant course deficiencies at the time of admission to the program. Deficiencies should be corrected early in the graduate program either by formal coursework or, with the approval of the Advisory Committee, by independent study. In some cases, the Advisory Committee may decide to waive certain of these requirements, depending on the student's background, goals, and interests. Agreements regarding remedial coursework, independent study, or waivers should be recorded in the notes of the meeting in which they were discussed, and included in the student's file.

Basic Course Requirements: All students are strongly encouraged to take PPA 400G (Principles of Plant Pathology), even if they have had a similar course previously. This course provides a common basis for subsequent required courses in the department, and will allow international students to become conversant with domestic terminology and perspective in the discipline. Required courses for both the M.S. and Ph.D. are PPA 500 (Physiology of Plant Health and Disease), PPA 600 (Critical Methods in Plant-Microbe Interactions), PPA 640 (Identification of Plant Diseases), PPA 641 (Plant Disease, Population Biology, and Biotechnology), and PPA 770 (Plant Pathology Seminar). Ph.D. students are required to complete all of the above courses, and also to take at least two of the following courses: PPA 670 (Plant Bacteriology), 671 (Advanced Plant Virology), 650 (Fungal Biology), and 673 (Advanced Plant Disease Resistance). The Advisory Committee may decide to waive one or more of these course requirements if the student has already taken equivalent coursework at another institution. A record of this decision should be placed in the student's file.

Individual Course Requirements: Elective courses will be determined by the student together with the Major Professor and Advisory Committee, taking into account the student's background, research topic, and area of specialization.

Departmental Seminars: *All students are required to attend all Department of Plant Pathology seminars*, and are strongly encouraged to attend seminars given by other departments that relate to their subject matter interests. At the end of each student's tenure, an Exit Seminar should be presented. This seminar, which summarizes the student's thesis/ dissertation research, is presented immediately before the Final Examination. In addition to the Exit Seminar, each M.S. student must present at least one other seminar, and each Ph.D. student must present at least two other seminars. Students should enroll in PPA 770 for at least one of these seminars. Specific seminar policies will be distributed by the Seminar Coordinator at the beginning of each semester.

Foreign Language: The Department of Plant Pathology does not require knowledge of a language other than English for the M.S. or Ph.D. degrees.

Graduate School Requirements - Master of Science

Time Limits: For students enrolled prior to 2005, up to 8 years is allowed for completion of all requirements for the degree, with the possibility of extensions for up to an additional 4 years. For students enrolled in the fall of 2005 or after, the limit is 6 years to complete all requirements, with the possibility of extensions approved by the Graduate School for an additional 4 years.

Coursework: For a M.S. degree, the Graduate School has the following minimum course requirements:

1. 30 total semester hours of graduate course work, with a GPA of at least 3.0. Courses that count toward fulfillment of this requirement are those with numbers from 500 to 799, and all 400-level courses with a G suffix that are outside the student's major (thus PPA 400G does not count for this requirement).
2. 16 hours of graduate course work in regular courses. PPA 768, PPA 784 and PPA 794 *do not count* for fulfillment of this requirement
3. 12 hours of graduate course work in the student's major area (PPA).
4. 12 hours in 600 or 700 level courses.

Thesis: A Master's thesis must represent an original scholarly contribution by the student. This should not discourage collaboration by students in larger, multi-authored projects, but collaborative research must be undertaken very carefully to ensure that the student's contribution represents a complete, self-contained piece of work that can easily be considered an independent accomplishment. It is the responsibility of the student, the Major Professor, and the Advisory Committee to ensure that this is the case.

Although it is not a requirement for graduation, it is common for students to include original data that have already been published, or that have been accepted or submitted for publication, in their theses. Any chapters that have already been published, accepted for publication, or submitted for publication must carry the following footnote: *A version of this chapter has been published/accepted for publication/submitted for publication (cite the reference)*. Furthermore, if the student wants to include verbatim text or figures that have already been published or accepted for publication in a journal article or book chapter, he or she must obtain permission from the publisher, if necessary, and provide evidence of this permission to the Graduate School at the time of submission.

If the student wants to include material from published, accepted, or submitted papers or book chapters on which that student **was not the sole first author**, the DGS must write a letter to the Graduate School that justifies inclusion of this material in a work that is supposed to be evidence of independent scholarly accomplishment.

Final Examination: Within 30 days of the start of the semester during which the

defense will occur (15 days for the start of Summer Session II), the student must submit the *University of Kentucky Graduate School Application for Degree* form to the Graduate School. No less than two weeks before the Final Examination, the Major Professor and the DGS must submit a *Request for Final Masters Degree Examination* and a *Thesis Approval Form* to the Graduate School. The Thesis Approval form indicates that the thesis satisfies all requirements of the Graduate School and is complete in content and format, and that the student is ready for examination. The examination should be given no later than eight days before the end of the semester in which the degree is to be awarded. The examination is given by a committee of at least three members appointed by the Dean of the Graduate School upon recommendation of the DGS. The members of the examining committee are usually those who have served on the Advisory Committee. The committee determines if the thesis is acceptable and administers the examination. This examination covers the thesis and course work. The choice as to whether the examination is to be oral and/or written rests with the examining committee. If a student is applying to work on a Ph.D. after completion of the M.S., the examiners may also provide recommendation of the candidate's qualification for the Ph.D. program.

Graduate School Requirements - Doctor of Philosophy

Coursework: Before taking the Qualifying Examination, a Ph.D. student must register for at least four semesters of full time residence (9 credit hours per semester) at U.K. A student who initially enrolled in fall of 2005 or beyond may not register for more than 10 semesters prior to taking the qualifying examination. An M.S. degree can usually be substituted for two of the required prequalifying residency semesters if desired (consult the current Graduate School Bulletin for details of the various models for fulfilling this requirement). After the Qualifying Examination, the student must register for at least two more semesters of residency credit before s/he can defend her/his dissertation. If the student registers for two credits of PPA 767, and if the *Recommendation for Qualifying Examination Form* is submitted within six weeks of the beginning of the semester, the semester in which the exam is taken can count as one of the post-qualifying residency semesters. After successfully completing the Qualifying Examination, Ph.D. students can enroll in PPA 767 for two credit hours (this counts as full-time enrollment) for up to ten semesters. If the defense has not occurred within that time, the student will be terminated from the program.

Qualifying Examination: The Ph.D. Qualifying Examination is both written and oral, and is given by the Advisory Committee. The Advisory Committee determines the subject matter of the examination, including the major area of specialization, minor areas if appropriate, and any other areas that the committee feels are pertinent. The examination can only be taken after the pre-qualifying residency requirement has been fulfilled (consult the current Graduate School Bulletin for details). No less than two weeks before the date of the oral examination, a *Recommendation for Qualifying Examination Form* must be submitted to the Graduate School. Qualifying Exam format is stated in the

Appendix. Copies of materials from prior examinations are kept on file and may be obtained from the Department Chair or DGS upon request. The written and oral portions of the examination are not assessed separately, only an overall determination of pass or fail is made. The majority opinion of the Advisory Committee determines whether the student passes or fails the examination. If the student fails, the examination may be repeated no sooner than 4 months and no later than 12 months after the first examination. Under no circumstances may a third examination be given.

Dissertation: A Ph.D. Dissertation must represent an original scholarly contribution by the student. This should not discourage collaboration by students in larger, multi-authored projects, but collaborative research must be undertaken very carefully to ensure that the student's contribution represents a complete, self-contained piece of work that can easily be considered an independent accomplishment. It is the responsibility of the student, the Major Professor, and the Advisory Committee to ensure that this is the case.

Although it is not a requirement for graduation, it is common for students to include original data that have already been published, or that have been accepted or submitted for publication, in their dissertation. Any chapters that have been published, accepted for publication, or submitted for publication must carry the following footnote: *A version of this chapter has been published/accepted for publication/submitted for publication (cite the reference)*. Furthermore, if the student wants to include text or figures that have already been published or accepted for publication in a journal article or book chapter, he or she must obtain permission from the publisher, if necessary, and provide evidence of this permission when filing the dissertation.

If the student wants to include material from published, accepted, or submitted papers or book chapters on which that student **was not the sole first author**, the DGS must write a letter to the Graduate School that justifies inclusion of this material in a work that is supposed to be evidence of independent scholarly accomplishment. In general, it is best to avoid having a substantial part of the student's dissertation published in articles for which the student is not the sole first author.

Final Examination: The Final Examination for the Ph.D. is given a minimum of two semesters after the Qualifying Examination. This is an oral examination that includes a defense of the dissertation and may include questions from the major and minor areas. The Final Examination for the Ph.D. is a public event open to any interested member of the university community. The examination is given by a committee, appointed by the Dean of the Graduate School, which consists of the DGS (or a designee) as chair, the Advisory Committee, and an Outside Examiner. The majority opinion of the committee determines the outcome of the examination. If the committee is evenly divided, the candidate fails. In the event of a failure, a second but not a third examination may be given. The dissertation

in its final form must be received by the Graduate School within 60 days after successfully passing the Final Examination. The candidate might be required to undergo a second examination if this deadline is not met.

M.S. Non-Thesis Degree Option (Plan B)

The Department of Plant Pathology proposes to offer a primarily coursework non-thesis Master of Science degree, also called a “Plan B” Master’s, designed for students seeking additional exposure and training in sub-disciplines within plant pathology without the emphasis placed on original research by the current thesis M.S. degree.

The PPA non-thesis master’s degree option primarily involves academic course work followed by a written examination during the final semester of enrollment. The structured research component of the M.S. degree with thesis is not present in the non-thesis Plan B option. Since this option does not involve laboratory research, this degree track is suitable for working students. Students entering the Plan B Master’s program will develop a curriculum based on their own interests, advice from a faculty advisor, the list of available classes, and the Graduate School guidelines for a non-thesis M.S. degree. Through this degree program, students can develop additional technical skills, expand their understanding in any of the major areas of plant pathology, and prepare themselves for additional educational opportunities or an upgrade in their employment position.

The typical length of time for completion of an M.S. non-thesis degree while enrolled as a part-time student is anticipated to be approximately six to eight semesters. The student will take a four-hour written exam after completing 30 graded graduate credits.

M.S. Non-Thesis Degree Program of Study

During the first semester, the student will be assigned an advisor selected from the faculty in PPA with interests consistent with those of the student. Working with the faculty advisor, the student will complete a Program of Study having the depth and breadth to satisfy the requirements of the degree: The Program of Study should have, (1) an emphasis in a major area of plant pathology, and (2) a breadth of study in other areas of plant pathology such as biotechnology, molecular and cytological studies. During the student’s first term of enrollment, the Program of Study must be submitted to the major professor for approval. By the beginning of his or her last semester, the student should establish an advisory committee who will administer the exit exam. This three-person committee is chosen from members of the graduate faculty in PPA who have agreed to serve. This committee will continue to advise the student and will administer the exit exam before the degree is awarded. Non-thesis (Plan B) Master’s students in PPA must fulfill the general requirements as outlined by the Graduate School. Thirty (30) credit hours are required for the degree and students must pass a written exit exam in the last semester. The coursework

requirements follow those set out by the Graduate School.

At least 20 credit hours must be graded graduate level courses (courses other than research or residency courses and that have a set meeting time), and at least 15 hours must be at the 600-700 level. Students may take courses numbered as 4xxG and 5xx in other departments with approval of the DGS. For the in-depth requirement of the degree, students are required to take a minimum of 20 credits with a PPA prefix in 600 or above level courses. Of these, three credit hours must be taken as graduate seminar in PPA770 or a relevant offering in another department with approval of the DGS. The exit exam will be at the end of the coursework, administered by the three person committee to ensure the student is sufficiently familiar with scholarship in her/his chosen area of specialty,

Typically, the Department of Plant Pathology will not offer non-thesis M.S. students an assistantship. Students are expected to pay their tuition through other means. There are opportunities on a term by term basis for Plan B students to assist teaching PPA lab courses. Other sources of financial aid within UK or externally are also possible and the DGS will help to identify opportunities.

Combined BS/MS (4+1) Program Option

Students will have an opportunity to earn both a Bachelor's degree in a related field such as Agricultural and Medical Biotechnology or Plant and Soil Sciences, and a Master's degree in Plant Pathology in a shorter period of time, typically within but not less than five years.

Students in the 4+1 Program Option are classified as undergraduates until they have completed all requirements for their undergraduate degree and undergraduate tuition rates will be applied to the 12 hours of graduate level coursework designated for dual credit in the program. Through the Plant Pathology 4+1 Option, the student with his/her advisor plans a five-year program of study. The program is intended for selected students for whom the M.S. degree is sufficient preparation for their career goals, is desirable as a goal in itself, or is viewed as additional preparation before pursuing a professional degree.

A minimum of 30 graduate credit hours is required for the Master's degree. This includes enrollment in at least 24 semester hours of formal graduate course work plus enrollment in 6 additional credit hours of research.

The Plant Pathology Department will form a 4+1 Petition Committee who will, along with the DGS, evaluate applicants for suitability into the program. If a student is accepted by the Department and Petition Committee, the student must then separately apply to the Graduate School in accordance with the regular graduate application procedure.

Admission to the 4+1 Option is highly selective and will occur in two stages. First, during the junior or senior year, once the Department has confirmed the student's qualifications for the program, s/he will be admitted by the Department for the 4+1 program. Second, at the appropriate stage, toward the end of the undergraduate program, the student will submit the on-line application to the Graduate School for formal admission as an M.S. student for the fifth year, but graduate student status is not established until after the student has received a B.S. degree. Students will be provisionally accepted as graduate students pending completion of all undergraduate requirements.

4+1 Program of Study

Students admitted in this program must satisfy all requirements for both B.S. and M.S. degrees. Double-counting of credits is not allowed. The principal distinction between this program and the PPA standard M.S. graduate program is two-fold: (1) students are allowed to take graduate courses while completing the Bachelor's degree; and (2) students are thereby enabled to complete both degrees within five years. In order to complete the program in five years, students will be expected to complete most, if not all, requirements for their undergraduate degree by the end of the first semester of the senior year. It is also suggested that students begin taking PPA graduate courses toward the M.S. degree in their senior year.

Dual Doctoral Degree Program

PPA currently has a dual doctoral degree program with the Universidade Federal de Viçosa in Brazil. Additional international dual degree programs may be established with other universities of similar compatibility.

Under the Dual Degree Program, students will acquire credits and develop part of the research for their doctoral dissertations at each partner university. A residency of at least 12 consecutive months at each partner university will be required for the program. Students in the program will obtain doctoral degrees in Plant Pathology from both UK and the partner institution. Students in the program will develop language skills in English and the host country language and become familiar with the culture and norms of the discipline in both countries. Students will fulfill the academic requirements of both institutions in order to obtain degrees from both.

The goal of the program is to prepare students to work across borders in academics, government or industry settings. Graduates of the program will be able to leverage resources from both countries to solve problems of mutual interest at the highest level.

Dual Degree Major Professor and Advisory Committee

Each student will be guided by a Major Professor and an Advisory Committee. The doctoral advisory committee will consist of one or more members from the

partner institution and PPA who will host the student in their laboratory during their exchange. Partner institution faculty members who participate on the Advisory Committee will be added to the faculty roster of the UK Grad School. Likewise, PPA faculty on the Advisory Committee will be designated as adjunct faculty at the partner institution in accordance with their established process. The Advisory Committee should be chosen and submitted to the DGS for approval before the end of the second semester of the student's tenure. The Advisory Committee should meet at least annually with the student with all committee members attending either in person or remotely via the internet. It is the responsibility of the student to schedule these meetings.

Dual Degree Requirements

Partner institution students will be required to have an M.S. degree in plant pathology before entering the program. Each student will be required to pass a written and an oral qualifying examination before he or she may be admitted to candidacy for the program. The qualifying examination will be administered jointly by the proposed Major Professor and the Advisory Committee members being recommended. The qualifying exam will emphasize knowledge in the discipline contained within the core courses, as well as critical thinking, logic, and communication. Upon acceptance, a plan-of-work will be presented to the Advisory Committee, as well as a general overview of the proposed research plan.

The core curriculum for the dual degree program provides a rigorous and comprehensive education in both basic and applied plant pathology, with emphasis on critical thinking, communication, and research methodologies. Each student is expected to write a dissertation based on original research between both institutions. Basic course requirements will be determined by the Major Professor and Advisory Committee but required courses should include PPA500, PPA600, PPA640, PPA641 and PPA770 (seminar). The Major Professor and Advisory Committee may waive one or more of these courses if the student has already taken equivalent coursework at another institution. Individual elective course requirements will be determined by the student, Major Professor and the Advisory Committee, taking into account the student's background, research topic, and area of specialization.

Admissions to PPA Graduate Programs

Application Procedure

Application materials must be submitted to both the U.K. Graduate School and to the department. All forms may be obtained from the Graduate School online, or by writing to the DGS. Appropriate fees, Graduate School application forms, transcripts, test score reports and other documents must be sent to the Graduate School.

Continuing for a Ph.D. after a U.K. Master's Degree

There are some modifications of the application procedure for prospective Ph.D.

students who expect to receive a Master's degree from U.K. Although such students are not required to apply to the Graduate School, they must apply for departmental admission in the same manner as students beginning graduate work at U.K. The letters of reference may be written by the members of the student's M.S. Advisory Committee, and should specifically address the student's suitability for continuing graduate work. The application is usually submitted early in the semester in which the student expects to finish work on the M.S. The final decision on acceptance is made after the student's Exit Seminar and M.S. Final Examination.

Requirements for Admission

The Graduate School's requirements for admission are outlined in the Graduate School Bulletin (<http://www.research.uky.edu/gs/bulletin/bullinfo.shtml>). They include a baccalaureate degree from an accredited institution, and a minimum grade-point average (GPA) of 2.75 on a 4.0 scale for all undergraduate work, and 3.0 on a 4.0 scale for all graduate work. Graduate Record Exam (GRE) scores for verbal, quantitative, and analytical tests must be submitted. Applicants whose native language is not English must have a minimum score of 550 (paper), 213 (computer), or 79 (internet) on the Test of English as a Foreign Language (TOEFL), or an IELTS score of 6.5 or better. These are the *minimum* requirements for acceptance into any graduate program at U.K. Requirements for admission to the graduate program of the Department of Plant Pathology are more rigorous. The department's Academic Program Committee makes recommendations for admission to the Plant Pathology graduate programs. In addition to the materials required by the Graduate School, the department requires each applicant to submit three letters of recommendation, copies of transcripts from all undergraduate and graduate institutions attended, and a written statement (Statement of Purpose) identifying the applicant's reasons for wishing to undertake studies in this department. Applicants should also submit a resume or a *curriculum vitae* and copies of any papers published or in press, or other evidence of scholarly achievement. Application materials for the department must to be sent to:

Director of Graduate Studies
Department of Plant Pathology
201F Plant Science Building
1405 Veterans Drive
University of Kentucky
Lexington KY 40546-0312

Admission to a graduate program in Plant Pathology does not guarantee financial assistance to the student. Applicants who are admitted will also be informed of any financial offer in a contract that they must sign to be admitted to the Graduate School.

Leave of Absence Policy

Enrolled graduate students at the University of Kentucky who sit out for one or more semesters will need to complete a new application and pay the application fee in order to be considered for readmission. In many instances this requirement can be avoided by requesting a “leave of absence”. In addition to avoiding the application process, this status will allow the student to priority register in preparation for their return to UK. Procedurally, students should contact the Director of Graduate Studies (DGS) to seek approval for the leave prior to the beginning of the semester in question. If approved, the DGS will contact the Graduate School admissions officer who will modify the record accordingly. No more than two consecutive and four total semesters in leave of absence status may be requested. Post-qualifying doctoral students are not eligible for the leave of absence. International students considering a leave of absence are strongly encouraged to discuss their plans with the International Center, Department of Immigration Services prior to making a formal request.

Assistantships and Fellowships

Research Assistantships

Research assistantships are awarded by the department on the basis of merit and availability. They may be funded by departmental general funds or by research grants.

Research assistantships carry an expected 20 hours minimum per week for research, which is in addition to time spent on course work and thesis/dissertation research (see the section on Duties for more details). Typically, work performed during the 20 hours per week of assistantship service will comprise part of the thesis or dissertation research, but faculty supervisors may require additional, unrelated duties if these are relevant to the student’s training and education. Tuition and health insurance will be paid for all students receiving assistantships or fellowships.

Fellowships

Most fellowships are awarded through the Graduate School. They are highly competitive, with minimum GPA and GRE score requirements depending on the fellowship. The fellowships available include: Presidential Fellowships, Graduate Student Academic Year Fellowships, Lyman T. Johnson Fellowships, Academic Excellence (In-State Tuition) Fellowships, Otis A. Singletary and W. L. Matthews, Jr. Fellowships, Kentucky Opportunity Fellowships, Dissertation Year Fellowships, and Jeffrey Fellowships. Some fellowships may include additional money to help support the student's research. If a fellowship stipend is less than that of a typical research assistantship in the department, an appropriate supplement will be provided by the department or by the Major Professor’s grant funds. Requirements for fellowships vary for eligibility, the nomination and selection process, and date of application. Generally the student is nominated by the DGS with recommendation from the Major Professor. More information on fellowships:

http://www.research.uky.edu/gs/StudentFunding/fellowship_opportunities.html

Application Procedure

Application for an Assistantship or Fellowship is automatic at the time of application for admission (unless the student specifies another source of support). Applications from domestic students should be submitted no later than one month before the beginning of the semester the applicant intends to begin graduate work. **However, to improve chances for financial support, domestic applicants should submit their materials as early as possible.** Applications from international students must be submitted at least six months before they intend to begin graduate work.

Criteria for Assistantship Awards

Assistantships are awarded on the bases of academic record, GRE scores, letters of recommendation and any other available information relevant to evaluating the academic potential of the student. An effort is made to evaluate motivation and commitment in awarding assistantships. Since the number of available assistantships is usually less than the number of qualified applicants, the requirements for assistantships exceed requirements for admission. Students having the best academic record and greatest potential for successfully completing graduate study are given highest priority for assistantship support. It may improve the chances of obtaining financial support if prospective students specifically research the interests of departmental graduate faculty, and then write directly and personally to those with research programs that are most relevant to their background and future goals. Advocacy of a faculty member interested in mentoring a student can be very helpful to that student's candidacy.

Duties and Responsibilities

A research assistantship or fellowship is awarded for financial support while the student is conducting research for a graduate degree. The thesis or dissertation must be the student's own work; however, the research is almost always consistent with the overall objective of the Major Professor's research program. The Major Professor may require the student to assist in non-thesis research or participate in additional activities for the student's educational benefit.

Research assistantships are generally referred to as "half-time assistantships", implying that the recipient must devote at least 20 hours per week to research when classes are in session (fall and spring semesters). Additional research hours are expected in fulfillment of research and special topics courses, as well as to fulfill research requirements for the degree. Students receiving assistantship or fellowship support are expected to consider the fulfillment of requirements for graduate degrees to be a full-time job, including the time between semesters and during the summer. The departmental philosophy is that commitment and dedication are essential characteristics of a good graduate student; that assistantships and fellowships should provide students the opportunity to devote their full attention to study and graduate research; and that

successful graduate study demands evening and weekend work. With the exception of University-approved holidays, time between semesters and summers **are not considered to be time off** for graduate students. There is no schedule for accumulation of vacation days for graduate students. Students may expect at least two weeks of vacation each year, but the precise timing and amount of any vacation leave time **must be negotiated with and approved by** the Major Professor. Students do not accumulate sick leave. Students should notify their Professors when they are absent due to illness, and they should make arrangements to make up any missed work. Graduate students are entitled to receive up to six weeks of maternity leave.

Enrollment Requirements

Each student must have her/his schedule approved by her/his Major Professor and/or the DGS before registering each semester. It is strongly recommended that students and their Major Professors consult with the DGS regarding scheduling of coursework, to avoid problems later. Courses to be added or dropped also must be approved by the DGS and/or by the Major Professor. It is the student's responsibility to register for courses via their myUK accounts each semester. Students **MUST** maintain continuous enrollment to remain in good standing with the Graduate School. A student who allows their enrollment to lapse for one semester will no longer be a student in good standing, and must apply to the Graduate School and to the Department of Plant Pathology to be readmitted. Because international students are required by the U.S. Immigration Service to be enrolled for 9 credit hours in the spring and fall semesters (or 2 credits of PPA 767), failure of international students to enroll could result in other serious consequences, up to and including deportation. Graduate students are not required to enroll for summer courses to maintain full time status, and most students do not enroll for formal coursework in the summer: however, students are still expected to be present during the summer months working on the research requirements for their degrees.

If not taking enough formal courses to meet the minimum course load requirement, M.S. students may register for 1 to 6 hours per semester of PPA 768 (Residence Credit for the Master's Degree), 1 to 3 hours per semester of PPA 784 (Special Problems in Plant Pathology) and/or 1 to 9 hours per semester of PPA 794 (Research in Plant Pathology). No more than a total of 12 hours of these courses may be taken during the M.S. program. Before taking the Qualifying Examination, Ph.D. students may register for up to 3 hours per semester of PPA 784 and/or up to 9 hours per semester of PPA 794. In order to fulfill the Graduate School's residence requirement, Ph.D. students must register for 2 hours of PPA 767 for at least two semesters after the Qualifying Examination is passed (if the examination request form is filed within six weeks of the beginning of the semester, the semester in which the exam is taken can count as one of these).

Duration

Fellowships are usually awarded for the academic year (July 1-June 30), with the duration being established by the Graduate School. Graduate Research Assistantships are usually awarded on a 12-month basis, subject to renewal providing the student is making satisfactory progress. Students entering in the spring will have their support renewed after six months, providing the student is making satisfactory progress.

Review of Progress and Termination of Assistantships

It is each student's responsibility to arrange a meeting with his/her Major Professor and Advisory Committee at least once a year to formally evaluate academic and research progress. This evaluation will be conveyed in writing from the Major Professor to the student, and a copy will be signed by the DGS and placed in the student's file. A student will be considered to be making good progress if they maintain a grade of at least a B in all graduate courses, and demonstrate advancement toward completing their thesis or dissertation research, as determined by the Major Professor and the Advisory Committee.

Students who are placed on academic probation because of failure to meet the minimum overall 3.0 GPA required by the Graduate School will automatically be placed on probation with respect to the assistantship. The assistantship will be terminated if the student is not removed from academic probation after one semester, unless extenuating circumstances can be satisfactorily demonstrated.

An assistantship can be terminated prior to completion of degree requirements or prior to the normal termination date, with no less than 4 weeks notice, if the student fails to conduct himself or herself in a professional and ethical manner (including but not limited to academic misconduct, excessive absenteeism, or harassment of departmental personnel); fails to make satisfactory research progress as determined by the Major Professor and the Advisory Committee; fails the Ph.D. Qualifying Examination; or fails the Final Examination for the Master's degree or the Ph.D. degree. Assistantships can also be terminated if funds are no longer available (hopefully, a very rare circumstance). Normally, termination of an assistantship is recommended by the Major Professor and the Advisory Committee (if one has been appointed), reviewed by the DGS, and finally acted upon by the chair of the department. Research assistants will be notified by June 30 at the very latest regarding the continuation of appointments and status of financial support for the coming academic year.

Facilities and Services

Equipment

The Department of Plant Pathology has excellent facilities and equipment for graduate research. This equipment includes some rather sophisticated and very expensive instruments. Most equipment is under the control of individual faculty members, but may be shared with other faculty and students under rules and supervision required by the faculty in charge. No one should use any piece of

equipment without 1) authorization from the faculty member in charge of the instrument, and 2) previous prescribed instruction on how to properly operate the instrument. Good manners, neatness, consideration for the time and property of others, and knowledge of operation are essential for fostering cooperative use of facilities and equipment. Use of equipment may be denied to individuals who do not properly care for equipment and space. Only the faculty member in charge can authorize use of equipment to individuals outside the department. If an individual not known to a group is found using a groups' equipment, the faculty member in charge and/or the campus police should be notified immediately.

Supplies

Each laboratory attempts to maintain an adequate stock of supplies needed for its research. Anyone borrowing supplies from another lab must 1) have the permission of the appropriate faculty member or supervisory laboratory technician, and 2) return or reimburse for the item as soon as possible.

Desk space

Each student is provided with a desk in the department.

Keys

Keys to appropriate office and laboratory facilities can be obtained through the department's Office Manager.

Mail

Student mailboxes are provided in room 201F. Most university and departmental communication occurs via e-mail. Each student should obtain and use a uky.edu e-mail account. Yahoo or other similar accounts are not sufficient due to the inability to attach large files.

Copying and Faxing

Copying and fax machines are available in room 201F. Students should not undertake extensive copying or faxing without the permission of their Major Professor. Students should abide by copyright laws regarding extensive photocopying of books and journals.

Professional Societies and Meetings

Students are encouraged to join appropriate scientific and professional societies, and to present their work at meetings. Many societies have reduced membership fees for student members, and some sponsor graduate student paper competitions with cash prizes. Funds are usually available from the Graduate School for partial support of student travel to professional meetings to present research papers or posters, but applications must often be made several months in advance. See the Graduate School online information for deadlines.

Departmental Graduate Student Organization

There is an organization of graduate students and postdoctoral scholars active in

the department known as APPS (Association of Plant Pathology Scholars). All students and postdocs are automatically entitled to membership in this organization. The association is responsible for communicating the needs and positions of students to the DGS and department chair. The activities of APPS are determined by the members, and can include both social and academic activities. A graduate student serves on the department Academic Program Committee, and graduate students also rotate attendance at department faculty meetings.

Libraries

Books and journals of use to plant pathologists are located in a number of U.K. libraries, including the Agricultural Information Center on the ground floor of Ag. Science North, the Medical Center Library, and the W.T. Young main library building. A student ID is required to check out materials. More materials are available via interlibrary loan, which can be accessed online. Past issues of *Phytopathology*, *Science*, *Plant Disease*, *Mycologia*, and the *Journal of Virology* are available in the Plant Pathology conference room (room 266). Books and journals should not be removed from this room except briefly for the purpose of photocopying. Students should become familiar with available journals and with various reference databases and electronic journal access. The librarians are trained and willing to instruct on use of the databases.

Computers

Most laboratories contain computers for student use, subject to approval by the Principal Investigator/ Major Professor.

Responsibilities of the Graduate Program

Responsibilities of the Department Chair

The Department Chair is the chief executive for the major professor, the advisory committee and the student. He/she serves as an ex-officio member of all committees and may advise any committee member, the major professor, or the student in regard to quality of the student's performance.

Responsibilities of the Major Professor

The major professor assists the student in choosing his/her graduate research project and provides advice throughout the student's graduate program. The method and philosophy of developing and carrying out a graduate program should rest with the major professor in consultation with the advisory committee. The major professor should approve all course work and review the progress of the student regularly. The advisor should approve the student's thesis/dissertation before it is submitted to the advisory committee and should examine the final copy of the thesis/dissertation that is submitted to the Graduate School before affixing his/her signature to denote approval of the quality of the research and the mechanical and literary quality of the document.

Responsibilities of the Advisory Committee

Members of the advisory committee, appointed by the major professor and the DGS, are an advisory board to both the major professor and the graduate student. They also conduct examinations and approve the thesis/dissertation. Supervision of the performance of the student is the responsibility of the major professor, but members of this committee may suggest course work, research techniques, or other needs that will promote success of the student's program. A member of the advisory committee may serve to advise the student in a special area of expertise and can coordinate portions of the student's research in agreement with the major professor. The signature by a member of the advisory committee on the thesis/dissertation indicates that the member believes the quality of both the research and the thesis/dissertation merits approval.

Responsibilities of the Graduate Student

To the Graduate School

It is the responsibility of each graduate student to comply with regulations governing the University of Kentucky and the graduate program as outlined in the Graduate School Bulletin at:

<http://www.research.uky.edu/gb/bulletin/bullinfo.shtml>.

Important deadlines can be met only if the student is familiar with criteria in the bulletin and with notifications that are published periodically, particularly during registration procedures.

To the Department

The Department of Plant Pathology considers it the obligation of the graduate student, and not of the major advisor, to initiate all actions required for fulfilling the requirements for the degree.

The graduate student who holds an assistantship of any kind should consider that position a professional obligation and fulfill responsibilities with full regards for professional ethics. Problems that arise should be discussed first with your major professor. If your major professor cannot deal with a problem, you may wish to consult with the DGS and department chair.

As a graduate student involved in research, you may sometimes be responsible for negotiating with other institutions, industries, or private individuals in relation to funds, supplies, or services. Your communications with such individuals should be conducted with full understanding of university and department policies and regulations.

To the Advisory Committee

The student's advisory committee serves both as an advisory board for his/her graduate program and as a thesis/dissertation and written/oral examining committee. The student should seek the help of any member of the committee whenever it becomes desirable during the course of study. Any major changes

in the course work or research will be done in consultation with the committee members.

Check List for Master's Degree Students

NOTE: The following is subject to change by the Graduate School, so consult the Graduate School Bulletin and other documentation on the Graduate School home page.

- Plan initial coursework. Before the first semester, meet with the DGS and/or the Major Professor, to determine courses to be taken during the first semester.
- Select Advisory Committee. An Advisory Committee should be selected before the end of the second semester.
- Plan program of study. By the end of the second semester, meet with the Advisory Committee to develop an overall course of study, including classes and research. The student should develop a research proposal that includes a literature review and outlines the research to be undertaken. A copy of this should be placed in the student's file.
- Present a seminar. Determine a topic through consultation with the Major Professor and Seminar Coordinator. Schedule the seminar with the Seminar Coordinator near the end of the semester before the one in which the seminar will be given.
- Complete coursework.
 - 24 hours minimum graduate credit (500-799 and 4--G courses not in major).
 - 12 credit hours must be in Plant Pathology (PPA) courses.
 - 12 credit hours must be at 600-700 level.
 - 16 credit hours must be in regular courses.
- Present oral and written research and academic reports to a meeting of the Advisory Committee at least once a year.
- Apply for graduation within 30 days after the beginning of the semester of expected graduation (15 days in summer semester).
- Schedule Exit Seminar. After the Major Professor has certified that research is essentially completed, meet with the Seminar Coordinator to schedule an exit seminar. The exit seminar is to be scheduled for presentation immediately before the Final Examination.
- Apply for Final Examination. At least two weeks before the examination, submit *MS Final Examination Recommendation Form* and *Thesis Approval Sheet* to the Graduate School.

Check List for Doctoral Students

NOTE: The following is subject to change by the Graduate School, so consult the Graduate School Bulletin and other documentation on the Graduate School home page.

- Plan initial coursework. Before the first semester, meet with the DGS, or, if known, the Major Professor, to determine courses to be taken during the first semester.

- Select Advisory Committee in consultation with Major Professor and DGS. By the end of the second semester, submit an *Advisory Committee Request Form* to the Graduate School, and meet with the Advisory Committee to develop an overall course of study, including coursework and research. The student should present to the Advisory Committee a research proposal that includes a literature review and outlines the research to be undertaken. A copy should be placed in the student's file.
- Complete residency and seminar requirements. Consult regularly with the DGS, Major Professor, and Advisory Committee to determine specific requirements.
- Schedule Qualifying Examination. Arrange a date well in advance with the Major Professor and Advisory Committee. At least two weeks before the date, submit a *Recommendation for Qualifying Examination* form to the Graduate School.
- Residence credit. Following successful completion of the Qualifying Examination, register for at least two consecutive semesters of 2 credits of PPA 767 (Residence Credit); the semester in which the exam is taken may count for one of these if the *Recommendation for Qualifying Examination* form is submitted within the first two weeks of the semester.
- Present oral and written research and academic reports to a meeting of the Advisory Committee at least once a year.
- Apply for graduation. Submit an *Application for Degree* form to the Graduate School within 30 days of the beginning of the semester of expected graduation (15 days during summer semester).
- Schedule Exit Seminar. After the Major Professor has certified that research is essentially completed, meet with the Seminar Coordinator to schedule an exit seminar. The exit seminar is to be scheduled for presentation immediately before the Final Examination.
- Notify Graduate School of possible Final Examination. Submit an *Intent to Schedule Final Examination* form at least 8 weeks before the examination is expected to be scheduled (so that an Outside Examiner can be found).
- Schedule Final Examination. At least two weeks before the examination, submit to the Graduate School a *Request for Final Examination* form. These forms should not be submitted until the Major Professor and a majority of the Advisory Committee considers the dissertation to be suitable for distribution.
- Distribute dissertation to Advisory Committee and to the Outside Examiner at least two weeks ahead of the defense.
- Submit completed dissertation and a signed *Dissertation Approval Sheet* not later than 60 days after the defense or by the end of the semester. If the student will make two high quality copies of the dissertation, the department will pay to have both bound, and present one bound copy to the student. The other copy will go into the department's collection in room 266.

Appendix

Revised Graduate Student Qualifying Examination Format, adopted Feb. 12, 2018

- A. Written section: prepare a research proposal on a topic that is related to current research project

Note: the proposed research must be novel (i.e., not very similar to research already described in the literature), or, to the knowledge of the student, already described in proposals by the mentor or other lab members. With those caveats, the proposal can be related to the student's research project. The student is encouraged to consult with the advisor or advisory committee members while developing the general theme(s) upon which the proposal is based. However, the student must not copy or significantly paraphrase (i.e., plagiarize) manuscripts, papers, proposals, or other text written by the advisor or anyone else.

1. At least 12 weeks prior to the date when the student intends to take the qualifying exam, the student must submit to his or her committee chair(s) a bullet-pointed outline for each of at least three projects that potentially could be developed into a proposal that conforms to the NIFA style (U.S. Department of Agriculture competitive grants program), but of length of 8–10 pages (not including references).

The abstract should contain:

- a) Suggested title.
 - b) A statement about the specific research question that will be addressed (ideally a formal hypothesis)
 - c) A brief description of the experimental system that will be used
 - d) A brief description of experimental approaches that will be used
 - e) A statement of what knowledge the student expects to gain and how it can be used to reduce the impacts of plant diseases or otherwise provide practical benefits.
2. The final topic and abstract must be approved by the committee chair(s) prior to the start of the examination semester and in accordance with the timeline below, and will form the basis for the proposal that is to be developed for the written component of the qualifying exam
 3. After the topic has been approved the student will develop a proposal using the following NIFA-style format:
 - i. Project summary (one page maximum): This "must contain a summary of the proposed activity suitable for dissemination to the public. It

should be a self-contained description of the project and should contain a statement of objectives and methods to be employed. It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically or technically literate lay reader."

- II. Project Description (eight pages maximum): This "should provide a clear statement of the work to be undertaken and must include the objectives for the proposed work and expected significance; the relationship of this work to the present state of knowledge in the field. The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures. Proposers should address what they want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified. These issues apply to both the technical aspects of the proposal and the way in which the project may make broader contributions."
 - III. Bibliography for all works cited within the Project Description (unlimited). Each reference must include all authors listed in order (give last names and initials), year of publication, full journal title, volume, and inclusive page numbers or electronic identification.
4. The student will submit the proposal to each committee member no later than six (6) weeks prior to the scheduled oral exam date. Each committee member will have until at least two (2) weeks prior to the date of the oral exam to provide a one-page written critique of the proposal in bullet-point format, and to be available to the student for consultation regarding the proposal and critiques. The student should be prepared to address these critiques during the oral examination. Should the committee members deem there to still be serious problems with the proposal, the oral examination may be postponed by a majority vote.

Note: The proposal must conform to the following requirements:

a. Use one of the following typefaces identified below:

- **Arial, Courier New, or Palatino Linotype at a font size of 10 points or larger, or:**
- **Times New Roman at a font size of 11 points or larger, or:**
- **Computer Modern family of fonts at a font size of 11 points or larger.**

A font size of less than 10 points may be used for mathematical formulas or equations, figures, table or diagram captions and

when using a Symbol font to insert Greek letters or special characters. Note, however, that the text must still be readable when printed on standard letter-size paper.

- b. No more than 12 lines of text within a vertical space of 5 cm.**
 - c. Margins, in all directions, must be at least an 2.5 cm.**
 - d. Length of 8–10 pages, not counting references.**
5. Prior to the oral examination, the committee members will grade the written proposal, providing marks for: development of topic, grammatical accuracy, clarity of expression (including proper use of scientific terminology) and appropriate use of citations.
 6. The student must submit the final version of the proposal to the Director of Graduate Studies.