

GRADUATE STUDENT HANDBOOK
DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY
OKLAHOMA STATE UNIVERSITY
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Introduction

The sciences of Entomology and Plant Pathology focus on the biology and management of insect and arthropod pests of plants, animals, and humans; and diseases of plants. Careers in Entomology and Plant Pathology range from practitioners who work in pest management for government and private industry to University scientists who conduct basic biological research. Entomology and Plant Pathology are specialized fields of biology that require a strong foundation of knowledge in the basic concepts of biology and chemistry acquired through undergraduate and/or graduate level coursework. Undergraduates or graduate students who have successfully completed coursework in the basic principles of biology including, but not limited to biochemistry, botany, ecology, evolution, genetics, invertebrate zoology, microbiology, and statistics are particularly well-suited for the graduate programs in Entomology and Plant Pathology at Oklahoma State University.

The graduate programs in Entomology and Plant Pathology at Oklahoma State University are research-based degree programs which require the completion of a research thesis or dissertation. In the M.S. degree, graduate students learn to conduct research in a structured program. Ph.D. students are expected to already have research experience and to develop and demonstrate the ability to conduct independent research. Graduate work is thus more than a continuation of undergraduate studies. Coursework in the graduate programs is designed to support research interests and provide training necessary to become a successful scientist. Graduate students work under a faculty member who serves as their Major Advisor and are usually employed as graduate assistants in research, teaching, and/or extension (outreach). Graduate students contribute a great deal to the research, teaching, and extension missions of the Department and University and are considered valuable members of the Department. This departmental membership assumes a dedication to scholarship as manifested by excellence in coursework, research, and professionalism.

The **Entomology and Plant Pathology Graduate Student Handbook** is intended to provide students with information about M.S. and Ph.D. degree program requirements in the Department of Entomology and Plant Pathology. Portions of this handbook have been extracted from the Oklahoma State University Catalog and the Graduate College web site. The Oklahoma State University Catalog available at <http://www.okstate.edu/registrar/Catalogs/Catalog.html>) is the final authority on all matters concerning the academic programs of the University. Guidelines regarding enrollment, records, and degree programs are outlined, as well as fees, minimum grade requirements, and requirements for the various graduate degrees. The OSU Catalog may be obtained by new students, free of charge from their student academic services offices at the beginning of their first semester at OSU and is available at the OSU website as noted above. Although periodic changes occur in these requirements, the requirements in force upon your matriculation are those that apply during your program. ***Ultimately, the student is responsible for the completion of all requirements in a timely manner and in accordance with University, Graduate College, and Department regulations.***

The policies, procedures, and guidelines in this handbook pertain to students who started or will start their degree program in the summer 2009, fall 2009, and spring 2010. All students should be aware of changes made by the Graduate College which are retroactive, students using older versions of the handbook should note changes made to grades assigned to research hours starting fall 2008.

An electronic version of this document is available at: <http://entopl.okstate.edu/pdf/private/2009-2010-handbook.pdf>

Brief Departmental History

Oklahoma State University, a state-supported land-grant university founded in 1890, emphasizes a liberal and practical education. The University's strong commitment to research is reflected in the Noble Research Center for Agricultural Sciences and Natural Renewable Resources.

The Department of Entomology and Plant Pathology is housed in Noble Research Center with state-of-the-art equipment and laboratories, giving the Department added resources for teaching and research. The department's faculty includes scientists who have achieved national and international recognition. In September 1997, the Department of Entomology merged with the Department of Plant Pathology, becoming the Department of Entomology and Plant Pathology.

Congratulations and welcome to the department! You are now a member of an academic and professional community of entomologists and plant pathologists. During this phase of your career, you will have the opportunity to learn and grow as a professional as you complete the requirements for your graduate degree. The following sections contain important information regarding the requirements for both the Master's and the Ph.D. degree. There is also relevant information regarding departmental and graduate school policies and procedures.

After Admittance

During your graduate program your goal is to develop the skills and experience to be able to perform as a competent professional entomologist or plant pathologist. As you go through this process you will be continually evaluated by the faculty, staff, postdoctoral fellows, and your fellow graduate students. In addition to those at OSU you will also make an impression on scientists you meet and interact with at scientific meetings and conferences. All of these individuals will either directly or indirectly have an impact on your success in obtaining a position as a professional scientist. It is critical that you take your time as a graduate student seriously and take full advantage of the great opportunity you have been given. Our assistantship stipends are very competitive and can also be supplemented with special incentives for outstanding student performance. Having this financial assistance is a tremendous advantage to students and allows them to concentrate on their coursework and research without having to work outside the University. However, there are also responsibilities that go along with the advantages of an assistantship. Funds for assistantships are generated mostly through grants to major professors and are intended to be used to conduct specific research. At times this may coincide with a student thesis research, at other times it may not.

Students serving as Teaching Assistants are expected to work a minimum of 20 hours per week as well and are assigned to a professor that will determine their work assignments. Thesis research is expected to be performed on the student's own time. Performance of students on both Teaching and Research Assistantships can be evaluated on a regular basis and poor performance will result in the termination of the assistantship. When students are offered assistantships it is with the understanding that the assistantship will continue for a specified time period providing the student performs at an acceptable level. In order to be successful you will need to work hard and spend a lot of long hours studying, conducting research and writing. The expectation of the Department is that a student on an assistantship will work a minimum of 20 hours per week under the direction of their major professor performing whatever tasks are assigned. In some cases the student will be conducting their thesis research; however, other tasks may also be assigned that are unrelated to their thesis. All students should consult http://gradcollege.okstate.edu/gradcord/download/Enrollment_Notice.pdf for policies relating to course enrollment. Note that "Following a recommendation from the Graduate Council, the Office of the Provost has approved a policy requiring *all graduate students to enroll in research, thesis, or dissertation hours (as appropriate) each semester in which they are engaged in research leading to a thesis or dissertation.* Such enrollment is "over and above" any minimum number of credit hours of thesis/dissertation/research hours that are required for a degree. Further, it is *not* limited by the maximum number of such hours that can be applied to a graduate degree. The following are some of the expectations that you need to be aware of.

Scientific Literature

An important component of any profession is the published literature. As a developing professional it is critical that you develop your own strategy to keep up with developments in your area of specialization as well as science in general. With the explosion of scientific literature this is indeed a daunting task but a very important one. The use of internet resources will allow you to cover a lot more literature than in the past and you will need to be selective. Remember the library is still an essential resource especially for older materials that may not be on-line. It is also a great place to browse and explore new areas. Literature can be found using one of the many article databases found at <http://www.library.okstate.edu/database/index.cfm>. You can also access the article databases remotely through EZProxy at <https://argo.library.okstate.edu/login>. Articles or books not available at the Edmond Low Library are available through Interlibrary Services at <https://illiad.library.okstate.edu/illiad/ILL/logon.html>. You should read a few journals important to your area on a regular basis. In addition, it is a good practice to read Science and Nature to keep up with the trends in general science.

Professional Courtesy

Students within the Department are expected to exhibit the highest standards of professional ethics and courtesy, and show respect to visitors, subordinates, peers, staff, and faculty, and to continuously conduct themselves in an honorable manner. To this end, professional deportment when in classes, laboratories, seminars, formal and informal meetings and training sessions, as well as other Departmental or OSU gatherings is essential if communication and progress are to occur and the excellent reputation of the Department thereby maintained. All electronic communication devices must remain "off" during classes or other sessions. Exceptions, if any, to these restrictions including use of laptop computers are determined by the professor or instructor in responsible charge.

Seminars

One of the major advantages of studying at a comprehensive research university like OSU is the diversity and outstanding quality of information that is shared and available to students on a regular basis. Hour-long seminars are standard and allow students to hear about cutting edge research from scientists from all over the world. As a graduate student you should make it a point to keep current on the seminars being presented on campus and attend as many as you can fit into your schedule. This will become a vital component of your graduate education. The Department maintains a listing of seminars on the board outside the main office.

The Department conducts a weekly seminar series on Wednesday afternoons at 3:30. All graduate students are expected to attend. In addition to hearing excellent speakers this is also where important announcements relating to the Department are made. It is also a great place to interact with and get to know other members of the Department.

Class Attendance

Since graduate students are generally supported on research and/or teaching assistantships which include out-of-state tuition waivers and the Graduate College provides in-state tuition waivers for six hours of course work per semester, class attendance is expected.

Holidays and Annual Leave

Graduate students who are funded on assistantships are under contract to the University as half-time employees. They are eligible to take University holidays when the University is closed, including Martin Luther King Day, 4th of July, Memorial Day, Labor Day, and official Thanksgiving and Christmas breaks. However, these students are not eligible for any leave days during Fall Break or Spring Break, or breaks between semesters. Additionally, as half-time employees they are not eligible for annual leave. Graduate students are expected to remain active in their research during summer break as well.

The Department recognizes that graduate students may need to be away from the University for brief, personal situations. In such situations, students on research assistantships may coordinate with their advisor, giving ample advance notice and making any arrangements necessary so that the research is not adversely affected by the

student's absence. It is expected that such absences would not exceed ten (10) working days (Monday-Friday) per year. Graduate students must recognize that out-of-class time during breaks and holidays provides an ideal environment to conduct laboratory and field research, and to make significant progress toward completing requirements for their degree. Therefore, with proper planning and preparation their research will progress in a timely manner.

Completing Research and Thesis in Timely Manner

Because thesis research is performed on each student's own time outside of TA and RA responsibilities, thorough and detailed planning and organization are required to ensure steady progress and completion of research and thesis in a timely manner. During their first semester, each student must develop a Plan of Study in cooperation with their major advisor, gather an Advisory Committee, and have a committee meeting. The Plan of Study must be approved and signed by the student's committee and forwarded to the Graduate College. All graduate students must also develop a written research/dissertation proposal and provide it to their committee members for review and revision. The final proposal must be agreed upon and signed by all committee members; any subsequent changes to the proposal require review and approval by committee members. Research/dissertation proposals must be approved at least one full year prior to the date of graduation, whether a M.S. or Ph.D. is sought. Graduate students should review the "Responsibilities for the Master's Degree / Doctoral Program" provided in this Handbook.

Although the Graduate College imposes maximum degree completion time limits of 7 years and 9 years for M.S. and Ph.D. programs, respectively, the Department expects students to achieve their degrees within shorter periods. Ideally, M.S. programs are completed in 2-3 years, and Ph.D. programs in 3-4 years although it is understood that some programs may exceed these periods. However, TA and RA support may not be available beyond these initial periods, and such support is not assured for even shorter periods as funding may not always be available. Graduate students must continuously exhibit consistent acceptable progress toward degree completion for their program to remain viable. It is the graduate student's responsibility to ensure this progress, and failure to progress can result in termination of the student's program.

Teaching Experience

All Graduate Students are encouraged to invest at least one semester in a teaching assistantship experience. Depending on Departmental needs, teaching assistantship requirements can continue for two or more semesters. For Ph.D. students and candidates, this is in addition to any teaching activity completed during their M.S. program. The teaching experience may consist of assistance in preparation for lecture or laboratory classes, maintaining attendance and other class records, grading examinations, actual classroom teaching, or other requirements determined by the course instructor. Students are encouraged to enroll in ENTO/PLP 5700 "Teaching and Curriculum Development" while serving as a teaching assistant. TA responsibility is a valuable component of graduate student training and responsibilities, and imparts important experience and sense-of-responsibility to each TA.

Teaching assistantship responsibilities require time outside of classroom and research work, and TA time must be coordinated with classes and research to avoid conflict.

Professional Societies and Student Organizations

The **American Phytopathological Society (APS)** is the national society for plant pathologists and those of related professions. Bacteriology, virology, mycology, nematology, epidemiology, plant disease diagnostics, and extension plant pathology are the main focus areas. APS is an excellent way to get involved in the field of plant pathology through online journals, forums, APSNet, and the annual meeting. Usually held during the last week of July, the annual APS meeting brings scientists together from all over the country. There are opportunities for students to present their research and to participate in various scientific communities.

The **Southern Division American Phytopathological Society** is the regional branch of the American Phytopathological Society. It meets annually, usually in February of each year.

The **Entomological Society of America (ESA)** is the national society for entomologists and those of related professions. Like APS, ESA meets annually bringing entomologists together from a variety of disciplines, including systematics, physiology, ecology, pest management, urban entomology, medical entomology, extension entomology, and molecular biology. The society is organized into four major sections: systematics, evolution, and biodiversity; integrative physiological and molecular insect systems; structural, veterinary, and public health systems; and plant-insect ecosystems. Students are strongly encouraged to participate in the society by attending the national meeting which is usually held in November or early December. There are many opportunities to participate in the national meeting, by presenting original research in the student paper and poster competitions, attending the graduate student mixer, participating in networks, or competing in the Linnaean Games, which is a college bowl-type competition between schools.

Southwestern Branch is the regional branch of the Entomological Society of America.

Sanborn Entomology Club is an organization for students in Entomology and Plant Pathology, including undergraduate entomology students, graduate entomology students and graduate plant pathology students. Meetings are usually held monthly and several activities sponsored by Sanborn Club include Movie Night, Guest Speakers, Fall Picnic, and Spring Picnic. This is a great way for students, especially international students, to get to know one another, the faculty, and staff on an informal basis. There has been good participation by the entomology students and plant pathologists are especially encouraged to participate.

Professional Ethics

Professional ethics, the examination of professional codes, and academic integrity are becoming important topics in many of the scientific fields at many Universities. As academic environments and scientific disciplines become more competitive the increase in the number of scientists neglecting their professional ethics and breaching ethical codes is staggering. As scientists we are working every day to contribute to the general good. We are looked upon as pillars of societal advancement, which is a responsibility that we should not take lightly. Therefore, it is most important that we, as scientists, maintain proper professional ethics, conduct, and integrity. The following points concerning plagiarism and copyright are just portions of larger philosophical discussions of professional ethics and academic integrity. For more in depth information about academic integrity, professional ethics, professional codes of conduct, and case studies evaluating professional ethics visit the following web links:

Oklahoma State University, Academic Integrity Policies and Procedures - <http://academicintegrity.okstate.edu/>

Oklahoma State University, Copyrightable Intellectual Property Policies and Procedures -

<https://stillwater.sharepoint.okstate.edu/Policies/Shared%20Documents/Intellectual%20Property.pdf> **Error! Hyperlink reference not valid..** Oklahoma State University, Ethics Center -

http://philosophy.okstate.edu/index.php?option=com_content&task=view&id=12&Itemid=27.

Center for the Study of Ethics in the Professions at Illinois Institute of Technology - <http://ethics.iit.edu/index.html>

Plagiarism

Plagiarism is defined by the University of Minnesota, Center for Bioethics "as the act of passing off somebody else's ideas, thoughts, pictures, theories, words, or stories as your own (1)." **Copyright** is the right of a creator of an invention, literary work, intellectual property, etc. to exclusive use of that work. When plagiarism or violations of copyright are committed, the act is bothersome when performed by any person. However, when a research scientist plagiarizes or violates copyright laws the act is especially offensive. Violations of others' intellectual property or plagiarism by a research scientist jeopardizes the validity and integrity of the work and the people associated with that work. Plagiarism comes in many flavors. It can be intentional in nature, or it can be unintentional as a result of laziness in writing, paraphrasing, or improper citation. If citations are not referenced for paraphrased or word-for-word statements, data, pictures, comments, etc. then the act of plagiarism has been committed. Plagiarism and

violation of copyright are not tolerated in the scientific community or in the Department of Entomology and Plant Pathology at Oklahoma State University. If plagiarism or violation of intellectual property rights is committed in research work or proposals by a graduate student in the Department of Entomology and Plant Pathology, that student will be subject to a level three sanction according to University Policy. A level three sanction is as follows:

Recommend dismissal from the graduate, professional education, or Veterinary Medicine program and suspension from the University for the following types of Violations:

- Plagiarism or other violations of academic integrity in a thesis or dissertation proposal, qualifying examination, comprehensive examination, thesis or dissertation, report for a creative component, thesis or dissertation defense, or professional education portfolio.
- Fabrication or falsification of research or laboratory data used in a creative component, report, thesis or dissertation.

Literature Cited

1. "A guide to Research Ethics." University of Minnesota, Center for Bioethics.
http://www.ahc.umn.edu/img/assets/26104/Research_Ethics.pdf

Computer Usage/Software Licensing

There are no common use computers available to graduate students, however, computers are available for student use in individual laboratories. Students often use their own personal computers in labs or graduate offices where internet access is available. Computers, whether professional or private, are subject to specific policies governing computer use. Downloading of freeware, free reprints, and public domain documents is permissible, however, the downloading of illegal files such as pirated music, movies, books, and other copyrighted materials is not allowed, even onto a personal computer. Strictly forbidden is the downloading or emailing of pornographic material. Be aware that this is a public institution and email can be screened for objectionable content. The penalty for downloading pornography can range from a warning to dismissal from the University. Visit the University IT website for more information about appropriate computer usage: http://it.okstate.edu/policies/pol_app.php There is IT assistance available from Mr. Dustin Klopp, 142A NRC. He is available to help with computer problems, downloading of licensed software, and programming.

Safety

Laboratory Safety

All research laboratories have copies of and follow a chemical hygiene plan. You are required to undergo safety training specific to your lab within a month of employment. Documentation of training is to be maintained by lab supervisors and by the Departmental Safety Officer. In addition, safety training is required for each member of laboratories four times per year. Consult <http://ehs.okstate.edu/modules/index.htm> for on-line training opportunities. Several opportunities for mandatory or optional training will be provided year round.

Standard rules for lab and departmental safety, OSHA and EPA based.

- 1) The rules and expectations below are held in the highest regard for our Department. This helps aid our Department and labs in keeping you and our environment safe for yourself and others.
- 2) In the event of intentional misuse of lab material or equipment, you will be reported to the proper personnel and authorities for handling; all accounts are documented.
- 3) Accidents in the lab are going to happen; therefore, you must always be alert, be aware and learn how your lab and Departmental procedures work. Regardless of the lab you are in, do not make any assumptions, always ask; this will help keep accidents at a minimum.

Some basic lab practices. (You can be cited for violating the following items)

- 1) No wearing of sandals or open-toed shoes in any lab.
- 2) No food or drinks in the labs (This includes but not limited to medications, hand creams, mouth wash, hard candy, condiments, make up, lip balm/ lip gloss, eye drops).
- 3) No playing or reckless behavior in NRC.
- 4) Do not use equipment or tools in or outside the labs, unless you are trained by the lab supervisor, your advisor, or a qualified technician recognized by the Department or that specific lab.
- 5) No dumping of environmentally unsafe products down the drain (a few examples: ethidium bromide, methanol, radioactive material, acids, and bases). OSU has developed a disposal program for these types of products, if you have a question as to an item being dumped down the drain always ask your advisor or contact EHS.
- 6) Do not work with products that produce an unsafe vapor or gas outside of a fume hood. Talk with your advisor or the lab supervisor if you are unsure whether the product you are working with should be in the fume hood.
- 7) Wear the proper PPE (Personal Protection Equipment) during experiments or working with or in hazardous elements. Examples of PPE: safety goggles, proper gloves, lab coat, proper shoes, body shields.
- 8) Do not put broken glass or sharp objects (razor blades, syringe needles, etc.) in domestic trash containers. If you need to dispose of such items, each lab has designated containers for that specific item.
- 9) Using lab materials in appliances that are designated for cooking food, refrigerate/freeze, or store food or medicine for human consumption is not allowed. This also includes certain ice machines throughout NRC. These appliances will be marked for human consumption only.
- 10) Walk-in coolers/ freezers in NRC are for lab purposes only; food or drink for human consumption is not allowed to be stored in these units. Do not store flammable products in these units as they are not rated as explosion-proof.
- 11) Combustible items or chemicals that need to be refrigerated shall only be stored in a non-explosive refrigerator.
- 12) No mouth pipetting.
- 13) Friends, family, and visitors will not be in the labs at any time unless they are a paid employee of OSU and have a designated right to be there by the Department or another OSU entity and/or are studying in your field of work, or recognized by the Department as a visitor or guest.
- 14) Under Federal law (OSHA) all paid employees of OSU must attend four safety classes every year.
- 15) If you find yourself in a compromising situation in a lab, do not try to handle it by yourself and always call for help.
- 16) Pesticide certification: If the student will be working with pesticides, it is advised that the student be certified in the Demonstration and Research category and any other category that is appropriate. See the Pesticide Coordinator for more information

Biological Safety

Several of the laboratories in Entomology and Plant Pathology work with restricted pathogens or recombinant DNA. These materials often require additional safety training and certification, termed Biological Safety Level 1, 2, or 3. Specialized training and standard operating procedures (SOPs) are in place for your safety and that of others who may enter the lab or work in close collaboration with your lab. Some of these procedures include safe handling of pathogens, use of personal protection equipment (PPE), proper disposal of contaminated material, and safe research protocols. If you work in a BSL-1 or BSL-2 laboratory, you must be trained and your name must be on the laboratory protocol on file with the Institutional Biosafety Office under the direction of Research Compliance (NIH guidelines) before you begin work in the lab. More information about Biosafety may be obtained at:

<http://compliance.vpr.okstate.edu/ibc.htm>

Working in a BSL-2 or BSL-3 laboratory requires yearly training in SOPs specific to that laboratory or protocol. Lab personnel must wear lab coats and closed-toed shoes upon entry of a BSL-2 or BSL-3 space. Gloves must be worn when working with any regulated pathogens. Any accidents, spills, injuries, or anomalies involving pathogens must

be reported to the lab supervisor and logged on the spill/accident log. When leaving a BSL-2 or BSL-3 space, coats and gloves must be removed and hands washed. Only authorized personnel are permitted to enter a BSL-2 or BSL-3 lab space unless accompanied by an authorized person. No food or drink of any kind is permitted. Distribution of regulated pathogens to persons outside of the lab or project is strictly forbidden. Failure to comply or violation of safety protocols may result in serious consequences ranging from loss of laboratory certification to University fines.

Radiation Safety

Radio-isotopes and radiation producing devices such as x-ray machines are highly regulated on this campus. Oklahoma State University's Radiation Safety Program operates under the supervision of the Oklahoma Department of Environmental Quality (DEQ) that determines the policies and procedures to be used in handling radiation producing materials. The regulations are administered and enforced by The Radiation Safety Officer operating out of the Radiation Safety Office (<http://compliance.vpr.okstate.edu/radsafety/index.htm>).

Persons using or planning to use radiological-materials must have prior approval from the Radiation Safety Officer and Committee. Generally, the Principle Investigator in charge of the laboratory will request approval to use radio-isotopes or radiation producing devices. Laboratories where isotopes are to be used are inspected and appropriate warning signs and labeling put in place. All containers of radio-isotopes must be labeled and isotopes must be secured in a locked cabinet or freezer when not in use. All radioactive waste must be stored in a safe location and properly disposed of by university safety personnel. Some isotopes require the use of monitoring devices such as dosimeters that are monitored on a regular basis. Users of isotopes must keep meticulous records and file quarterly reports with the Radiation Safety Office. Isotope purchases must be approved by the Radiation Safety Officer and the disposition of that isotope accurately recorded. Laboratories using radio-isotopes or radiation producing devices are inspected on a regular basis and their records checked.

Anyone that works with radio-isotopes or radiation producing devices must undergo Radiation Safety Training and pass a test. General radiation safety training must be taken every two years, and x-ray training annually. Anyone working in a laboratory where isotopes are being used but are not working directly with the isotopes are not required to have had formal training and testing. However, it is the responsibility of the lab director to assure that everyone working in the laboratory is aware of proper radiation safety procedures.

It should be stressed that radio-isotopes can only be used by approved, trained individuals working in laboratory areas approved for isotope use. Do not under any circumstances bring your materials/organisms into an approved laboratory and use their isotopes to conduct an experiment unless you have obtained approval from the Radiation Safety Officer. Likewise, do not move isotopes from an approved laboratory and use them in an area not approved by the Radiation Safety Officer. Failure to follow these rules will result in severe penalties for you and your major professor, the Department, the Division, and the University.

Institutional Review Board (IRB)

All research involving human subjects must have prior approval by the University's Institutional Review Board (IRB). This approval protects both the human subjects and the investigator(s). The IRB forms and format are available on the web at www.pp.okstate.edu/ehs/rc_inst.htm. Information on the IRB may be obtained by calling (405) 744-7241.

Permits

APHIS (Agricultural Plant Health Inspection Service) requires that live insects and pathogens that originate outside of Oklahoma be obtained and maintained under a PPQ permit. The process of obtaining permits can be lengthy and if a student intends to colonize or culture outside organisms it is best to obtain the necessary permits as soon as possible. This is usually done by the academic advisor. It is illegal for anyone to request, collect, or purchase organisms outside of Oklahoma without the possession of a permit. It is illegal for anyone to mail or transport organisms outside of Oklahoma without the possession of a permit.

Motor Pool

As a graduate student in the Department of Entomology and Plant Pathology, you are entitled to obtaining transportation from the Oklahoma State University Transportation Services Motor Pool for official University business purposes. In order to take advantage of this privilege, students must abide by several rules and procedures. While some procedures and important policies are highlighted here, students should consult the following link, and be familiar with, all Oklahoma State University Motor Pool Policy and Procedures.

<http://home.okstate.edu/policy.nsf/c92c833c20ba36fe862562c2007aa39e/8f80e8066511615c0625649e00607c9e?OpenDocument>

If transportation for research purposes or other official University business is deemed necessary by a student's advisor, then the student must use the following procedures for obtaining a vehicle from University motor pool after obtaining written permission from the major advisor:

1. Telephoned or written requests for advance reservations of Transportation Services' vehicles are urged. Phone-in reservations may be made by calling Extension 4-7945; written reservations may be addressed to: OSU Transportation Services, 113 Motor Pool, OSU Campus. Written reservations will be confirmed upon request. Failure to cancel reservations before the reserved time of departure will result in half-day charges being billed to the respective Department. Reservations not canceled by 1:00 p.m. will result in full-day charges being billed to the respective Department. All cancellations must be submitted by e-mail or fax and will be acknowledged by same.
2. At the time of leasing, the University personnel taking a vehicle must complete and sign a trip ticket. The person checking out the vehicle must be prepared to show either a University identification card, temporary authorization card, or Departmental authorization memo, plus a **current and valid USA driver's license** and the account number to be billed. Students will need to see Gerry Smith in the front office to receive and orange authorization card. The card must be kept in possession like your driver's license when operating a University vehicle.
3. At the termination of travel, the vehicle, credit card, and vehicle key should be returned to a member of the Transportation Services leasing staff during normal operating hours. A vehicle check-in unit with detailed instructions posted is provided for after hour returns. The campus vendor invoice will be cost-based according to the type of rental, time-out, and miles traveled. A copy of the campus vendor invoice with all charges listed will be transmitted by mail to the user Department. Each driver is encouraged to inspect the vehicle for damage upon return to the Transportation Services' facility and discuss any damage with a Transportation Services' employee. **In the case of vehicle damage resulting from the driver's gross negligence, competitive bids are used to assess the cost of repair. The user Department will be charged the full amount of the total of the charges to repair the vehicle.**

The following are important rules to remember when in possession of, and operating ANY University vehicle:

1. Private use of any University-owned vehicle is prohibited by State Statute (O.S. 1981, Title 47, Section 159.7). All University-owned vehicles shall be used strictly for official business. The following guidelines shall be used in determining whether vehicle usage fits the official usage requirement:
 - a. Travel directly incidental to the performance of official business, provided that the vehicle is not diverted from a reasonable and prudent route to or from its intended official purpose;
 - b. Transportation between temporary lodging and temporary duty station;
 - c. Transportation while in travel status between the temporary duty location or temporary residence and place where meals are taken, drug stores, barber shops, churches, laundries, cleaning establishments, and other similar places required for the health and well-being of the traveler.
2. The term "official" use or purpose does not include the use of a University-owned or leased vehicle or commercial rental vehicle for personal entertainment, the visiting of friends or relatives, or loan to or use by guests of the University. All persons traveling in University-owned vehicles must be on official business at all times.

3. A Transportation Services' vehicle is to be checked out by a regular full-time state or federal employee. The employee who checks out a University vehicle is responsible for the safe operation and care of the vehicle while in that individual's custody. The employee is also personally responsible for citations received while operating the vehicle.
4. If the vehicle is operated by anyone other than the employee who checked out the vehicle, the employee shall be responsible for the approval of capable and competent drivers. All drivers must have in their possession a current and valid USA motor vehicle driver's license with no restrictions other than for corrective lenses.
5. While any University vehicle is in the Stillwater area, purchases of fuel, services, and other automotive supplies must be made from Transportation Services with the exception of needed fuel purchasing on Sundays and University holidays.
6. Tobacco use is prohibited in all Transportation Services' vehicles. The Department may be charged a cleaning fee to remove tobacco odors or stains.

Travel

Out-of-State Travel (Flying or Driving)

1. Submit Request by completing the Out-of-State Travel Request (Yellow) Form
2. Obtain Approval / Authorization Signatures
3. Make Necessary Travel Arrangements
All Out-of-State Travel Requests and Airline Requisitions must be submitted in advance of the trip. At least one month in advance if possible. Out-of-Country needs to be submitted several months in advance.

Register for Conference or Meeting

After receiving approval to attend, register and pay for the conference or meeting in one of four ways:

1. Advisors P-card: Three criteria must be met by the conference to use the P-card use this form to make sure they are met.
2. Purchase order
3. Direct billing
4. Self payment

Arrange Transportation

Airline ticket purchases for Out-of-State Travel submission only: Commercial airline tickets for out-of-state travel must be purchased from an approved travel agency as established by the Division of Central Services. Our Department uses International travel in the Student Union. Penny is the one who helps us, her number is 744-6894.

Air travel services exceptions may include:

- Ticket can be secured elsewhere at a cost less than by the State Travel Division
- Travel originates from a location outside the state and it would be impractical to arrange for the air travel through an approved state travel agency
- Travel is necessitated by an emergency and time does not permit utilization of an approved state travel agency
- Travel is part of a package arrangement made by the organization scheduling the meeting or conference

Other Forms of Transportation

If you decide to drive a car to your destination you may drive your own car in the state of Oklahoma. If you drive your own car outside of OK you will not get full mileage back. It is better to rent a car from the OSU motorpool. To do this you must receive permission from your advisor. You may drive your own car to the airport and receive mileage for the trip to and from the airport as well as the cost of the parking fee.

Mileage eligible for reimbursement for privately owned vehicle:

For purposes of computing mileage eligible for reimbursement the individual's office is the starting point, except when the individual is leaving from his or her home and where his or her home is closer to his or her destination than is his or her office.

Parking: Actual expenses for parking may be reimbursed in full by providing receipts.

Taxi: Taxicab fares may be reimbursed for out-of-state travel on the basis of necessity. A receipt is necessary.

Bus/Train: Travel by bus will be reimbursed at a rate not to exceed the normal charge of such conveyance, and in no instances will the rate exceed coach class airfare.

Turnpike Tolls: Actual cost for turnpike tolls may be reimbursed in full.

Reserve Hotel Room

Call the designated conference hotel or site and ask what form of payment they accept. Most hotels will expect a credit card number to reserve the room and will not allow for direct billing or purchase orders. The most frequent method is for the traveler to use his or her own credit card to reserve and pay for the room and then submit their receipts for reimbursement after the trip. Please see the submission reimbursement guidelines for details.

Designated Conference Hotel or Location

While in official travel status, attending a previously arranged meeting, workshop or such similar event, conducted at the designated location as evidenced by the sponsor's announcement or notice, will qualify for actual lodging expense reimbursement not to exceed the single occupancy room rate charged by the designated hotel, motel, or other public lodging place. Students choosing to acquire less expensive lodging at another hotel, motel, or other public lodging place may be reimbursed the actual lodging expense not to exceed the single occupancy room rate charged by the designated hotel, motel, or public lodging place. Under these circumstances, you will not be reimbursed for local transportation costs incurred while traveling between the chosen lodging site and the designated hotel site unless an overall cost savings is demonstrated. When the itinerary does not specify a designated hotel, a hotel needs to be designated by the Department before the trip is taken. A designated hotel form needs to be signed and dated before the trip.

Cost Comparisons

Regardless of mode of travel, reimbursement for out-of-state transportation costs cannot exceed that of coach airfare plus mileage to and from the airport. If you choose another mode of travel other than by air, you must provide a cost comparison between the actual cost of transportation and the cost of the airline ticket (had you flown to the destination).

Meals

Meals included in registration: One fourth of one day's meals will be deducted from the per diem.

Continental breakfasts: Continental breakfast and refreshments such as coffee, tea, soft drinks, etc., provided during meeting breaks are not considered meals for the purposes of deducting meal provided with registration. *See also Meals Included in Registration.

Other meals: you will receive a per diem on meals that are not provided by the conference.

Take Your Trip and When You Return

Complete travel voucher (pink) form

Submit Worksheet with the following receipts and itineraries/schedules for reimbursement.

Original receipts with zero balances and conference itineraries/schedules to the Travel Coordinator.

These may include:

- Airline ticket

- Conference itinerary/schedule
- Designated hotel verification
- Itemized hotel bill (single room rate)
- Paid registration fee
- Miscellaneous supplies (with purpose stated)
- Business phone calls (usually shown on hotel bill)
- Parking and tolls
- Any other pertinent receipts
- Leased or rented automobiles, taxi
- Miscellaneous Supplies and Costs
- These include internet use (as long as it has to do w/ work)
- Registration Fees

Travel Reimbursement Voucher

The Travel Coordinator will prepare the travel reimbursement voucher for you to sign (this is placed in your mailbox). The travel voucher will be delivered to University Accounting to be processed for reimbursement.

In-State Travel Reimbursement (Driving)

Register for Conference or Meeting

If applicable. See above.

Arrange Transportation

See above.

Reserve Hotel Room

If applicable. See above.

Take Trip

Complete Reimbursement Form

In-State/Same Day Reimbursement Form

Submit Worksheet

Submit the worksheet with receipts and itineraries/schedules for reimbursement. See above.

Master's Degree Program

The Master's of Science degree program allows students to gain greater knowledge in one of two areas (entomology or plant pathology). Through the process of earning a Master's degree, you will learn how to conduct in depth research and effectively communicate those findings through both oral presentations and scientific writing. You should consider the Master's program to not only be an academic endeavor that is preparing you for your future plans but also a professional occupation.

The Department offers a Master's of Science in Entomology and Plant Pathology with an emphasis option in Entomology or Plant Pathology.

Entrance Requirements for Graduate Programs

The following courses should have been taken prior to acceptance into graduate programs in the Department of Entomology and Plant Pathology. A student may be admitted with deficiencies in these areas, but should take the courses and depending on the course may not receive credit toward their degree requirements. The courses required will be based on recommendation of their Advisory Committee.

For the M.S. Entomology Option

Introduction to the Science of Entomology, ENTO 2992 + ENTO 2991 or equivalent*

For the M.S. Plant Pathology Option

Introductory Plant Pathology (such as PLP 3343) or PLP 5043*.

The following courses are suggested for those students who are interested in graduate study in entomology or plant pathology.

1. Chemistry with lab (*three semesters, including at least one semester of Organic Chemistry*)
2. Introductory Biological Science with Lab (e.g., *Principles of Biology, Plant Biology, Microbiology, Zoology*)
3. Physiology with laboratory
4. An Anatomy OR Taxonomy course
5. Genetics
6. Statistics and College Calculus
7. Physics

** The prerogative of the student's Graduate Committee to waive specific curriculum requirements for good cause does not apply to Introductory Plant Pathology or Introduction to the Science of Entomology. If this course has not been taken prior to admission, it must be taken during the student's graduate program at OSU.*

Master's Graduate Study Guidelines

It is the **student's** responsibility to know all relevant University deadline dates and to have a general understanding of the rules of the Graduate College as they relate to the student's program. A listing of deadlines for each academic year can be obtained from the Graduate College at <http://gradcollege.okstate.edu/>.

Expectations for Degree Requirements and Deadlines

There are Departmental deadlines in place for timely completion of your degree. Professionals operate under the pressure of deadlines and the same expectations are true of this Department and the Graduate College. Important Departmental deadlines are specified throughout this document and it is **your** responsibility to adhere to them. These deadlines include holding committee meetings, submission of committee report forms, and research proposals. It is for your benefit that these policies and deadlines are in place so that you can complete your degree

and enter the workforce prepared and competitive. Failure to adhere to these deadlines may result in action that will result in the suspension of your assistantship until the requirement(s) is completed.

Selection of Advisory Committee

As early as possible during the first semester of enrollment, the student should consult with their Major Advisor regarding the formation of an advisory research committee. This Advisory Committee must include a minimum of three (3) members consisting of:

- The Major Advisor
- A tenure-track faculty member within the Department of Entomology and Plant Pathology
- A third tenure-track faculty member who may be chosen from within or outside the Department.
- All members of the Advisory Committee must be members of the Graduate Faculty.

The Advisory Committee will make recommendations regarding the student's Plan of Study and will supervise and review his or her research projects.

The Head of the Department of Entomology and Plant Pathology is considered a non-voting ex-officio member of all Advisory Committees, and must be notified prior to all meetings and examinations.

The student and Major Advisor select the Advisory Committee. Committees must be formed by the end of the first regular semester in which the student is enrolled at OSU. Once potential members are identified, it is the responsibility of the student to visit and ask each individual to serve on the committee. This will help establish rapport between the student and committee members. Names of committee members must be provided to the Graduate College.

A committee meeting should be scheduled as soon as possible after the selection and approval of committee members. This meeting is for purposes of preparing the Plan of Study and approval of the basic concept of the student's research. ***It will be held before the end of the first semester (spring or fall).*** After this meeting the student should submit a signed Graduate Committee Tracking Form (see Appendix) without a research summary. A copy of this report should be sent to each committee member and submitted to the Departmental Head. A student will not be allowed to enroll in courses if a Plan of Study is not on file by the time the student is enrolling for their 17th credit hour.

The Advisory Committee will meet at no less than six-month intervals throughout the students program. The purpose of these meetings is to monitor progress on research and course work. One week before each Committee meeting, the student should provide to committee members a written one-page summary of his/her research progress since the last meeting. At the completion of all meetings, the student must request signatures and submit the Graduate Committee Tracking Form. A copy of this report should be sent to each committee member and submitted to the Department Head.

Master's Degree Plan of Study

Prior to the 17th hour of credit, each master's student must submit an official Plan of Study to the Graduate College. (Plan of Study forms may be obtained on-line at <http://gradcollege.okstate.edu/download/plansforms.htm>. Note that Graduate College requirements specify a minimum of 21 hours of 5000 level (or above) courses for a Master's degree Plan of Study. Any change in the Plan of Study must receive prior approval by all members of the student's committee. In addition, students should consult closely with their Advisory Committees on all phases of their research projects. Once the Plan of Study form is completed, it should be signed by the Major Advisor and Advisory Committee members and submitted by the student to the Graduate College for final approval. **Refer to the common mistakes to avoid on a Plan of Study in the Appendix.**

Basic requirements to be completed by ALL students:

Core requirements: 9 credit hours plus 6 credit hours of Research & Thesis

- ENTO/PLP 5870 2 hours, Scientific Presentations
- ENTO/PLP 5623 3 hours, Advanced Biotechnology Methods
- ENTO/PLP 5524 4 hours, Integrated Management of Insect Pests and Pathogens
- ENTO 5000 OR PLP 5000 6 hours, Master's Research and Thesis

Discipline requirements: 15 credit hours

Entomology: 15 credit hours

Core – select at least 2 courses from following.

- ENTO 4464 4 hours, Insect Biology and Classification
- ENTO 5003 3 hours, Insect Biochemistry
- ENTO 5043 3 hours, Insect Physiology

Plus additional courses to complete the Plan of Study

Plant Pathology: 15 credit hours

PLP 5043 3 hours, required if student has NOT had Introductory course

Core – select at least 2 courses from following.

- PLP 5003 3 hours, Plant Nematology
- PLP 5012/5013 2 / 3 hours, Plant Virology
- PLP 5104 4 hours, Mycology
- PLP 5304 4 hours, Phytobacteriology

Plus additional courses to complete the Plan of Study

Introduction Seminar

At the beginning of the second semester (fall or spring), every M.S. student is required to present a short seminar as part of the Departmental Seminar Series. The purpose of this short 20-30 minute presentation is to introduce the student to the Department and to give a brief overview of the research the student will be conducting during their degree program. The presentation should include background information to help us get to know you, including where you are from, what your home town or country is like, any prior education, hobbies, and interests, etc. You should also include what degree you will be working on and who is your Major Advisor. Then give a brief overview of your research area and the approaches you will be using. You do not need to give very specific details but do give enough information so the audience understands what you will be doing and can provide general suggestions about your research. It should be noted that this is not a proposal defense seminar.

Near the end of your first semester (spring or fall) contact the seminar coordinators for the next semester to schedule a date for your presentation. The coordinators for the next few years are listed below. You should work with your Major Advisor on the preparation of your presentation and contact the seminar coordinators for the semester you will be presenting if you have specific questions.

Seminar Coordinators:

2009	Fall	Drs. Wayadande & Dillwith
2010	Spring	Drs. Fletcher & Royer
2010	Fall	Drs. Verchot & Kard

Research Proposal

A written proposal is a prerequisite for thesis preparation. Advisory Committee approval of the proposal is necessary. The proposal must be submitted to all Advisory Committee members two weeks prior to the student's second committee meeting. This second committee meeting must take place before the end of the student's first year in the program. The research proposal is designed to help the student prepare for conducting research by familiarizing him/her with the relevant literature, scientific writing, and planning experiments (experimental design). A well-written proposal not only functions as a template for you and your committee, but can also be used as the foundation of your thesis or dissertation. The research proposal must be in scientific format with proper references. There are no strict rules as to what goes into a research proposal, but here are some guidelines:

1. Title Page
2. Overview and Objectives (1-2 page brief description of project and objectives)
3. Literature Review (usually 15-30 pages in length)
4. Experimental Plan (detailed description of how you will conduct your research to meet your project objectives)
5. Results to Date (if any)
6. Literature Cited

Research Proposals are first approved by the Major Advisor then sent to the committee members for review and approval.

Research involving human subjects, biological, or hazardous materials must be approved by OSU institutional review committees/boards. Please refer to the introductory portion of this handbook. It is the student's responsibility to work with the Major Advisor to make sure appropriate approvals are obtained before work begins. Failure to do so will result in serious consequences for the student, advisor, and the University.

Compliance Committees

1. Review Board for Protection of Human Subjects (IRB)
2. Biosafety Committee
3. Animal Care and Use Committee
4. Radiological Safety Committee
5. Hazardous Waste Committee

Research

It is the student's responsibility to keep all members of the Advisory Committee informed of the research progress (including copies of the manuscript drafts for review). Adequate time must be allowed for committee review of the research materials in advance of the Graduate College deadlines. Communication with Advisory Committee members is critical to the successful coordination of graduate activities.

It is the student's responsibility to make satisfactory progress with their research. A student will receive the grade of "SR" (for satisfactory research) or "UR" (for unsatisfactory research). These grades are given in real time and are permanent. Unsatisfactory research grades do not count towards degree requirements and must be repeated and satisfactorily completed. If a student receives a grade of UR two semesters in a row, they will lose their research/teaching assistantship.

Master's Degree Thesis

Important Graduation Dates, Deadlines, and Forms

All students should visit the Graduate College website to review the numerous forms and deadlines they are responsible for in order to graduate at:

http://gradcollege.okstate.edu/download/pdf/Graduation_Checklist_Master's_1.pdf. For answers to common questions see http://gradcollege.okstate.edu/student/Most_Common_Question4.pdf.

Students wishing to graduate must submit a graduation clearance form, signed by their advisor, in their last semester. This form guides students through the process of verifying that degree requirements will be met. An extremely important step in this process is checking that courses listed on the Plan of Study have been taken and that the course prefix and number match those on transcript *exactly*. This form must be received by the Graduate College before a graduate student can apply for a diploma application with the Registrar's Office.

Application for Diploma

Application must be made at the time of enrollment for the semester in which the degree is conferred (see <http://gradcollege.okstate.edu/download/graduation.html>). Failure to file an application for a diploma card means you cannot graduate in that semester. In addition, the student must confirm that the Plan of Study is up-to-date. If the student does not graduate in the planned semester they must resubmit the application for diploma. All students must be enrolled in at least two semester credit hours during the semester they plan to graduate.

Final Semester Graduate College Forms

International students must complete a final semester verification form available at http://gradcollege.okstate.edu/gradcord/FSV_Form.pdf. Domestic students must complete a final semester verification form available at http://gradcollege.okstate.edu/download/pdf/FSV_Form_domestic.pdf. All students must submit a graduation clearance for graduate students form available at http://gradcollege.okstate.edu/gradcord/download/Grad_Clearance_form.pdf.

Final Draft Copy of Thesis

Note: an approved draft of the thesis must be submitted for review by the Graduate College well in advance of the end of the semester in which the student expects to graduate (see the Graduate College for the specific date). Draft copy submission is required in paper form. The student must follow the format guidelines in the Thesis/Dissertation Handbook that can be downloaded at: <http://gradcollege.okstate.edu/student/thesis.htm>.

Thesis Format

The Department of Entomology and Plant Pathology generally allows students to use one of two thesis formats. Refer to the Graduate College guidelines at <http://gradcollege.okstate.edu/student/thesis/default.html>. One is the traditional format and the second is a format that involves a collection of manuscripts in refereed journal form. The student should work with the Major Advisor and members of the Advisory Committee to determine the most appropriate format.

Traditional Format: This format includes the following sections:

- Cover Page
- Signature Page
- Acknowledgments
- Table of Contents
- List of Tables
- List of Figures
- Chapter 1: Introduction
 - Brief background of the problem
 - Overall goal for the research
 - Specific objectives and hypotheses tested
- Chapter 2: Literature Review
 - This is an exhaustive review of published literature related to the research.
- Chapter 3: Materials and Methods
 - Source of materials and reagents
 - Rearing of biological materials
 - Experimental design

Details of specific methods used
Details of data analysis used

Chapter 4: Results and Discussion
Presentation of data in tables and figures
Interpretation of data
Discussion of results

Chapter 5: Summary and Conclusions
This is a brief statement summarizing the findings and the significance of the results.

Literature Cited:
This is a complete list of the literature cited in the thesis and should be in a form generally used in scientific publications. Complete titles of papers cited should be included.

Appendix
Supporting website(s)

Vita
Abstract

Journal Article Format: This format includes the following sections:

Cover Page
Signature Page
Acknowledgments
Table of Contents
List of Tables
List of Figures
Chapter 1: Introduction
Brief background of the problem
Overall goal for the research
Specific objectives and hypotheses tested

Chapter 2: Literature Review
This is an exhaustive review of published literature related to the research.

Literature Cited:
This section contains literature cited in the introduction and literature review.

Next Chapter(s): Articles in referred journal format.
These articles should be prepared in a form ready for submission to a journal.
The target journal should be identified and its format followed.
Can be articles that have been published by the student.
The student must be the primary author of all the articles included.
Articles should contain the following sections:

Title
Authors
Abstract
Introduction
Materials and Methods
Results and Discussion
Acknowledgments
Literature Cited

Chapter (n): Summary and Conclusions

This is a brief statement summarizing the findings and the significance of the results.
Appendix
Supporting website(s)
Vita
Abstract

Master's Degree Final Examination

All students completing their M.S. are required to give a 50-minute public seminar discussing their research project and results. It is usually scheduled immediately preceding the Final Exam.

A final oral examination is conducted based on the draft copy of the thesis so that changes suggested by the student's Advisory Committee may be incorporated into the final copy. Scheduling should be done as far as possible in advance of the oral examination date. Students are required to submit draft copies of their theses to all members of their committee at least two (2) weeks prior to the oral defense.

The examination is conducted by the Advisory Committee and may include other Faculty. The content of the examination includes all course work, research, and research-related material covered during the student's tenure in the Department. Passing the exam requires a majority committee vote, with the Major Advisor voting with the majority. If the student fails the exam a second exam cannot be taken within two months of the failure. Failure to pass the second exam will result in dismissal. Following the oral examination, the student immediately submits the Result of Final Examination form to the Graduate College.

Final Copy of Thesis

After successful defense of the thesis the student prepares a final version incorporating any changes required by the Major Advisor and Advisory Committee. The final copy in electronic version is submitted to the Graduate College and the Department Head. The Department will print and bind a copy of the thesis that will reside in the Department office. See http://gradcollege.okstate.edu/student/Electronic_Guidelines2.pdf and http://gradcollege.okstate.edu/student/thesis/examples/templates/font_and_size.pdf for further information.

- The final copy of the thesis/dissertation must be in one complete file and must be in PDF format. Acrobat Adobe 6.0 Professional or later should be used.
- Font must be either Times New Roman or Arial.
- Images should be saved as TIFF or JPEG files and inserted into the document by using "Insert" from the menu bar in Word 2007, select "Insert" then "Picture" and select the source from file.
- All attachments must be embedded into the one document before the document is submitted.
- Scanned documents should be scanned with settings at least 300 dpi in Line Art or Grayscale and saved as a JPEG file, inserted into thesis/dissertation using above instructions.
- Institutional Review Board (IRB) approval letters should be scanned and inserted in the document.
- The abstract should be added as the last page behind the Vita, with no page number. Type your Advisor's name on the Advisor's Approval line.
- Type the Graduate Dean and Committee Member names on the Approval page of the electronic copy.
- The Graduate Dean's name should appear as "A. Gordon Emslie". If Dr. is used for one name, a similar title must appear with all names.
- Submit on the website. The URL for online submission is made available to the student when the completed and signed Result of Oral Defense form is received in the Graduate College. There is a submission fee of \$50 for the thesis.
- Students must submit one approval page with original Advisory Committee signatures on plain white paper or the OSU thesis bond paper. Student Name and ID # must appear at the top of this paper copy, but should not appear on the e-submission approval page.

- Students must submit two abstracts to the Graduate College with original Advisor signatures on OSU thesis bond paper. The format must adhere to the approved OSU guidelines (last page in the template).

Completion

Submit a final copy of the thesis in electronic format to the Graduate College and to the Department Head.

Consult with your advisor first. You can obtain bound copies of your thesis for yourself and your committee by purchasing the paper and/or using one of the local printing companies in town such as Kinko's. The Departmental copier should not be used to duplicate your thesis. Several binders are in the state that can bind your document. One is Ace Bookbinding Co. in Oklahoma City at 825 North Classen Blvd.

Purchase or rent the cap, gown, and hood at the Student Union Bookstore.

Congratulations

Please keep the Department up-to-date on your address along with professional and personal news you wish to share.

Tips

A checklist is provided for your convenience.

Students generally underestimate the time involved in satisfying the Graduate College regulations—obtaining copies and signatures, etc. Be prepared.

Responsibilities for Master's Degree

Department Head

1. Monitor graduate program.
2. Provide guidance to graduate students and graduate faculty.
3. Enforce rules, policies, and timelines outlined in this handbook.

Major Advisor

1. Review program possibilities with student.
2. Assist student in organizing Advisory Committee.
3. Direct Advisory Committee meetings.
4. Work with student to develop a research proposal.
5. Assist student in setting up Advisory Committee meetings at appropriate times.
6. Assist student in developing the Plan of Study and approve enrollment each semester.
7. Provide research guidance and advice.
8. Meet regularly with student during enrollment in research hours to provide guidance on research and thesis writing.

Committee

1. Make suggestions, review, approve, and sign the Plan of Study.
2. Approve thesis proposal and review research for compliance (i.e., animal, human, hazard, DNA) and Institutional Review Board (IRB) requirements.
3. Assist student during research as requested by advisor and student.
4. Review and approve draft copy of thesis.
5. Participate in student's oral examination.
6. Approve and sign final copy of thesis.

Student

- 1) Read thoroughly:
 - a. Graduate College policies and procedures.
 - b. Departmental Graduate Student Handbook.
- 2) With the assistance of your advisor:
 - a. Develop Plan of Study and file with Graduate College prior to enrollment in the 17th credit hour.
 - b. Plan each semester's enrollment.
 - c. Establish research project with a research proposal approved by committee.
 - d. Organize Advisory Committee.
 - e. Plan Advisory Committee meetings and submit committee tracking forms.
 - f. Obtain IRB approval of research proposal, if required.
- 3) When enrolling for the semester in which the degree will be conferred, recheck the Plan of Study (plan and transcript must match). When enrolling for the semester in which the degree will be conferred see: http://gradcollege.okstate.edu/download/pdf/Graduation_Checklist_Master's_1.pdf. and http://gradcollege.okstate.edu/student/Most_Common_Question4.pdf.
- 4) Meet Graduate College deadline dates in the current catalog regarding:
 - a. Plan of study.
 - b. Draft copy of thesis.
 - c. Oral examination.
 - d. Final copy of thesis.
 - e. Complete application of degree.

- 5) File copy of your thesis with the Departmental Office.
- 6) Exhibit professional challenging attitudes towards the rigors of academic performance indicative of graduate education.
- 7) Exit interview with Department Head.

Master's Degree Graduate Student Check List

Student Name: _____

Date Began: _____

- ___ 1. Discussion of professional goals and objectives, academic plans, with advisor.
- ___ 2. Reviewed Graduate Student Handbook and Graduate Catalog.
- ___ 3. Determined courses for first semester.
- ___ 4. Become acquainted with research project.
- ___ 5. Developed a Plan of Study.
- ___ 6. Organized a Graduate Advisory Committee.
- ___ 7. Presented Plan of Study to Graduate Advisory Committee.
- ___ 8. Finalized a Plan of Study and submitted it to the Graduate College.
- ___ 9. Selected a thesis problem.
- ___ 10. Developed a thesis proposal.
- ___ 11. Presented a thesis proposal to Graduate Advisory Committee within first 12 months of program.
- ___ 12. Presented introductory Seminar to the Department by the end of the second semester.
- ___ 13. Amended the Plan of study (if necessary).
- ___ 14. Submitted a Graduate Clearance Form to the Graduate College.
- ___ 15. Completed application for Diploma Application Form in the semester in which the degree is to be conferred.
- ___ 16. Submitted draft of thesis to Graduate College.
- ___ 17. Completed thesis and abstract.
- ___ 18. Defended thesis.
- ___ 19. Passed final examination and submitted results to the Graduate College.
- ___ 20. Completed required changes in thesis.
- ___ 21. Submitted two signed copies of thesis abstract to the Graduate College.
- ___ 22. Obtained a signed approval page.
- ___ 23. Submitted thesis to the Graduate College and paid submission fees.
- ___ 24. Submitted one copy of thesis to Department Head.
- ___ 25. Exit interview with Department Head.

Doctor of Philosophy

Entrance Requirements for Graduate Programs

A Master's degree with a research thesis is required. In addition to courses typically taken for the Master's degree, the following courses should have been taken prior to acceptance into Doctorate of Philosophy programs in the Department of Entomology and Plant Pathology. A student may be admitted with deficiencies in these areas, but should take these courses and depending on the course may not receive credit toward their degree requirements. The courses required will be based on recommendation of their Advisory Committee.

1. Biochemistry
2. Ecology
3. Genetics
4. Basic Statistics and/or Experimental Design

General Requirements

The Doctor of Philosophy degree is granted in recognition of high achievement in scholarship and independent investigation. The candidate must prove his/her acceptability by:

- Successfully completing a series of courses comprising a Plan of Study;
- Passing a written and oral examination demonstrating academic competence;
- Carrying out a research program under supervision and preparing an acceptable dissertation; and,
- Demonstrating initiative, creative intelligence, and ability to plan and carry out research in the chosen field.

Doctorate Graduate Study Guidelines

It is the **student's** responsibility to know all relevant University deadline dates and to have a general understanding of the rules of the Graduate College as they relate to the student's program. A listing of deadlines for each academic year can be obtained from the Graduate College at <http://gradcollege.okstate.edu/>.

Expectations for Degree Requirements and Deadlines

There are Departmental deadlines in place for timely completion of your degree. Professionals operate under the pressure of deadlines and the same expectations are true of this Department and the Graduate College. Important Departmental deadlines are specified throughout this document and it is **your** responsibility to adhere to them. These deadlines include holding committee meetings, submission of committee report forms and research proposals. It is for your benefit that these policies and deadlines are in place so that you can complete your degree and enter the workforce prepared and competitive. Failure to adhere to these deadlines may result in the suspension of your assistantship until the requirement(s) is completed.

Selection of Advisory Committee

As early as possible during the first semester of enrollment, the student should consult with their advisor regarding the formation of an advisory research committee. This Advisory Committee must include a minimum of four (4) members consisting of:

- The Major Advisor
- One tenure-track faculty member within the Department of Entomology and Plant Pathology
- A third tenure-track faculty member who must be chosen from outside the Department.
- A fourth member from either inside or outside the Department
- All members of the Advisory Committee must be members of the Graduate Faculty.

The Advisory Committee will make recommendations regarding the student's Plan of Study and will supervise and review his or her research projects.

The Head of the Department of Entomology and Plant Pathology is considered a non-voting ex-officio member of all Advisory Committees, and must be notified prior to all meetings and examinations.

The student and Major Advisor select the Advisory Committee. Committees must be formed by the end of the first regular semester in which the student is enrolled at OSU. Once potential members are identified, it is the responsibility of the student to visit and ask each individual to serve on the committee. This will help establish rapport between the student and committee members. Names of committee members must be provided to the Graduate College.

A committee meeting should be scheduled as soon as possible after the selection and approval of committee members. This meeting is for purposes of preparing the Plan of Study and approval of the basic concept of the student's research. *It will be held before the end of the first semester (spring or fall).* After this meeting the student should submit a signed Graduate Committee Tracking Form (see Appendix) without a research summary. A copy of this report should be sent to each committee member and submitted to the Departmental Head. A student will not be allowed to enroll in courses if a Plan of Study is not on file by the time the student is enrolling for their 28th credit hour.

The Advisory Committee will meet at no less than six-month intervals throughout the students program. The purpose of these meetings is to monitor progress on research and course work. One week before each committee meeting, the student should provide to committee members a written one-page summary of his/her research progress since the last meeting. At the completion of all meetings, the student must request signatures and submit the Graduate Committee Tracking Form. A copy of this report should be sent to each committee member and submitted to the Department Head.

Doctoral Degree Plan of Study

Prior to the 28th hour of credit, each doctorate student must submit an official Plan of Study to the Graduate College. Plan of Study forms may be obtained on-line at <http://gradcollege.okstate.edu/download/plansforms.htm>. The plan must include all of the acceptable graduate work that has been completed beyond the master's degree and all that will be taken for the degree.

The Doctor of Philosophy degree requires at least 6 semesters of full-time graduate study (a minimum of 90 semester credit hours) beyond the bachelor's degree or four semesters of full-time graduate study (a minimum of 60 semester credit hours) beyond the M.S. degree. This includes a minimum of 15 credits and a maximum of 36 credits for the dissertation (ENTO 6000 or PLP 6000). Approximately 75% of the credit hours should be obtained from 5000 and 6000 level courses. The remaining 25% may be taken from 3000 and 4000 level courses which are approved for graduate credit (an asterisk in the OSU course catalogue indicates these courses). Any change in the Plan of Study must receive prior approval by all members of the student's committee. In addition, students should consult closely with their Advisory Committees on all phases of their research projects. During the final semester of enrollment, the Plan of Study form should be reviewed by the student and Major Advisor for any changes that were made during the student's program. Any changes should be submitted by the student to the Graduate College for final approval. Students are expected to complete the requirements for the degree within 9 years (18 semesters excluding summer) from the student's first semester of enrollment. The doctoral degree must be completed within four years of passing the qualifying exam. Failure to do so requires that the qualifying exam be repeated. **Refer to the common mistakes to avoid on a Plan of Study in the Appendix.**

Doctor of Philosophy Degree Programs

Ph.D., Entomology

Required courses:

ENTO 4464	Insect Biology and Classification
ENTO 5003	Insect Biochemistry
ENTO 5043/5044	Insect Physiology
ENTO 5870	Scientific Presentations (2 semesters)
ENTO 5992	Career Skills and Professionalism (recommended)

Ph.D., Plant Pathology

Required courses:

Introductory – one is required if not previously taken.

PLP 3043	Introductory Plant Pathology (no graduate credit)
PLP 5043	Principles of Phytopathology

Pathogens courses:

PLP 5104	Mycology
PLP 5724	Host-Pathogen Physiology

Additional Pathogen courses – 2 required:

PLP 5003	Plant Nematology
PLP 5012/5013	Plant Virology w/ lab
PLP 5304	Phytopathology

Concepts courses – 2 required (at least one with *):

PLP 5523*	Integrated Management of Insect Pests and Pathogens
PLP 5613*	Host Plant Resistance
PLP 6303	Soilborne Diseases of Plants

Professionalism:

PLP 5992	Career Skills & Professionalism (recommended)
PLP 5870	Scientific Presentations (2 semesters)

Introduction Seminar

At the beginning of the second semester (fall or spring), every Ph.D. student is required to present a short seminar as part of the Departmental Seminar Series. The purpose of this short 20-30 minute presentation is to introduce the student to the Department and to give a brief overview of the research the student will be conducting during their degree program. The presentation should include background information to help us get to know you, including where you are from, what your home town or country is like, any prior education, hobbies, and interests, etc. You should also include what degree you will be working on and who is your Major Advisor. Then give a brief overview of your research area and the approaches you will be using. You do not need to give very specific details but do give enough information so the audience understands what you will be doing and can provide general suggestions about your research. It should be noted that this is not a proposal defense seminar.

Near the end of your first semester contact the seminar coordinators for the next semester to schedule a date for your presentation. The coordinators for the next few years are listed below. You should work with your Major Advisor on the preparation of your presentation and contact the seminar coordinators for the semester you will be presenting if you have specific questions.

Seminar Coordinators:

2009	Fall	Drs. Wayadande & Dillwith
2010	Spring	Drs. Fletcher & Royer
2010	Fall	Drs. Verchot & Kard
2011	Spring	Drs. Marek & Criswell

Research Proposal

A written proposal is a prerequisite for thesis preparation. Advisory Committee approval of the proposal is necessary. The proposal must be submitted to all Advisory Committee members two weeks prior to their second committee meeting. This second committee meeting must take place before the end of the student's first year in the program. The research proposal is designed to help the student prepare for conducting research by familiarizing him/her with the relevant literature, scientific writing, and planning experiments (experimental design). A well-written proposal not only functions as a template for you and your committee, but can also be used as the foundation of your thesis or dissertation. The research proposal must be in scientific format with proper references. There are no strict rules as to what goes into a research proposal, but here are some guidelines:

1. Title Page
2. Overview and Objectives (1-2 page brief description of project and objectives)
3. Literature Review (usually 15-30 pages in length)
4. Experimental Plan (detailed description of how you will conduct your research to meet your project objectives)
5. Results to Date (if any)
6. Literature Cited

Research Proposals are first approved by the Major Advisor then sent to the committee members for review and approval.

Research involving human subjects, biological hazards or hazardous materials must be approved by OSU institutional review committees/boards. Please refer to the introductory portion of this handbook. It is the student's responsibility to work with the major professor to make sure appropriate approvals are obtained before work begins. Failure to do so will result in serious consequences for the student, advisor and the University.

Compliance Committees

1. Review Board for Protection of Human Subjects (IRB)
2. Biosafety Committee
3. Animal Care and Use Committee
4. Radiological Safety Committee
5. Hazardous Waste Committee

Research

It is the student's responsibility to keep all members of the Advisory Committee informed of the research progress (including copies of the manuscript drafts for review). Adequate time must be allowed for committee review of the research materials in advance of the Graduate College deadlines. Communication with Advisory Committee members is critical to the successful coordination of graduate activities. It is the student's responsibility to make satisfactory progress with their research. A student will receive the grade of "SR" (for satisfactory research) or "UR" (for unsatisfactory research). These grades are given in real time and are permanent. Unsatisfactory research grades do not count towards degree requirements and must be repeated and satisfactorily completed. If a student receives a grade of UR two semesters in a row, they will lose their research/teaching assistantship.

Residence Requirements

A minimum of 30 semester credit hours must be taken in residence at Oklahoma State University. One year of the last two years must be spent in continuous residence at this institution. With prior approval by the Advisory Committee, Department Head, and the Dean of the Graduate College, the student may do research for the degree in absentia. Research conducted while not in residence is under the supervision of the Major Advisor and the Advisory Committee.

Qualifying Examination

The qualifying examination is designed to assess the student's competencies in the fields of study required of a dissertation. The qualifying examination consists of both written and oral components. When completed or nearing completion of formal course work and after formal approval of the research proposal by the Advisory Committee, the Ph.D. student will arrange to take the qualifying examination administered by the Major Advisor and the Advisory Committee. Faculty outside the committee may also be asked to submit questions for portions of the qualifying examination. Faculty outside the committee who submit questions do not have voting privileges. The qualifying exam is comprehensive and covers the entire area of graduate studies. It will consist of both a written and oral component from each committee member. Passing the qualifying examination requires a majority vote, with the Major Advisor voting with the majority. The examination must be administered not less than 12 months before the degree is granted. The results must be reported to the Graduate College on the Admission to Doctoral Candidacy Form available at http://gradcollege.okstate.edu/download/pdf/Doc_candidacy_form.pdf.

Written Qualifying Examination

The written qualifying exam must be passed before proceeding to the oral qualifying exam. The committee will submit questions for the written qualifying exam. Each questioner may dictate the conditions for his/her questions (i.e., open or closed book, limits, take-home, etc.). The entire written exam should be completed within two weeks. After the exam is completed, the questions will be graded by each examiner and assigned a pass (P) or fail (F) grade. Based on the overall performance of the student the committee will vote to pass or fail the student. If there are one or more dissenting votes, the committee will decide whether to re-administer part or the entire exam. A copy of the decision and action should be recorded and placed in the student's file. The student will be required to re-take failed portions within six weeks of the failure. If a student fails to pass portions of the written qualifying exam that were taken a second time, the second failure results in dismissal from the program.

Oral Qualifying Examination

The oral examination provides each student with an opportunity to respond to follow-up questions related to the written examination and/or other questions. The oral examination provides another opportunity to assess the student's ability. After passing the written exam, the student will be required to take an oral exam within 2-6 weeks. The oral exam must be advertised to Departmental faculty one week prior to administration. The student's Advisory Committee administers the exam but all other faculty are invited to participate. Only committee members and the Department Head may be present during deliberation and voting. However, a faculty member external to the Department can be requested by the student or Major Advisor to serve as a neutral observer during the deliberation and voting process. Unless the Department Head is a member of the committee, he/she may not vote. The decision of the committee to pass a student is based on the performance of the student in both written and oral portions of the exam, as well as the potential of the student as evidence, by research performance, course work and overall commitment to graduate level study. Unanimous approval is required for an unconditional pass. A non-unanimous, committee vote will result in a conditional pass, in which the committee will decide on an appropriate course of action to correct any deficiency noted on the part of the dissenting member(s). A dissenting vote by the Major Advisor, a majority of dissenting votes, or an even vote will result in failure. The committee's action must be recorded and placed in the student's file. Failure to pass the first oral qualifying exam will result in the opportunity to retake the exam in six months from the date of the first oral qualifying exam.

If a student fails to pass the second qualifying exam, the second failure results in dismissal from the program. Passage of the qualifying exam moves the student into doctoral candidate status. The Qualifying Examination Report and Application must be submitted to the Graduate College. Before being admitted to candidacy, the student must:

1. Pass the written and oral qualifying examination.
2. Have an approved Plan of Study on file in the Graduate College.
3. Have a research proposal approved by the student's Advisory Committee.

Admission to Doctoral Candidacy Form

See <http://gradcollege.okstate.edu/download/admdocand.htm> for the Admission to Doctoral Candidacy Form.

Doctoral Dissertation

Important Graduation Dates, Deadlines, and Forms

All students should visit the Graduate College website to review the numerous forms and deadlines they are responsible for in order to graduate at:

http://gradcollege.okstate.edu/download/pdf/Graduation_Checklist_doctoral_1.pdf. For answers to common questions see http://gradcollege.okstate.edu/student/Most_Common_Question4.pdf.

Students wishing to graduate must submit a graduation clearance form, signed by their advisor, in their last semester. This form guides students through the process of verifying that degree requirements will be met. An extremely important step in this process is checking that courses listed on the Plan of Study have been taken and that the course prefix and number match those on transcript *exactly*. This form must be received by the Graduate College before a graduate student can apply for a diploma application with the Registrar's Office.

Application for Diploma

Application must be made at the time of enrollment for the semester in which the degree is conferred (see <http://gradcollege.okstate.edu/download/graduation.html>). Failure to file an application for a diploma card means you cannot graduate in that semester. In addition, the student must confirm that the Plan of Study is up-to-date. If the student does not graduate in the planned semester they must resubmit the application for diploma. All students must be enrolled in at least two semester credit hours during the semester they plan to graduate.

Final Semester Graduate College Forms

International students must complete a final semester verification form available at http://gradcollege.okstate.edu/gradcord/FSV_Form.pdf. Domestic students must complete a final semester verification form available at http://gradcollege.okstate.edu/download/pdf/FSV_Form_domestic.pdf. All students must submit a graduation clearance for graduate students form available at http://gradcollege.okstate.edu/gradcord/download/Grad_Clearance_form.pdf.

Final Draft Copy of Dissertation

Note: an approved draft of the thesis must be submitted for review by the Graduate College well in advance of the end of the semester in which the student expects to graduate (see the Graduate College for the specific date). Draft copy submission is required in paper form. The student must follow the format guidelines in the Thesis/Dissertation Handbook which can be downloaded at: <http://gradcollege.okstate.edu/student/thesis.htm>.

Dissertation Format

The Department of Entomology and Plant Pathology generally allows students to use one of two thesis formats. Refer to the Graduate College guidelines at <http://gradcollege.okstate.edu/student/thesis/default.html>. One is the traditional format and the second is a format that involves a collection of manuscripts in referred journal form. The student should work with the Major Advisor and members of the Advisory Committee to determine the most appropriate format to be used.

Traditional Format: This format includes the following sections:

- Cover Page
- Signature Page
- Acknowledgments
- Table of Contents
- List of Tables
- List of Figures
- Chapter 1: Introduction
 - Brief background of the problem
 - Overall goal for the research
 - Specific objectives and hypotheses tested
- Chapter 2: Literature Review
 - This is an exhaustive review of published literature related to the research.
- Chapter 3: Materials and Methods
 - Source of materials and reagents
 - Rearing of biological materials
 - Experimental design
 - Details of specific methods used
 - Details of data analysis used
- Chapter 4: Results and Discussion
 - Presentation of data in tables and figures
 - Interpretation of data
 - Discussion of results
- Chapter 5: Summary and Conclusions
 - This is a brief statement summarizing the findings and the significance of the results.
- Literature Cited:
 - This is a complete list of the literature cited in the thesis and should be in a form generally used in scientific publications. Complete titles of papers cited should be included.
- Appendix
 - Supporting website(s)
- Vita
- Abstract

Journal Article Format: This format includes the following sections:

- Cover Page
- Signature Page
- Acknowledgments
- Table of Contents
- List of Tables
- List of Figures
- Chapter 1: Introduction
 - Brief background of the problem
 - Overall goal for the research
 - Specific objectives and hypotheses tested
- Chapter 2: Literature Review
 - This is an exhaustive review of published literature related to the research.

Literature Cited: This section contains literature cited in the introduction and literature review.

Next Chapter(s): Articles in referred journal format

These articles should be prepared in a form ready for submission to a journal

The target journal should be identified and its format followed

Can be articles that have been published by the student

The student must be the primary author of all the articles included

Articles should contain the following sections:

Title

Authors

Abstract

Introduction

Materials and Methods

Results and Discussion

Acknowledgments

Literature Cited

Chapter (n): Summary and Conclusions

This is a brief statement summarizing the findings and the significance of the results.

Appendix

Supporting website(s)

Vita

Abstract

Oral Defense of Dissertation

An oral defense primarily consists of the material presented in the dissertation and is considered the final examination. A minimum of 6 months must elapse between the qualifying exams and the defense of dissertation. Two weeks prior to the defense the student must submit a final draft of his/her dissertation to the committee. Major problems with the dissertation should be discussed with the student and corrected prior to scheduling the defense. The defense (or final examination) constitutes a public defense of the student's research. The defense consists of a public seminar that is followed by a private examination administered to the student by the Major Advisor and Advisory Committee. About two weeks before the defense the student should notify the office staff of the title, date, time and location of the seminar so that a flyer can be posted or Department faculty, staff, students can be notified by email. Following an oral presentation of the student's dissertation research, the committee will administer a final oral examination. If a student fails to pass the second oral defense of dissertation exam, then the second failure results in dismissal from the program. Following the oral examination, the student immediately submits the Result of Final Examination form.

Final Copy of Dissertation

After successful defense of the thesis the student prepares a final version incorporating any changes required by the Major Advisor and Advisory Committee. The final copy in electronic version is submitted to the Graduate College and the Department Head. The Department will print and bind a copy of the thesis that will reside in the Department office. See http://gradcollege.okstate.edu/student/Electronic_Guidelines2.pdf for further information.

- The final copy of the thesis/dissertation must be in one complete file and must be in PDF format. Acrobat Adobe 6.0 Professional or later should be used.
- Font must be either Times New Roman or Arial.
- Images should be saved as TIFF or JPEG files and inserted into the document by using "Insert" from the menu bar in Word, select "Insert" then "Picture" and select the source from file.
- All attachments must be embedded into the one document before the document is submitted.

- Scanned documents should be scanned with settings at least 300 dpi in Line Art or Grayscale and saved as a JPEG file, inserted into thesis/dissertation using above instructions.
- Institutional Review Board (IRB) approval letters should be scanned and inserted in the document.
- The abstract should be added as the last page behind the Vita, with no page number. Type your Advisor's name on the Advisor's Approval line.
- Type the Graduate Dean and Committee Member names on the Approval page of the electronic copy.
- The Graduate Dean's name should appear as "A. Gordon Emslie". If Dr. is used for one name, a similar title must appear on all names.
- Submit on the website. The URL for online submission is made available to the student when the completed and signed Result of Oral Defense form is received in the Graduate College. There is a submission fee of \$50 for the thesis.
- Students must submit one approval page with original Advisory Committee signatures on plain white paper or the OSU thesis bond paper. Student Name and ID # must appear at the top of this paper copy, but should not appear on the e-submission approval page.
- Students must submit two abstracts to the Graduate College with original Advisor signatures on OSU thesis bond paper. The format must adhere to the approved OSU guidelines (last page in the template).

Completion

Submit a final copy of the thesis in electronic format to the Graduate College and to the Department Head.

Consult with your advisor first. You can obtain bound copies of your dissertation for yourself and your committee by purchasing the paper and/or using one of the local printing companies in town such as Kinko's. The Departmental copier should not be used to duplicate your dissertation. Several binders are in the state that can bind your document. One is Ace Bookbinding Co. in Oklahoma City at 825 North Classen Blvd.

Purchase or rent the cap, gown, and hood at the Student Union Bookstore.

Congratulations

Please keep the Department up-to-date on your address along with professional and personal news you wish to share.

Tips

A checklist is provided for your convenience.

Students generally underestimate the time involved in satisfying the Graduate College regulations—obtaining copies and signatures, etc. Be prepared.

Responsibilities for the Doctoral Program

Department Head

1. Advise the student of the steps necessary to complete admission to the chosen program.
2. Monitor the Department Graduate Program.
3. Provide guidance to the graduate student and faculty.
4. Enforce rules, policies, and timelines outlined in this handbook.

Major Advisor

1. Review the program possibilities with the student.
2. Assist the student in organizing an Advisory Committee.
3. Chair the Advisory Committee meetings.
4. Assist the student in developing a Plan of Study.
5. Meet regularly with the student.
6. Advise the student during research, suggest appropriate consultation related to the research design, statistics, computer use.
7. Plan tentative time for the following:
 - a. course completion.
 - b. research completion.
 - c. qualifying examination.
 - d. dissertation completion.
 - e. submission of the draft copy of the dissertation to the committee for review and approval before sending it to the Graduate College.
 - f. final copy of dissertation to the Graduate College
8. Assist the student in preparation for the qualifying examination.
9. Administer the qualifying examination or coordinates the qualifying exam with the graduate coordinator.
10. Critique the dissertation.
11. Mentor throughout the program.

Advisory Committee

1. Assist the student in preparing a Plan of Study.
2. Assist the student in planning and supervising the research.
3. Assist the student in the preparation and evaluation of the qualifying examination.
4. Supervise the writing and evaluation of the dissertation.
5. Conduct the final examination.

Student

1. Read thoroughly:
 - a. Departmental Handbook
2. With the assistance of your advisor:
 - a. Develop a Plan of Study and file with Graduate College prior to enrollment in the 28th credit hour.
 - b. Plan each semester's enrollment.
 - c. Determine a research interest.
 - d. Organize the Advisory Committee.
 - e. Plan Advisory Committee meetings
 - f. Develop the research proposal before the end of second semester.
 - g. Obtain an IRB approval of research proposal, if required, complete research.
3. When enrolling for the semester in which the degree will be conferred, recheck the Plan of Study (Plan and transcript must match). When enrolling for the semester in which the degree will be conferred see: http://gradcollege.okstate.edu/download/pdf/Graduation_Checklist_doctoral_1.pdf. and

http://gradcollege.okstate.edu/student/Most_Common_Question4.pdf.

4. Meet the Graduate College deadline dates listed in the current catalog regarding:
 - a. Notice of intention.
 - b. Plan of Study and dissertation outline.
 - c. Qualifying examination.
 - d. Draft copy of the dissertation.
 - e. Final oral examination.
 - f. Final copy of the dissertation.
5. Turn in copy of the dissertation abstract to the Department Office.
6. Exit interview with Department Head.

Doctoral Degree Graduate Student Check List

Student Name: _____

Date Began: _____

- ___ 1. Initial interview. Discussion of the professional goals and objectives, professional experience, academic plans, program opportunities.
- ___ 2. Reviewed Graduate Student Handbook and Graduate Catalog.
- ___ 3. Developed a temporary Plan of Study.
- ___ 4. Organized a Graduate Advisory Committee.
- ___ 5. Finalized a Plan of Study and submitted it to the Graduate College.
- ___ 6. Selected a dissertation topic.
- ___ 7. Developed the dissertation proposal.
- ___ 8. Presented a thesis proposal to Graduate Advisory Committee within first 12 months of program.
- ___ 9. Presented introductory Seminar to the Department by the end of the second semester.
- ___ 10. Passed the qualifying exam.
- ___ 11. Amended the Plan of Study (if necessary).
- ___ 12. Completed Admission to Doctoral Candidacy form to the Graduate College twelve months prior to completing degree.
- ___ 13. Submitted a Graduate Clearance Form to the Graduate College.
- ___ 14. Completed application for Diploma Application Form in the semester in which the degree is to be conferred.
- ___ 15. Submitted draft of dissertation to the Graduate College.
- ___ 16. Completed dissertation and abstract.
- ___ 17. Defended dissertation.
- ___ 18. Passed final examination and submitted results to the Graduate College.
- ___ 19. Completed required changes in dissertation.
- ___ 20. Submitted two signed copies of dissertation abstract.
- ___ 21. Obtained a signed approval page form Advisory Committee.
- ___ 22. Submitted dissertation to the Graduate College and paid submission fees.
- ___ 23. Submitted one copy of dissertation to Department Head.
- ___ 24. Exit interview with Department Head.
- ___ 25. Notes:

Appendix A

Operational Functions

Office/Desk Assignments

Offices and desks in the NRC graduate student suites will be assigned in consultation with the Department Head, as space is available.

Keys

Upon entering the Department, students will be issued keys to the building and lab as appropriate. The student is responsible for the security of these keys, and must return all keys to the main office before leaving the Department. Keys should not be loaned or given to other students or faculty. Failure to turn in your keys to the main office could result in a \$25/per key charge to your Bursar account.

Photocopying/Scanning

Students may use the Department's photocopy machines, observing the following guidelines:

1. Copying of personal materials will incur a charge (to be paid at the time copies are made) of \$0.05 per copy or current rate.
2. Copying of instructional materials for students enrolled in Departmental classes will incur a charge be paid at the time copies are made of \$0.05 per copy.
3. Copying of instructional materials by Teaching Assistants for use in their class must first be approved by the instructor and will be billed to the "Teaching Account."
Scanning of documents is available at no charge and are directly sent to an e-mail address in .pdf format

Poster Making

Equipment is available for poster printing for a fee. Please see Dr. Richard Grantham. Businesses in Stillwater are also capable of printing posters for a larger fee.

Brief Description of Faculty Area of Interests

Entomology

Dr. Jack Dillwith	Insect biochemistry; insect-plant interactions
Dr. Jim Criswell	Extension pesticide coordinator
Dr. Kristopher Giles	Field crops pest management
Dr. Carmen Greenwood	Teaching and soil arthropods
Dr. Deborah Jaworski	Tick physiology and tick management
Dr. Haobo Jiang	Insect molecular biology
Dr. Brad Kard	Structural and urban arthropod pests; termites
Dr. Phil Mulder	Alfalfa, peanuts, fruit & nut tree arthropod pests
Dr. George Opit	Stored grain arthropod pests
Dr. Eric Rebek	Extension entomologist. Horticultural, ornamentals, and landscape arthropod pests
Dr. Michael Reiskind	Veterinary and medical entomology
Dr. Tom Royer	Integrated pest management coordinator
Dr. Justin Talley	Livestock arthropod pest management

Plant Pathology

Dr. Carol Bender	Plant molecular biology and genetics engineering
Dr. Ken Conway	Vegetable diseases
Dr. John Damicone	Extension plant pathologist - peanut & vegetable crops diseases
Dr. Jacque Fletcher	Plant mycoplasmaology & bacteriology
Dr. Carla Garzon	Soilborne plant pathology
Dr. Steve Marek	Fungal functional genomics
Dr. Bob Hunger	Wheat plant pathology
Dr. Francisco Ochoa-Corona	Plant virology
Dr. Damon Smith	Extension plant pathologist, horticultural, ornamentals, and landscape diseases
Dr. Jeanmarie Verchot-Lubicz	Plant virology
Dr. Nathan Walker	Turfgrass integrated pest management
Dr. Astri Wayadande	Vector biology and insect behavior

Student _____

Date of Meeting _____



Thesis/Dissertation Committee Meeting Report



Regularly scheduled committee meetings are an important aspect of graduate student study. The committee meeting serves as a time for the student to present the findings of his/her research to the committee and enables the committee to be informed of the student's progress. It provides the student and committee an opportunity to troubleshoot and solve research issues, creates an opportunity to reevaluate the need for certain projects, and the ability to adjust the objectives of the students research. The committee meeting facilitates timely progress by the student and committee members on the objectives of a research project through frequent and regular meeting sessions. A committee meeting should be viewed as a positive and beneficial task. The committee meeting is not an examination of the student.

At each committee meeting the student should provide either a written report or powerpoint presentation containing the following sections:

- _____ 1. New and existing research approaches for each objective

- _____ 2. For each objective, a summary of progress since the last committee meeting

- _____ 3. New data (including graphs, tables, and statistical analysis if appropriate) since the last committee meeting

Written reports should be clear, concise, and in proper scientific style. Presentation format should follow that of a seminar. Students should consult their advisor for guidance or questions when developing the report or presentation. Upon completion of the committee meeting, a signed copy of this form **must be submitted to the Department Head to be placed in the students personnel file.**

<u>Committee Member Signatures</u>	<u>Committee Member Printed Name</u>	<u>Comments</u>
_____ (ADVISOR)	_____	_____
_____ (CO-ADVISOR)	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ENTOMOLOGY AND PLANT PATHOLOGY DEPARTMENTAL
Ph.D. PRELIMINARY EXAMINATION RESULTS

To: Department Head, Entomology and Plant Pathology

RE: Preliminary examination administered to:

Student: _____ CWID#: _____

Major: _____ Minor: _____

Major Advisor: _____

Committee Chair: _____

Committee Members and Department: Indicate by signature below if the student passed, or did not pass, their preliminary examination.

Student passed their
preliminary examination

Student did not pass their
preliminary examination

Major Advisor

Major Advisor

Committee Member

Committee Member

Committee Member

Committee Member

Committee Member

Committee Member

Committee Member

Committee Member

Written Preliminary Exam Time and Date: _____

Written Examination Results (Pass / Not Pass): _____

Oral Preliminary Exam Time and Date: _____

Oral Examination Results (Pass / Not Pass): _____

Note: Written exam must be passed before taking the oral exam. Both the written and oral exams must be passed to overall pass the preliminary examination. A dissenting vote by the Major Advisor, a majority of dissenting votes, or an 'even' vote results in a 'not pass'.

FALL 2009-

ENTO 2003	"Insects and Society" (Greenwood)
ENTO 2223	"Insects & Public Health" (Reiskind)
ENTO 3501/5501	"Entomology for Educators" (Andrine, Instructor or Record)
ENTO 3644/5644	"Insect Morphology" (Staff) not offered
ENTO 4800	"Entomology Practicum" (Greenwood)
ENTO 5020	"Special Problems"
ENTO 5513	"Biological Control" (Giles)
ENTO 5700	"Teaching Practicum in Entomology & Plant Pathology" (Greenwood)
ENTO 5733	"Insect Chemical Ecology" (Staff) not offered
ENTO 5850	"Epidemiology of Arthropod-Borne Diseases" not offered
ENTO/PLP 4400	"Special Topics"
ENTO/PLP 5623	"Advanced Biotechnology Methods"(Jiang)
ENTO/PLP 5870	"Scientific Presentations" (Dillwith)
ENTO/PLP 5992	"Career Skills & Professionalism for Scientists" (Fletcher & Hunger)
ENTO 6100	"Adv Insect Physiology" (Jaworski)
PLP 3343/5343	"Principles of Plant Pathology" (Marek & Garzon)
PLP 3553	"Fungi: Myth & More" (Conway)
PLP 5560	Problems in Plant Pathology "Plant Disease Epidemiology" (Melouk)
PLP 5560	Problems in Plant Pathology

SPRING 2010 -

ENTO 2003	"Insects and Society" (Greenwood)
ENTO 2091	"Livestock Entomology" lab (Talley)
ENTO 2991	"Introduction to the Science of Entomology" lab (Greenwood)
ENTO 2992	"Introduction to the Science of Entomology" (Greenwood)
ENTO 3421	"Horticultural Insects" (Mulder)
ENTO 3461	"Insects of Forest Ecosystems" (Rebek)
ENTO/ZOO 4483/5483	"Aquatic Entomology" (Greenwood & Bidwell)
ENTO 4800	"Entomology Practicum" (Greenwood)
ENTO 5020	"Special Problems"
ENTO/PLP 4400	"Special Topics"
ENTO/PLP 5524	"Integrated Management of Insect Pest and Pathogens" (Walker)
ENTO/PLP 5700	"Teaching Practicum in Entomology & Plant pathology" (Greenwood)
ENTO 5753	"Insecticide Toxicology" (Dillwith)
ENTO 5833	"Insect Molecular Biology" (Jiang)
ENTO/PLP 5870	"Scientific Presentations" (Dillwith)
ENTO 6100	"Adv Insect Physiology" (Jaworski)
PLP 5012/13	"Plant Virology" (lab & lecture) (Verchot)
PLP 5560	"Problems in Plant Pathology"
PLP 5724	"Physiology of Host-Pathogen Interactions" (Bender)
PLP 5860	"Colloquium"(Conway)
PLP 6303	"Soilborne Diseases of Plants" (Garzon)

FALL 2010 -

ENTO 2003	"Insects and Society" (Greenwood)
ENTO 2223	"Insects & Public Health" (Reiskind)
ENTO 3501/5501	"Entomology for Educators" (Andrine – Instructor of Record)
ENTO 3644/5644	"Insect Morphology" not offered
ENTO 4223	"Ecological Methodology" (Giles)
ENTO 4464	"Insect Biology & Classification" (Greenwood)
ENTO 4800	"Entomology Practicum" (Greenwood)
ENTO 5003	"Insect Biochemistry" (Dillwith)
ENTO 5020	"Special Problems"
ENTO/PLP 4400	"Special Topics"
ENTO/PLP 5613	"Host Plant Resistance" (Hunger)
ENTO/PLP 5700	"Teaching Practicum in Entomology & Plant Pathology" (Greenwood)
ENTO/PLP 5870	"Scientific Presentations" (Dillwith)
ENTO/PLP 5992	"Career Skills & Professionalism for Scientists" (Fletcher & Hunger)
ENTO 6100	"Adv Insect Physiology" (Jaworski)
PLP 3343/5343	"Principles of Plant Pathology" (Garzon)
PLP 5003	"Plant Nematology" (Walker)
PLP 5104	"Mycology" (Conway)
PLP 5560	Problems in Plant Pathology "Plant Disease Epidemiology" (Melouk)
PLP 5560	Problems in Plant Pathology

SPRING 2011-

ENTO 2003	"Insects and Society" (Greenwood)
ENTO 2091	"Livestock Entomology" lab (Talley)
ENTO 2993	"Introduction to the Science of Entomology" (Greenwood)
ENTO 3021	"Postharvest Insect Pests" (Opit)
ENTO 3044/5044	"Insect Physiology" (Jaworski)
ENTO 3331	"Insect Pests of Agronomic Crops" (Royer)
ENTO/PLP 4400	"Special Topics"
ENTO/PLP 3663	"Turfgrass IPM" (Walker)
ENTO 4800	"Entomology Practicum" (Greenwood)
ENTO 4854	"Medical and Veterinary Entomology" (Reiskind)
ENTO/PLP 4922	"Applications of Biotech. in Arthropod & Pathogen Control" (Dillwith)
ENTO 5020	"Special Problems"
ENTO/PLP 5700	"Teaching Practicum in Entomology & Plant Pathology" (Greenwood)
ENTO/PLP 5870	"Scientific Presentations" (Dillwith)
ENTO 6100	"Adv Insect Physiology" (Jaworski)
PLP 5304	"Phytobacteriology" (Fletcher)
PLP 5560	"Problems in Plant Pathology"

FALL 2011

ENTO 2003	"Insects and Society" (Greenwood)
ENTO 2223	"Insects & Public Health (Reiskind)
ENTO 3501/5501	"Entomology for Educators" (Andrine – Instructor of Record)
ENTO 3644/5644	"Insect Morphology" not offered
ENTO 4800	"Entomology Practicum" (Greenwood)
ENTO 5020	"Special Problems"
ENTO 5513	"Biological Control" (Giles)
ENTO/PLP 5700	"Teaching Practicum in Entomology & Plant Pathology" (Greenwood)
ENTO 5733	"Insect Chemical Ecology" not offered
ENTO 5850	"Epidemiology of Arthropod-Borne Diseases" not offered
ENTO/PLP 4400	"Special Topics"
ENTO/PLP 5623	"Advanced Biotechnology Methods" (Jiang)
ENTO/PLP 5870	"Scientific Presentations" (Dillwith)
ENTO/PLP 5992	"Career Skills & Professionalism for Scientists" (Fletcher)
ENTO 6100	"Adv Insect Physiology" (Jaworski)
PLP 3343/5343	"Principles of Plant Pathology" (Garzon)
PLP 3553	"Fungi: Myth & More" (staff)
PLP 5043	"Principles of Phytopathology" (Garzon)
PLP 5560	Problems in Plant Pathology "Plant Disease Epidemiology" (Melouk)
PLP 5560	Problems in Plant Pathology

SPRING 2012

ENTO 2003	"Insects and Society" (Greenwood)
ENTO 2991	"Introduction to the Science of Entomology" lab (Greenwood)
ENTO 2992	"Introduction to the Science of Entomology" (Greenwood)
ENTO 2091	"Livestock Entomology" lab (Talley)
ENTO 3331	"Insects of Agronomic Crops" (Royer)
ENTO 3421	"Horticultural Insects" (Mulder)
ENTO 3461	"Insects of Forest Ecosystems" (Rebek)
ENTO/ZOO 4483/5483	"Aquatic Entomology" (Greenwood & Bidwell)
ENTO 4800	"Entomology Practicum" (Greenwood)
ENTO 5020	"Special Problems"
ENTO/PLP 4400	"Special Topics"
ENTO/PLP 5524	"Integrated Management of Insect Pest and Pathogens" (Giles & Walker)
ENTO 5753	"Insecticide Toxicology" (Dillwith)
ENTO 5833	"Insect Molecular Biology" (Jiang)
ENTO/PLP 5870	"Scientific Presentations" (Dillwith)
ENTO 6100	"Adv Insect Physiology" (Jaworski)
PLP 5012/13	"Plant Virology" (lab & lecture) (Verchot)
PLP 5304	"Phytobacteriology" (Fletcher)
PLP 5560	"Problems in Plant Pathology"
PLP 5724	"Physiology of Host-Pathogen Interactions" (Bender)
PLP 6303	"Soilborne Diseases of Plants" (Garzon)

Common Plan of Study Problems

- Not submitting a Plan of Study before the due date necessitating a hold on the student's future enrollment:
- Master's Plan of Study must be received in the Graduate College prior to the start of the pre-enrollment period during the semester the student completes the 17th credit hour.
- Doctoral Plan of Study must be received in the Graduate College prior to the start of the pre-enrollment period during the semester the student completes the 28th credit hour.
- Using obsolete versions of all forms (Plan of Study, committee change request, graduation clearance form, admission to doctoral candidacy form); website should always have the most current versions of forms listed, as well as the reception area of the Graduate College for handouts of forms
- Course prefix and/or number as written on the plan does not correspond to the transcript (of vital importance at Graduation time when the Registrar performs degree checks on students)
- Listing a faculty member who is not a member of the Graduate Faculty; please use Graduate Faculty database to check status of all faculty members before completing the plan
- Using the Plan of Study to change committee members; use only the Committee Change Request form available at the website or as a handout at the reception area of the Graduate College
- Not completing all sections of the plan (especially the University Research Compliance section – all students must check the box regardless of the option they are pursuing)
- Not obtaining all signatures before submitting plan to the Graduate College for approval (must have student, all committee members, and Department Head/Graduate Coordinator approval)
- Adding additional research hours to a revised plan (5000 for master's, 6000 for doctoral) just because student needs to enroll in additional hours to maintain student status; just list the minimum hours needed to earn degree
- Submitting a Plan of Study with Graduation Clearance form if the plan has NOT changed (please only submit a revised plan if needed)

Top Five Reasons Students Fail to Graduate

1. Lack of Graduation Clearance Form
Graduation Clearance Form must be submitted to the Graduate College before a student can apply for the diploma with the Registrar's Office.
2. Lack of Diploma Application
Students must file the Diploma Application.
3. Plan of Study Problems
Courses on the transcript don't match those on the Plan of Study.
4. Grades not changed
"R" grades for creative component courses and Incomplete grades not properly changed.
5. Program/Department doesn't inform Graduate College of students who complete degree requirements.

MASTER'S DEGREE PROGRAM
M.S., Entomology & Plant Pathology

Basic requirements to be completed by ALL students:

Core requirements: 9 credit hours + 6 hours of Research

ENTO/PLP 5870	2 hours, Scientific Presentations
ENTO/PLP 5623	3 hours, Advanced Biotechnology Methods
ENTO/PLP 5524	4 hours, Integrated Management of Insect Pests and Pathogens
ENTO/ PLP 5000	6 hours, Master's Research & Thesis

Discipline requirements: 15 credit hours

Entomology: 15 credit hours

Core – select at least 2 courses from following.

ENTO 4464	Insect Biology and Classification
ENTO 5003	Insect Biochemistry
ENTO 5043	Insect Physiology

Plus additional courses to complete Plan of Study

Plant Pathology: 15 credit hours

PLP 5043 3 hours, required if student has NOT had Introductory course

Core – select at least 2 courses from following.

PLP 5003	Plant Nematology
PLP 5012/5013	Plant Virology
PLP 5104	Mycology
PLP 5304	Phytobacteriology

Plus additional courses to complete Plan of Study

DOCTOR of PHILOSOPHY DEGREE PROGRAMS

Ph.D., Entomology

Required courses:

ENTO 4464	Insect Biology and Classification
ENTO 5003	Insect Biochemistry
ENTO 5043/5044	Insect Physiology
ENTO 5870	Scientific Presentations (2 semesters)
ENTO 5992	Career Skills and Professionalism (recommended)

Ph.D., Plant Pathology

Required courses:

Introductory – one is required if not previously taken.

PLP 3043	Introductory Plant Pathology (no graduate credit)
PLP 5043	Principles of Phytopathology

Pathogens courses:

PLP 5104	Mycology
PLP 5724	Host-Pathogen Physiology

Additional Pathogen courses – 2 required:

PLP 5003	Plant Nematology
PLP 5012/5013	Plant Virology w/ lab
PLP 5304	Phytobacteriology

Concepts courses – 2 required (at least one with *):

PLP 5523*	Integrated Management of Insect Pests and Pathogens
PLP 5613*	Host Plant Resistance
PLP 6303	Soilborne Diseases of Plants

Professionalism:

PLP 5992	Career Skills & Professionalism (recommended)
PLP 5870	Scientific Presentations (2 semesters)

APPENDIX B

Admission Contacts

There are people to help you with your application and degree program.

Graduate Program Coordinator:
Dr. Brad Kard
311E Noble Research Center
brad.kard@okstate.edu

Unit Assistant
Ms. Gerry Smith
127 Noble Research Center
gerry.smith@okstate.edu

Department Head:
Dr. Phil Mulder
127 Noble Research Center
phil.mulder@okstate.edu

Application Deadlines

- The deadline for all international student applications (completed application submitted to the Department of Entomology and Plant Pathology and Graduate College application) is March 1 for enrollment in the Fall semester and August 1 for enrollment in the Spring semester.
- Deadline for domestic student applications (completed application submitted to the Department of Entomology and Plant Pathology and Graduate College application) is 60 days before the start of the semester which is around June 15 for enrollment in the Fall semester and November 15 for enrollment in the Spring semester.

Degree Offerings

The Master of Science degree program allows students to gain greater knowledge in one of two areas (entomology or plant pathology). Students will learn how to conduct in-depth research and effectively communicate those findings both in verbally and in scientific writing. Students should consider the Master's program to not only be an academic endeavor but also a professional occupation. We offer a Master of Science in Entomology and Plant Pathology with an emphasis in Entomology or Plant Pathology.

The Department offers two Doctorate degrees. These terminal degree programs are designed to expand upon the Master of Science experience and train students to be future independent investigators. We offer the Doctorate of Philosophy in Entomology or the Doctorate of Philosophy in Plant Pathology.

Departmental Admission Requirements

The Graduate College requires that to be eligible for admission to either Master of Science or Doctor of Philosophy degree programs at Oklahoma State University, qualified graduates of Colleges and Universities **must** submit:

- A completed application form (we recommend you do this electronically) with an application fee. Mail a non-refundable Application Fee of \$40.00 (domestic) or \$75.00 (international). Your application cannot be processed without the application fee and the Department cannot waive the fee or pay the fee for you. International students, once accepted, are eligible for the International graduate student admission scholarship and will receive \$100. The application is found at http://gradcollege.okstate.edu/download/pdf/International_Scholarship.pdf. International students should also see http://gradcollege.okstate.edu/download/pdf/pros_int_info.pdf for more information about graduate study at OSU.

- Two copies of official transcripts, from all institutions previously attended, that show the complete scholastic record, bear the official seal of the institution, and are signed by the issuing officer.
- A minimum score of 79 (internet based test), 213 (computer based test) or 550 (paper based test) on the Test of English as a Foreign Language (TOEFL) for international applicants.
- A 3.00 Grade Point Average (GPA) or above from the previous degree, or the equivalent for consideration of admittance without condition

The Department of Entomology and Plant Pathology has the following additional admission requirements:

- An official copy of the Graduate Record Examination (GRE) score will assist the Department in making a determination as to acceptance to the program and funding of an assistantship. The GRE institution code for OSU is **6546**. The Department recognizes a combined score of 1500 for exams taken before Oct – 2002 and a score of 1000 (verbal and quantitative) and 4.0 (analytical writing) for exams taken after Oct – 2002 for consideration of admittance without condition.
- Three letters of recommendation from faculty members familiar with your academic and/or professional background.
- A letter of intent from the student outlining research interests and professional goals.
- A resume from Ph.D. applicants who have completed a M.S. is also required.

Oklahoma State University requires that all international students submit a Confirmation of Financial Resources/Statement of Applicant and Sponsor that guarantees that the applicant has support from either him/herself or a sponsor in the amount of \$19,830.00 **for each year** of study before his/her application can be processed (additional funds are required if you wish to bring family members with you). In some instances, a specific professor in your selected area of interest may provide financial support for an international student, **but such support is not guaranteed**.

The Graduate Student Admissions Committee will make a final decision on all admissions. Only under exceptional circumstances will a student be provisionally admitted to the Graduate Program.

Requirements for International Graduate Students

International Students are required to do the following:

- A TOEFL or IELTS score:
Applicants for whom English is a second language are required to demonstrate an acceptable level of spoken English, usually by submitting a TOEFL or IELTS score. A TOEFL score of 79 (internet based test), 213 (computer based test) or 550 (paper based test) or above is required regardless of the number of semesters or terms completed in other institutions of higher education, including OSU, or prior enrollment in English language programs. Alternatively, an official IELTS, academic stream, examination with a minimum overall band score of 6.5 will satisfy the English proficiency requirements for admission to a graduate program. Either examination must have been taken within the last two years.
- Note that an applicant who has or will have completed a degree from a school for which the primary language of instruction is English in a country where English is a primary language is not required to submit a TOEFL or IELTS score.
- Information about the TOEFL is available at <http://www.TOEFL.org>. Information about the IELTS can be found on the IELTS web site at <http://www.ielts.org/>. The TOEFL institution code for OSU is **6546**.

The TELP Test

At Oklahoma State University, we want to ensure that all students succeed in their studies and perform at the highest academic level. The OSU faculty is concerned about the writing abilities of all graduate students, and in particular, students whose first language may not have been English. To ensure that graduate students are sufficiently skilled

at written English, the Test of English Language Proficiency (TELP) is required for all graduate students before their first semester enrollment. However, a waiver of the TELP requirement can be granted to a student who:

1. has achieved a TOEFL score of 250 in the computer based test or 600 in the paper based test or higher, and a score of 5.0 or higher on the Test of Written English (TWE) or Essay. Alternatively, a waiver can be granted to a student who achieved an IELTS, academic stream, overall band score of 6.5 or higher, and 6.5 or higher on each of the band scores for Listening, Reading, and Writing, or
2. has completed two full-time semesters of study in an accredited college or university at which English is the primary language of instruction, or
3. has graduated with a degree from an accredited institution of higher learning, at which English is the primary language of instruction.

Students completing the Internet-based TOEFL test (iBT) are considered separately and are not required to take the TELP. Student's who score at least 42 on the combined Reading and Listening portions, with a score of at least 20 in each section, are not required to enroll in any remedial coursework. Students who score less than this on the Reading and Listening portions of the TOEFL (irrespective of the score on the Written portion) are required to enroll in ENGL 0003 during their first semester. ENGL 0003 carries a grade of S/U and may not be used toward minimum degree requirements. Students must enroll in ENGL 0003 each semester until a grade of S is earned. Students who score at or above the minimum score(s) on the Reading and Listening portion of the TOEFL, but less than 22 on the Writing portion, are required to enroll in ENGL 4893* at some point in their studies. ENGL 4893* carries graduate credit and may be used toward minimum degree requirements; a grade of C or better in this course is required. Both ENGL 0003 and ENGL 4893*, as applicable, must be listed on the student's Plan of Study.

For those required to take the TELP, it is a test of written English and assesses the academic English skills necessary for students to function well in graduate-level university classes. The test has two sections: Listening/Dictation and Reading/Writing. A score of 70 on both portions of the TELP is considered passing. Students who score less than 70 on the Listening/Dictation portion of the TELP (irrespective of the score on the writing portion) are required to enroll in ENGL 0003 during their first semester. ENGL 0003 carries a grade of satisfactory/unsatisfactory and may not be used toward minimum degree requirements. Students must enroll in ENGL 0003 each semester until a grade of satisfactory is earned.

Students who score at least 70 on the Listening/Dictation portion of the TELP, but less than 70 on the Writing portion are required to enroll in ENGL 4893* at some point in their studies. ENGL 4893* carries graduate credit and may be used toward minimum degree requirements; a grade of C or better in this course is required. Both ENGL 0003 and ENGL 4893*, as applicable, must be listed on the student's Plan of Study.

Spoken English Proficiency for Employment

OSU policy and laws of the State of Oklahoma requires all persons for whom English is a second language to demonstrate an acceptable level of spoken English before being employed in an instructionally related capacity. Employment requires demonstrated proficiency on the Test of Spoken English (TSE) or by taking from OSU the institutional version, SPEAK (Spoken English Assessment Kit). International students who have been offered a teaching assistantship must take one of these tests. The test score is used as a condition of employment and is not a condition for admission to the Graduate College. Other spoken English examinations are not acceptable as substitutes for the TSE or OSU administered SPEAK. The TSE test may be taken on campus or at any of the many testing sites provided by the Educational Testing Service. Results must be received prior to the beginning of the school semester in which the student will be teaching. SPEAK Tests are given the Monday and Tuesday before the Fall and Spring semesters begin and only in Stillwater. The purpose of the SPEAK Test is to determine the spoken language proficiency of speakers of English as a Second Language (ESL). The test is administered in a language laboratory and takes about half an hour. It is divided into seven sections, each of which is evaluated for two or more of the following categories: pronunciation, grammar, fluency, and comprehensibility. Further information about the OSU SPEAK can be found at this web address: <http://english.okstate.edu/ita/>

International Teaching Assistant Program

Any new international teaching assistant (ITA) is required to participate in the international teaching assistant orientation and evaluation workshop. New ITA's must attend the three sessions of the Orientation (whether they have taught in a classroom somewhere else or not). Then, those ITA's who pass SPEAK and the ITA Test will be eligible to teach in the classroom. The ITA Test is a 10-minute evaluation procedure in which the ITA presents 5 minutes of information for an undergraduate lab, recitation, or lecture. Each ITA Test (the 5-minute mini-lesson plus the q/a period) will be evaluated by two faculty members from the English Department, a faculty member from the ITA's department, and a small group of undergraduate students.

International graduate students who wish to take the ITA Test should:

- 1 have a passing score of at least 220 on the SPEAK, or 50 on TSE
- 2 prepare a 5-minute presentation on a topic that they might be asked to teach, i.e. a topic appropriate for an undergraduate course in their field,
- 3 be prepared to respond to questions in a five minute question/answer period following the presentation.

The ITA program is offered at the beginning of the fall and spring semesters. The program is currently only offered in Stillwater and is given from 3:00- 5:30 in room 313 Classroom Building on Tuesday, Wednesday, and Thursday the week prior to school starting. Students must attend all three sessions.

Further information about the ITA can be found at this web address: <http://english.okstate.edu/ita/>

- International teaching assistants must participate in the international teaching assistant orientation and evaluation workshop offered at the beginning of fall and spring semesters. Students must receive an evaluation of Pass or Provisional Pass prior to teaching in the classroom.
- **All international students must obtain a work clearance BEFORE the payroll process can be completed. It is the international student's responsibility to see that his/her work clearance is renewed before it expires to avoid loss of pay. This can be done at International Students and Scholars Department.**

Prior to your first day of employment, all international students must complete Section One of the Employment Eligibility Form (I-9) and provide Departmental personnel with original documents pertaining to their identity and eligibility to work within the United States. Students will be required to submit weekly status reports of their application process and will be expected to provide their social security number as soon as they have been issued one. University policy requires that all non-citizens of the United States hold appropriate visas in order to be employed as graduate assistants. If the student is not a US citizen or Permanent Resident card holder, they must appear in the Office of International Students and Scholars in 076 Student Union prior to starting work as an assistant in order to obtain an on-campus work permit. Students must also complete form I-9 (see <http://www.uscis.gov/files/form/i-9.pdf> for complete details).

Transfer Students

Academic course credit may be transferred from another institution. The Advisory Committee will determine which, if any, courses can be applied toward the Master's or doctoral degree programs at OSU. Graduate credits can only be transferred to the Graduate College if the student was formally admitted to the Graduate College at another accredited institution and the courses were certified as graduate credit by that institution. The work must be recommended by the advisor as a part of an approved Plan of Study. The acceptance of transferred work is approved by the Dean of the Graduate College at the time a program of study is submitted.

Transfer of Credit Hours

- Master's and Ed.S. students may transfer a maximum of 9 hours from another University or special student status at OSU.
- Doctoral students must complete at least 30 hours at OSU if they have already completed a master's degree

or at least 60 hours at OSU if they are in a 90-hour doctoral program.

- Students enrolled through the *Research and Graduate Education Center (REGC)* in Tulsa may transfer up to 15 hours from a comparable RGEC program offered by the University of Oklahoma.

Entrance Requirements for Graduate Programs

The following courses should have been taken prior to acceptance into graduate programs in the Department of Entomology and Plant Pathology. A student may be admitted with deficiencies in these areas, but should take the courses and depending on the course may not receive credit toward their degree requirements. The courses required will be based on recommendation of their Advisory Committee.

For the M.S. Entomology Option:

Introduction to the Science of Entomology, ENTO 2992 + ENTO 2991 or equivalent*

For the M.S. Plant Pathology Option:

Introductory Plant Pathology (such as PLP 3343) or PLP 5043*

The following courses are suggested for those students who are interested in graduate study in entomology or plant pathology.

1. Chemistry with lab (*three semesters, including at least one semester of Organic Chemistry*)
2. Introductory Biological Science with Lab (e.g., *Principles of Biology, Plant Biology, Microbiology, Zoology*)
3. Physiology with Lab
4. An Anatomy OR Taxonomy course
5. Genetics
6. Statistics and College Calculus
7. Physics

** The prerogative of the student's Graduate Committee to waive specific curriculum requirements for good cause does not apply to Introductory Plant Pathology or Introduction to the Science of Entomology. If this course has not been taken prior to admission, it must be taken during the student's graduate program at OSU.*

For the Ph.D. Program

A Master's degree with a research thesis is required. The entrance requirements listed above also pertain to the Ph.D. programs. In addition, the courses below are recommended for admission, subject to the same make-up policy, as those required for the M.S.

1. Biochemistry
2. Ecology
3. Genetics
4. Statistics and/or Experimental design

Graduate College Time Limits

- All requirements must be completed within the following periods calculated from initial enrollment in the program:

<i>Master's Candidates</i>	<i>7 years</i>
<i>Doctoral Candidates</i>	<i>9 years</i>
- No course on the Plan of Study may be more than 10 years old at the time of graduation.
- Students must follow deadlines for submission of theses/dissertations and for completing final examinations as listed in the OSU catalog. The thesis/dissertation instructions are found on-line at:
<http://www.gradcollege.okstate.edu/download> .

Financial Support

Graduate Assistantships

Students will be performing research duties as a Graduate Assistant under the direction of a major advisor for at least twenty (20) hours per week. The Graduate Assistantship appointment may be renewed subject to satisfactory progress toward a student's degree, satisfactory performance of assigned duties, and availability of sufficient funds. Financial support is provided by their advisor, the Department or other agency and students should view the Graduate Assistantship as a semi-professional position and are accountable for their performance. The purposes of assistantships are to support programs of instruction, research, and extension in the Department of Entomology and Plant Pathology and to provide employment opportunities that contribute to the professional development of graduate students. Available assistantships include:

- Graduate Assistants: M.S. students
- Graduate Associates: Ph.D. students

Appointments are usually half-time (0.50 FTE) and graduate assistants/associates work twenty (20) hours per week. Time allocations may vary by assignment. Graduate assistants/associates are appointed for teaching, research, extension, or administration and are expected to carry out their responsibilities in a professional manner. In addition to course and/or laboratory preparation and teaching/supervising, other responsibilities may include: grading papers, conferring with students, and regular conferences with the faculty in charge of the courses and laboratories. The nature of a half-time research appointment varies with the type and stage of development of the research project. The work assignment and schedule of the graduate assistant/associate will be subject to the approval of the faculty member(s) in charge and the Department Head. The graduate assistant/associate will be informed by the Department Head as to the starting and ending dates of the appointment for the semester. Graduate assistants are expected to enroll in a minimum of six (6) credits per fall/spring semester and a minimum of three (3) credits per summer semester. Those on half-time appointments may enroll in no more than ten (10) credits per semester. Graduate assistants enrolled in a full time classification (6 hours/semester) receive a waiver of out-of-state tuition. If for any reason the assistantship is terminated, the out-of-state tuition will be reinstated. Stipends earned as graduate assistants/associates in DASNR are considered to be earned income and are not eligible for tax exempt status.

Enrollment Requirements

- Graduate students must complete a minimum of 6 credit hours in a 12-month period to be continuously enrolled.
- Failure to maintain continuous enrollment may require reapplication and admission to the program.
- Graduate students must be enrolled in at least two hours during any semester in which they are utilizing University resources including the semester in which they graduate.
- Graduate Assistants must meet minimum enrollment requirements of 6 hours in fall and spring semesters and 3 credit hours in the summer. **If employed 0.50 FTE (20 hours/week) or greater, students enrolled in 6 hours in the fall and spring or 3 hours in the summer are considered full-time. If employed less than 0.50 FTE, the student must enroll in 9 credit hours in fall and spring semesters or in 3 in the summer semester to be considered full-time.**
- All students (including those enrolling in research hours only) must be enrolled by the deadlines listed in the Class Schedule.

Tuition waiver for GRA/GTA

As a GRA or GTA, the University will pay for six hours of tuition for eligible courses each Fall and Spring semester you are enrolled in accordance with the requirements of your assistantship. Your employment as a GRA continues through the summer term and you are to be enrolled for at least three hours during this term. To receive this tuition benefit, and for a definition of "eligible courses," you must complete the "Tuition Waiver Agreement" (available in the Department Office) and submit a signed copy to the OSU Graduate College (202 Whitehurst Hall) as early as possible after you arrive at OSU, and each semester of your employment thereafter.

Non-Resident Tuition Waivers

Graduate students (both domestic and international) who are not residents of Oklahoma are eligible for waiver of their non-resident tuition if they are employed as graduate research or teaching assistants and meet the following requirements:

- Graduate students must be employed as a monthly employee and their employment action (EA) forms must show one of the following codes: 1713, 1714, 1749, 1750, 1960 and 1990.
- Students must be employed at least 0.25 FTE (¼ time) from the first day of class to the last day of final exams.
- Students must be enrolled full-time (i.e. six credit hours in the spring and the fall, and three credit hours in the summer). International students must be enrolled in nine credit hours (if employed 0.25 FTE) or six credit hours (if employed 0.5 FTE).
- Students must be enrolled using their student identification number.
- Students granted tuition waivers for the spring will be eligible to have non-resident tuition waived for the summer session.
- Please note that spouses of GA's are also exempt from out-of-state tuition charges.
- To receive the tuition benefit, and for a definition of "eligible courses," all students must complete the "Tuition Waiver Agreement" (available in the Department Office) and submit a signed copy to the OSU Graduate College (202 Whitehurst Hall) as early as possible, and each semester of employment thereafter.

Graduate Student Health Insurance

Graduate students who hold at least a 0.25 FTE graduate assistantship appointment are eligible for enrollment in a university-sponsored health insurance program. For more information, visit the OSU Graduate College internet site www.gradcollege.okstate.edu/download. Students who receive health insurance during the spring semester do not need to maintain enrollment during the summer. Insurance coverage will be extended until the beginning of fall semester in August.

- The single-person health insurance premium is paid on the student's behalf. This benefit adds \$890 to the value of your financial package. If your plans do not include enrolling in the program, then inform the Department as soon as possible. Students should also review the statement from the Council of Graduate Schools <http://www.cgsnet.org/portals/0/pdf/CGSResolutionJune2005.pdf> concerning conditions associated with the acceptance of graduate assistantships.

Academic Standing

A grade-point average (GPA) of "B" (3.0) is required to maintain good standing as a graduate student and more importantly, to meet the requirements for a graduate degree. Students receiving a grade lower than a "B" in a graduate course will be sent a letter of warning from the Graduate College. The student's Advisory Committee will meet to determine if the course should be taken again to obtain a higher grade. *(If a student's GPA drops below a 3.0, the student will be placed on Strict Academic Probation and will be required to earn at least a "B" in each course during the next semester of full-time enrollment).* Failure to do so will result in academic suspension. The probationary status will not be removed until the GPA is raised above 3.0. ***Students that are either admitted or placed on Strict Academic Probation because of low grades are not eligible for Departmental funded Graduate Research or Teaching Assistantships until the probationary status is removed. If a student on an assistantship is placed on academic probation, he/she will be allowed one semester to remove their probationary status; after this period the stipend will be withheld until the probationary status is removed.*** Please note that a student must have a "B" grade average in all courses on the Plan of Study, and also a "B" grade average in thesis, report, or courses designated as the creative component. After a student has completed a course, it cannot be dropped from the Plan of Study because of a low grade unless the change is first approved by the student's major advisor, the Department Head, and then by the dean of the Graduate College. Failure to maintain

adequate progress toward completion of the graduate degree (as determined by the Advisory Committee) is grounds for dismissal.

Any significant breach of scientific ethics (e.g. falsifying data or plagiarism) by the student may result in immediate dismissal of the student following due process (as defined by university regulations).

Please note that any course taken under the Pass-No Pass grading system ("P" or "NP") is acceptable on a Plan of Study only under very unusual circumstances and is generally deemed not acceptable.

For incomplete course work, a default grade of "I" will be assigned. This default grade will be the grade given the student should they not finish any incomplete work prior to one year from the assignment of the "I" grade.

Health Insurance/ Student Health Clinic

The Student Health Clinic is located at 1202 W. Farm Road, just west of the Noble Research Center. There is a walk-in clinic with physicians, physician assistants, and nurses on staff. Women's gynecological services, immunizations, allergy injections, laboratory, radiology, and counseling services are all available on site at the clinic. Office visits are low cost, approximately \$12.00 per visit, with additional costs for other services. The clinic is open from 8:00 am to 5:00 pm Monday through Friday. For more specific information about services go to:

<http://www.okstate.edu/UHS/>.

Other health service options include the Emergency Room at Stillwater Health Center (Stillwater's full service hospital), Warren Clinic, Family Health Centers, Stillwater Women's Clinic, the Department for Human Services, and numerous private physicians. Additional health insurance is available to spouses and children through University Health Services <https://www.academichealthplans.com/okstate/Default.asp>. This coverage is strongly advised if you are not covered by any other health insurance plan. An alternative might be private insurance through Blue Cross/Blue Shield which is available through local insurance brokers.

Campus Map

See: http://www.parking.okstate.edu/images/maps/AC_ParkingMap072709.pdf for a map of campus

Parking Permits

Parking permits may be purchased to park in student, commuter, or overflow lots which are usually located on campus, but approximately ½ mile from Noble Research Center. These permits cost \$54.00 per year and are prorated. Go to: <http://www.parking.okstate.edu/> to apply for a permit.

Housing

There are many options for graduate student housing in Stillwater. Many students rent or share apartments in nearby complexes. Others rent or buy houses in Stillwater neighborhoods. A popular choice for students is rental of a university apartment, for which several neighborhoods are located on campus and within walking distance of Noble Research Center. University apartments are usually furnished and include utilities in the rental fee. A roommate finding service is available to match students who wish to share an apartment. For more information go to:

<http://www.reslife.okstate.edu/housing/families.php?nav=3>

International Students and Scholars (ISS)

ISS office is located in the basement of the Student Union, Room No. 076. It is staffed by friendly people who are there to assist international students and scholars with a variety of issues:

- Pre-arrival forms and applications
- Help with transportation to Stillwater

- "Settling In" assistance after arriving in Stillwater
- Advising on university policies, immigration regulations, and financial matters
- Process immigration forms
- Issue work clearances
- Facilitate cultural connections between Departments, Student Organizations, and Community Organizations

For many international students, a visit to ISS is one of the first priorities after arriving at OSU. Website:

<http://union.okstate.edu/iss/index.htm>

Community and Transit Bus Service

A Stillwater-wide bus service (The Bus) is available to assist students who live off campus or must park in overflow parking lots. There are several bus lines which travel to many areas of the city of Stillwater, including both WalMart locations and downtown. OSU students with an ID ride free. The general public is charged \$.50 per one way fare. The Bus operates from 6:30 am to 7:00 pm Monday through Friday. No service on the weekends. For more information about The Bus go to: <http://www.parking.okstate.edu/TheBus.htm>

Getting to Stillwater

Many students drive to Stillwater using personal vehicles, but international students often arrive from one of two nearby airports: Tulsa International Airport or Will Rogers International Airport in Oklahoma City. If arriving in Oklahoma City or Tulsa, you should make arrangements with your faculty advisor to be picked up and driven to Stillwater. If this is not possible, there is a shuttle service to and from both airports. Air Express operates out of Will Rogers World Airport. Cost is \$112.00 from the airport to the OSU campus. To get to the Tulsa airport it is possible to ride the OSU-Tulsa transit bus then take a taxi to the airport.

Temporary Housing after Arrival

Most students have already made arrangements for housing before they arrive, but if temporary housing is needed, it is possible to arrange a temporary stay in one of the dormitories. Contact University Residence Halls at <http://www.reslife.okstate.edu/overnight/>

About Stillwater

Stillwater is a small-sized city of approximately 50,000 people located 70 miles east of Tulsa and 65 miles north of Oklahoma City. Its relative small size lends itself to easy movement around town. There are several restaurants featuring many types of cuisine, including barbecue, Mexican, Thai, Chinese, Japanese, American style delis and family dining, and popular student hangouts. Shopping is easily accomplished, but if it cannot be found in Stillwater, it is an easy drive to one of the two metropolitan areas, Tulsa or Oklahoma City, to obtain what is needed. There is one large movie cinema and a nearby lake recreational area. Stillwater is an easy and friendly community to live in, with good schools, safe neighborhoods, and accessible campus. For more information about the Stillwater community, visit <http://www.stillwaterchamber.org/>

APPENDIX C

ALTERNATE GRADUATE DEGREE PROGRAMS

The primary goal of the Department of Entomology and Plant Pathology Graduate Programs is to offer M.S.- and Ph.D.-level research degrees. Requirements for these degrees are discussed earlier in this Handbook. However, under exceptional and rare circumstances the Department will also consider allowing the following alternative degree programs:

Direct B.S.-to-Ph.D. Program (Entomology or Plant Pathology Option)

Students who are interested in this program and hold a B.S. degree must first enter a research thesis M.S. degree program. After completing at least two semesters of graduate study, and with the approval of their Major Professor and Advisory Committee, the student may submit a request to the Department Head to enter a direct B.S.-to-Ph.D. program. Graduate students desiring to convert to the direct B.S.-to-Ph.D. program are required to take a 'Direct Degree Assessment Departmental Qualifying Examination.' This examination consists of two components: 1). a closed book, written question component with answers submitted to and graded by all Committee members plus Departmental faculty from whom the student has taken courses and, 2). an oral component with the same Committee members and appropriate Departmental faculty participating. The examination will encompass previous course work and research.

This qualifying examination provides an overall evaluation of the student's potential for immediately pursuing Ph.D.-level work. Deliberation of exam performance and voting to 'pass' or 'not pass' the candidate includes all faculty who participated in the exam. Upon passing, the student will bypass the M.S. program and advance directly into the Ph.D. program. Any additional Committee members required to complete the student's Ph.D. Advisory Committee are added at that time. The Graduate College is also provided a revised Plan of Study. If the student does not pass the qualifying examination there is no penalty or negative connotation, and the student remains in his or her M.S. program.

Although M.S. thesis research is circumvented by entering into this direct program, all course requirements for the M.S. degree must be completed in addition to Ph.D. requirements during accomplishment of the direct B.S.-to-Ph.D. plan-of-study designated in this program.

Summary of Provisions:

1. During the first year of graduate enrollment in the Department, the decision to seek approval for a direct degree program is jointly made by the student and his/her Major Professor and Advisory Committee.
2. The student must have maintained a minimum 3.00 GPA in courses taken during his/her graduate enrollment in the Department, with no more than one 'C' earned during their graduate course work.
3. The student must submit a Research Proposal that provides a review of relevant literature, and that clearly outlines the research studies that will be completed for the Ph.D. Degree. The student's Graduate Advisory Committee must approve this Proposal. The finalized Proposal is expected to be completed and approved within the first two regular semesters of entering the Ph.D. program.
4. The student must complete a 'Direct Degree Assessment Departmental Qualifying Examination' that encompasses both written and oral components. This examination is administered by members of the student's Graduate Advisory Committee and by other Departmental faculty who have instructed in courses taken by the student during his/her first year of graduate enrollment at Oklahoma State University.

5. The final decision for approval of a student for the direct B.S.-to-Ph.D. program is made by the Department Head in consultation with the student's Graduate Advisory Committee. Criteria for approval include review of the academic record and the completed Ph.D. Research Protocol, and results of the Qualifying Examination.
6. Upon approval, completed 5000-level research hours must be upgraded to 6000 level.
7. Although funding for Departmental assistantships may be made available to students enrolled in direct degree programs, the Department cannot guarantee funding for the normal five-year duration of this degree program.
8. Should a student be accepted into the direct B.S.-to-Ph.D. program but not complete the Ph.D. Degree, the student may be awarded an M.S. Degree after completing all M.S. requirements.

Course Requirements for Completion of a Direct B.S.-to-Ph.D. Plan-of-Study

Course requirements for students completing this direct program include the following within the minimum 90 credit hours for the degree:

1. All students (both Entomology and Plant Pathology) must complete both
ENTO/PLP 5623- Advanced Biotechnology Methods, and
ENTO/PLP 5524- Integrated Pest Management
2. All students must complete 4 credit hours ENTO/PLP 5870 – Scientific Presentations
3. The Plan-of-Study may include **no more than 42** credit hours of ENTO 6000 or
PLP 6000 (All research credit hours are 6000 level)
4. In addition to the requirements stated above, Entomology students are required to complete the following courses:
 - ENTO 4464 – Insect Biology and Classification
 - ENTO 5003 - Insect Biochemistry
 - ENTO 5044 - Insect Physiology
 - ENTO 5644 - Insect Morphology
5. In addition to the requirements stated above, **Plant Pathology** students are required to complete the following courses:
 - PLP 5043 - Principles of Phytopathology (students w/out Introductory
Plant Pathology)
 - PLP 5724 - Host-Pathogen Physiology
 - PLP 5104 – Mycology

 - Pathogen Courses (must take 2)
PLP 5004 - Plant Nematology
PLP 5012 - Plant Virology (with laboratory)
PLP 5304 – Phytobacteriology

 - Concepts Courses (must take both)
ENTO/PLP 5613 - Host Plant Resistance
PLP 6303 - Soil-borne Diseases of Plants

Dual M.S. Degree

The Graduate Faculty Council has established a policy for students to pursue dual M.S. degrees. Students may use up to nine (9) overlapping credit hours on two different Master's plans of study. These overlapping hours cannot include the research component of either degree program.

Master's Degree Non-Thesis (Three Programs)

The programs listed below are not research-oriented and are considered terminal degrees. Students electing these programs are not expected to pursue a Ph.D. degree.

Plan I: REPORT POS (M.S.- Entomology or Plant Pathology Option)

Thirty-two (32) credit hours and a Research Report are required. The student must complete all course work listed under the standard Entomology or Plant Pathology M.S. POS, plus complete an additional two hours of course work in place of a thesis. Under the guidelines of Plan I, the student is required to prepare a report as described in the Graduate College Style Manual (available at the Graduate College), and to submit their report to all members of his/her Advisory Committee for approval. A draft copy of the report must be filed with the Graduate College. Passing a final examination is also required to complete this program.

Plan II: CREATIVE COMPONENT POS (M.S.- Entomology or Plant Pathology Option)

Thirty-two (32) credit hours that include a Creative Component (in place of a report) are required. The Creative Component may be a special report, annotated bibliography, research project, or other creative activity agreed upon by the student and their Advisory Committee. If the student's committee initiates Plan II, the Major Advisor will notify the Dean of the Graduate College when the student has satisfactorily completed all Departmental requirements. It is at the discretion of the Department and the Advisory Committee whether to require a final oral and/or written exam. The student will be notified at least 90-days prior to such an exam(s). Forms for arranging an exam can be obtained from the Graduate College. Note: ENT0 5000/PLP 5000 credit hours cannot be used in this POS.

MASTER of AGRICULTURE POS (M.Ag.- Entomology or Plant Pathology Option)

A non-thesis POS leading to a Master of Agriculture degree is intended for students who desire a broader program with emphasis in non-research areas. The M.Ag. Degree program requires a total of thirty-seven (37) credit hours, twelve of which must be 5000 level or above and include a two-credit-hour report.