

The Department of Plant Pathology & Microbiology

A Handbook for Graduate Students



College of Agriculture & Life Sciences
Department of Plant Pathology & Microbiology

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The Aggie Code of Honor

An Aggie does not lie, cheat, or steal or tolerate those who do

**WELCOME TO THE DEPARTMENT OF
PLANT PATHOLOGY & MICROBIOLOGY!**

The decision to pursue graduate studies is one of the most important choices you will make in your career path. You are mapping the course of your future. With your undergraduate degree, you could have entered the workforce as a scientist, but by continuing your education you are increasing your future professional opportunities. By choosing graduate studies you have decided that you want to be a leader in the arena of life science research, teaching, and extension.

We are pleased that you have chosen our department to pursue your goals. We feel that plant pathology and microbiology offer exciting opportunities that are likely to continue to increase in the future. The national and global food supply and the quality of our food will remain issues of wide concern in the future, as they have been in the past. The potential for the beneficial use of microbes for generating or improving bio-based products and to assist in solving environmental problems is just beginning to be realized. You have chosen a career that will offer you an exciting variety of opportunities.

As a faculty, we are committed to providing you with the best training possible. Graduate study will be different from your experiences as an undergraduate. Our goal is not so much to provide you with masses of information, but to help you learn how to learn. The "facts" of science change continually, so you are starting a process that will continue throughout your life. Our success will be measured by how well you develop the discipline, the self-confidence, and the ethical standards that will be primarily responsible for your future success. Much of what we teach will be by apprenticeship methods. There is considerable "art" in scientific research, teaching and extension. The best way to teach this is by the laboratory rotations, laboratory classes, seminar courses, field trips, and the research experiences that will be provided to you when you join a laboratory. Therefore, our best advice to you is to start to wean yourselves from textbooks and other crutches of undergraduate education. More of your learning will now be from the primary literature and from your personal contacts with professors, technical staff, and fellow students. Our primary purpose as University faculty is to share our knowledge and skills with students. We feel it is best to do this by including you in our current research, teaching, and extension activities.

We are pleased that you decided to join us!

Roles & Responsibilities

I. STUDENT

Graduate students are expected to be actively involved in and committed to the pursuit of excellence in all aspects of their academic and research endeavors during their tenure within the Department. Students should strive to maintain and enhance an environment conducive to the highest levels of scholarship and scientific inquiry. Students are expected to fully support the Department's seminars, committee assignments, graduate student organization, and all other activities that strengthen the Department. Academic excellence, advanced studies, and research pursuits are to be pre-eminent in the goals of every graduate student. Each student will be responsible for these additional requirements:

1. Know and follow the specific degree requirements of the Texas A&M University and the Office of Graduate and Professional Studies.
2. Know and follow the specific degree requirements established by the Department of Plant Pathology and Microbiology.
3. Enroll in the appropriate course work to complete your specific degree plan and maintain full- time status if receiving an assistantship or scholarship.
4. Maintain the appropriate levels of academic achievement to continue in the graduate program. Graduate students must maintain a minimum grade point ratio (GPR) of 3.00 on a scale of 4.00 in all courses required by their degree plan.

Departmental degree requirements for the M. S. and Ph. D. include satisfactory advanced study and research as determined by the student's Advisory Committee and Committee Chair. The M.S. (Master of Science) and Ph. D. (Doctor of Philosophy) are research degrees and must be approached as such. These degrees are not granted solely for the completion of course work, residence, and (or) technical requirements, although these also must be met. These degrees are awarded upon the completion of an independent research project with the accompanying thesis or dissertation. The Master of Agriculture or M.S. without a thesis is based upon the requirements presented by the Office of Graduate and Professional Studies. These degrees and the requirements for successful completion of each are described in detail at the following link: <http://catalog.tamu.edu> . Another helpful link is the Office of Graduate Studies and Professional Studies: <http://ogs.tamu.edu>

II. STUDENT'S ADVISORY COMMITTEE

The selection of a Major Professor is one of the most important decisions a graduate student will make. This person will act as mentor, thesis or dissertation advisor, research director, and mediator on behalf of the student to the departmental administration. Also, the student's Advisory Committee shall be selected jointly by the student and their Major Professor, who will serve as the Chair of the Advisory Committee. The Committee will be composed according to the regulations established by the Office of Graduate and Professional Studies as described in the Graduate Catalog. The graduate committee shall provide guidance and advice to the student. Specifically, the graduate committee will work with the student to develop a degree plan which meets the individual needs of the student and satisfies all requirements of the University, the Office of Graduate and Professional Studies, the College of Agriculture and Life Sciences (COALS), and the Department of Plant Pathology and Microbiology.

The committee will also work with the student to develop an appropriate Research Proposal for M.S. or Ph.D. degree programs; and provide advice and counsel during the research. The responsibility of the committee, working in concert with the Department Head, is to judge the academic qualities of the student and the student's work. This shall be accomplished through the required preliminary examination (Ph.D.) and final oral examinations (M.S.) and oral defense of thesis or dissertation (M.S. and Ph.D.). Each of these examinations will result in an unqualified decision by the graduate committee (pass or fail). The graduate committee will meet with the student no less than once every 12 months. Written records of each meeting listing items discussed, any actions taken, and a statement of the committee's evaluation of the student's overall progress may be placed in the student's file with copies to the student and all committee members. In addition, once a year a progress evaluation will be filed with the Associate Department Head for Graduate Programs.

III. DEPARTMENTAL GRADUATE ADVISOR

The role of the Departmental Graduate Advisor is to provide orientation, advice, and interim guidance to incoming graduate students prior to selection of a Major Professor. Accordingly, students who have not selected a Major Professor should seek the advice and counsel of the department Graduate Advisor, especially with regard to registration for course work.

IV. DEPARTMENT CURRICULUM AND ASSESSMENT COMMITTEE

The CAC is responsible for the coordination of the Department's graduate degree programs. Duties include coordination of content of graduate courses, review of proposed new courses and other significant changes in the graduate curriculum, and recruiting of graduate students. Separate from coordinating of the CAC is a special Graduate Recruiting Committee that has been established to actively engage in recruiting efforts and evaluation of applications for Departmental assistantships and scholarships.

A primary responsibility of the students themselves is to ensure that they remain in compliance with the system regarding requirements and deadlines. If students fail to adhere to the guidelines, they and their Advisory Committee Chair will be notified by the CAC or the Graduate Student Advisor or Departmental Staff. If a student consistently fails to make satisfactory progress in their degree program, the CAC will notify the Department Head who will take the matter into consideration for further action.

V. ASSOCIATE DEPARTMENT HEAD FOR GRADUATE PROGRAMS

The Associate Department Head for Graduate Programs (ADH-GP) serves in an advisory capacity to the Department Head for all matters dealing with graduate student affairs, curriculum development, and classroom instruction. The ADH-GP also serves as liaison between the Head and two standing committees, the CAC and Graduate Recruiting Committee. In these capacities, the ADH-GP serves as a voting member of these committees. The committee chair and the ADH will coordinate reporting of committee activities to the Head. Routine academic matters and normal operation will be administered by the ADH-GP, with regular reporting to the Head.

GRADUATE DEGREE REQUIREMENTS

I. COURSE REQUIREMENTS

All students are expected to fulfill University requirements as outlined in the TAMU Graduate Catalog and to complete the degree requirements of the Department of Plant Pathology and Microbiology as outlined in this document. Be aware that our graduate curriculum is constantly evolving, so that changes may occur and be implemented prior to being altered in this Handbook. Therefore, you are encouraged to consult with the Graduate Advisor, your Major Professor, the Associate Department Head for Graduate Programs, and the Office of Graduate and Professional Studies during the preparation of degree plans, thesis or dissertation proposals, and other important stages of your academic career.

Helpful links regarding Graduate courses:

<http://catalog.tamu.edu/>

The Graduate Catalog has detailed course descriptions.

<http://ogs.tamu.edu>

The Office of Graduate and Professional Studies is the site for forms that are required for various phases of your graduate career.

<http://plantpathology.tamu.edu>

Departmental website, and additional course information

Course Requirements continued...

All incoming students, regardless of previous background or experiences, are **required to take the following courses**. The courses are designed to be taken in sequential order to prepare students for a modern understanding of plant pathology.

Fall Semester

PLPA 601 (3)** Introduction to Plant Pathology
PLPA 303 (1) Plant Pathology Laboratory
PLPA 616 (2) Methods in Molecular Biology of Plant-Microbe Interactions
PLPA 681 (1) Seminar in Plant Pathology
PLPA 685 (variable credit) Special Topics, for rotating students

Spring Semester

PLPA 604 (1) Fungal Pathogenesis
PLPA 605 (1) Bacterial Pathogenesis
PLPA 606 (1) Viral Pathogenesis

Summer Semester

PLPA 626 (2) or Diagnosis of Plant Disease
PLPA 623 (3) Diseases of Field Crops

Fall Semester

PLPA 607 (1) Pathogen Strategies
PLPA 608 (1) Signaling and Resistance
PLPA 609 (1) Plant Biochemical Defenses

***Indicates the credit hours*

Additional Course Options

NOTE: In addition to the above courses, all students are required to enroll in:

PLPA 690 (1) for two semesters and a second PLPA 681 (1) for their exit seminar. (*seminar information on the next page*)

The Department does offer two **online** courses:
PLPA 603 (3) Plant Disease Management
PLPA 689 (3) Bioinformatics

The Department also offers the **in-class** course:
PLPA 665 (3) Viral Vectors and Gene Therapy

Research credits are taken as PLPA 691. Special topics courses (PLPA 685), such as a rotation in the Plant Disease Diagnostic Clinic are also available.

II. DEPARTMENTAL SEMINAR REQUIREMENTS

PLP A 681. Seminar, 1 credit hour

The intent is to provide instruction in the presentation of formal seminars (abstract preparation, visual aids, etc.) that reflect a critical review of current literature and original research in plant pathology and microbiology.

Requirements

Seminar I. A class designed to discuss the techniques for preparation and presentation of formal seminars. This seminar is required of all entering graduate students.

Seminar II. Original research in plant pathology and microbiology. M.S. and Ph.D. candidates are required to present a seminar on the original research conducted for their degrees upon completion of the degree program. This seminar will be scheduled as a presentation in the Department's weekly seminar series.

III. MINIMUM REQUIRED CREDIT HOURS FOR GRADUATE DEGREES

A graduate student (domestic or international) is considered full-time if he or she is registered for a minimum of:

- 9 semester credit hours during a fall or spring semester;
- 6 semester credit hours in a 10-week summer semester; or
- 3 semester credit hours in each five-week summer term.

You must register for the appropriate number of hours to obtain the benefits of a full-time student (benefits such as the stipend, health care, and tuition payments).

A minimum of 32 semester credit hours of approved courses and research is required for the thesis option Master of Science degree. The M.S. without a thesis options requires 36 hours of courses (excluded are research hours, PLPA 691). For a student who has completed a master's degree at a U.S. institution, a minimum of 64 hours is required on the degree plan for the degree of Doctor of Philosophy. For a student who as completed a baccalaureate degree but not a master's degree program, a minimum of 96 hours is required on the degree plan for the degree of Doctor of Philosophy. The number of required Departmental course credits does not total these TAMU hourly requirements. Thus, a graduate student pursuing a M.S. with a thesis or Ph.D. uses other courses, research hours (PLPA 691), or special topic courses (PLPA 685) to obtain the necessary hours for graduation. Graduate students pursuing a MS (with our without a thesis) should consult the graduate catalog for the appropriate selection of courses. OGPS has limitations on the number of hours for certain and combination of courses.

DEADLINES FOR COMPLETION OF DEGREE REQUIREMENTS

The chair of the Department Curriculum and Assessment Committee with the Associate Department Head for Graduate Programs will be responsible for tracking student's progress through their degree program and will provide timely notices of approaching deadlines. Failure to comply with these requirements may result in a recommendation to the Department Head that the student's future registration be blocked. A student may request an extension of a deadline by written request from the Advisory Committee Chair to the Associate Department Head for Graduate Programs.

REQUIREMENT	COMPLETION SEMESTER*	
	M.S.	Ph.D.
Committee Formation	2 nd	3 rd
Degree Plan**	2 nd	4 th
Research Proposal Submitted	3 rd	4 th
Preliminary Exam	-	6 th
Exit Seminar	Last Semester	Last Semester
Final Exam	Established by major, Professor, and committee	Established by major, Professor, and committee

**Times are semesters after first enrollment and include summer semesters.*

*****This requirement is mandated by the College of Agriculture and Life Sciences and non-compliance will result in blocking from registration.***

LABORATORY ROTATION SYSTEM

Having new graduate students, especially Ph. D. candidates, spend time working in several different laboratories is an excellent means of providing exposure to the different research programs of the Department and adds breadth to their educational experience. This experience also provides students with a basis for choosing a major professor and research problem for their thesis or dissertation. The Department of Plant Pathology and Microbiology strongly encourages all students supported by departmental funds and (or) university funds (Graduate Merit or Diversity Fellowships) to undertake a rotation of five weeks in different laboratories. These rotations should be completed by the end of their second semester in residence.

A student should spend the first week of their first semester in residence becoming familiar with the research programs of each faculty member. Following discussions with prospective faculty, the student will then submit to the Graduate Advisor a prioritized list of three laboratories in which they wish to conduct research. Students may work in two laboratories during their first semester and complete the rotation in their second semester. Students will be expected to register for PLPA 685 (Directed Studies) credit for these rotations. The laboratory rotation is an educational experience and that research projects are seldom completed during this short time.

The student and the faculty member will be allowed to extend the rotation experience beyond the allotted five weeks if both have agreed that the student will perform the thesis/dissertation research in that laboratory and the professor will serve as major advisor.

ANNUAL PROGRESS REPORTING

In addition to the academic requirements, graduate students are required to prepare an annual Achievement Report and Plan of Work that will be submitted for evaluation by the Department Head. Guidelines will be provided.

GENERAL EMPLOYMENT ISSUES / GRADUATE ASSISTANTSHIPS

Full-time Status Requirements: Students on assistantship must maintain a 3.0 GPA and be enrolled full-time (see attached page from Graduate Catalog). Assistantships require at least 20 hours of service per week.

Pay day is on the first working day of the month. Checks can be picked up from Karen Hodges in Room I20D or arrangements can be made to have your check deposited directly with your bank.

Graduate students are not eligible for paid vacation or sick leave.

Travel and Leave: If you are attending a meeting or will not be reporting to work, you will need to complete a travel form and submit it for approval via Concur through SSO sign on.

The Plant Pathology and Microbiology Department also has a program to offer up to \$500 travel allowance for graduate students to attend a professional meeting. Students must complete the application (attached) and all State of Texas rules must be followed. Travel rules will be provided to you through the main office.

Vehicle Usage: Graduate students on assistantships are eligible to drive departmental vehicles for State of Texas business. Any tickets, either parking violations or moving violations, are the responsibility of the driver. IF the driver is negligent in an accident, there is also a possibility of personal liability. Also, procedures for check-out, record-keeping of mileage, etc. must be followed. The loading dock is available for loading and unloading only (15 minute limit-tickets are issued!)

Safety Issues: Any problems with the building should be reported immediately to Shana Childers in Rm 120. Accidents or injuries should be reported IMMEDIATELY to both your supervisor and to Linda Brochu. Graduate students will be expected to use good lab safety (using fume hoods, wearing gloves, etc.). Please do not wear gloves or lab coats in non-lab areas (elevators, restrooms; mail/copy rooms. etc.). Pesticide usage is NOT allowed in the Peterson Building-any pest problems should be reported to the administrative office.

Equipment: Equipment in the building is for business use, although phones can be used for personal local calls and e-mail can be used for personal business. The computer lab is available for student use. Copy machines and faxes for personal use can be found in the library. Our fax machines require a code before you can use them and the charge will be assigned to the code.

Parking: The department does not have parking allocations available for graduate students. Student parking can be obtained through Parking, Traffic and Transit.

A MESSAGE FROM THE GRADUATE STUDENT CLUB

The club exists to make life a little easier, both academically and socially, for all graduate students in the department. We try to keep students abreast of any administrative changes that may affect us by calling meetings when necessary, sometimes inviting a faculty member along to give a fuller explanation if needed. We also set up meetings with visiting scientists to talk over their research on a more personal basis, and the club takes the visitors to lunch, to give them a taste of the local Texas "culture".

By becoming a graduate student in this department you automatically become a member of the graduate student club. Don't hesitate to ask for advice if there's any way that we can help you along in your program.

So - Welcome! The graduate student club is glad to have you!



