

Herbert College of Agriculture The University of Tennessee, Knoxville

EPP Graduate Student Handbook



Photo by Teneria Parker Orange

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Welcome

Welcome to the Department of Entomology and Plant Pathology (EPP) at the University of Tennessee (UTK). We are pleased that you have chosen our department for your graduate studies. By taking this important step, you are on your way to becoming a professional in Entomology, Plant Pathology, and/or Bioinformatics. Graduate studies are very different from undergraduate programs. In graduate school, working with the guidance of your major advisor, you are expected to take responsibility for your plan of study and fulfill departmental and university requirements that are relevant to your program. You are also expected to display high standards of personal and professional integrity, and to satisfy all compliance regulations governing your work and study at the University. Ideally, a successful graduate student establishes a life-long partnership with their major advisor and with the department. We want to assure you that you will receive the necessary guidance and support from your major advisor, other faculty, staff, and other students to help you in furthering your educational and career goals.

This document contains policy statements, procedures, requirements, and institutional philosophy that are consistent with the UTK Graduate Catalog. This Handbook is not intended to be your sole source of information but should provide you with written guidance in many areas. The EPP Graduate Student Handbook is updated annually, and you should refer to the most recent version. If, after seeking information in this Handbook, you are uncertain about appropriate procedures, please seek advice from your major advisor or the Director of Graduate Studies.

The mission of EPP is to advance scientific knowledge and provide science-based information to improve the sustainability of food and fiber production, protect natural resources, and enhance the lives of all people in Tennessee and across the world. Our vision is to be a recognized and innovative leader in discovery, education, development, and applications related to entomology, plant pathology, and bioinformatics.

The EPP Department is fully committed to a diverse, welcoming, inclusive, and equitable environment. We welcome students, postdoctoral research associates, visiting scholars and all others regardless of age, appearance, disability status, gender, gender identity, geographic background, marital/partnered status, parenting status, political affiliation, race, religion, sexual orientation, and all other characteristics that make each of us unique. We continually work to create an inclusive environment that reflects the diversity of society in general. We aim to cultivate an environment built on mentorship, encouragement, tolerance, and mutual respect. Diversity brings together a wide range of abilities, experiences, perspectives, and worldviews that are crucial to enriching experiences and addressing challenging research questions.

The culture of the department reflects a sincere desire for a high degree of collegiality, professionalism, community participation, and mutual respect among all members, and the highest standards of scholarship, teaching and extension. We encourage the interactions of faculty, staff, and students in support of intellectual curiosity, scholarly ambition, and social enrichment.

Each person's ideas and insights are valued for their creativity and independence of thought; all opinions and thoughts are welcome without prejudice or repercussions. Our departmental culture provides a constructive and safe environment to flourish and succeed, for learning and active debate, and is one that fosters inclusivity, openness, candor, respect for all people and ideas, and professionalism. All departmental members are encouraged to collaborate freely on teaching, research, and Extension programs with colleagues at the University of Tennessee and with personnel at U.S. and global academic and governmental institutions and industry.

Our faculty members strive to prepare students to lead lives of personal integrity and civic responsibility in an increasingly diverse world. As a graduate student, you are a vital part of our

department and its mission. We encourage you to participate actively in departmental activities including seminars; student, staff, and faculty recruitment; committees; outreach activities; fund raising; undergraduate student mentoring; social events; and the EPP Graduate Student Association to gain a broader perspective and more complete professional experience.

Purpose of the EPP Graduate Handbook

Graduate students are expected to be familiar with and satisfy all regulations governing their work and study at the university. For additional information please refer to the <u>Graduate Catalog</u>, the <u>Hilltopics Student Handbook</u>, and to publications on <u>Understanding your Rights and Obligations</u>. The EPP Department Graduate Handbook does not deviate from established <u>Graduate School Policies</u> noted in the <u>Graduate Catalog</u>, but rather provides the specific ways in which those policies are carried out.

EPP Graduate Administration

The EPP Graduate Studies Committee consists of six members. The purpose, membership, and procedures for this committee are described in the EPP departmental bylaws. The following section is excerpted from the EPP bylaws.

"Section 4. Graduate Studies Committee

- 9.4.1. <u>Purpose</u>. The Graduate Studies Committee (GSC) provides oversight to the development and maintenance of healthy and productive graduate degree programs in EPP.
- 9.4.2. <u>Membership</u>. The GSC is appointed by the Department Head. It is comprised of the EPP Director of Graduate Studies (DGS), at least six (6) additional faculty members, one (1) administrative staff member, and the Department Head. The DGS and faculty members have voting privileges. The DGS serves a 5-year renewable term and the six (6) appointed faculty members serve 2-year renewable terms on a staggered basis. The Department Head serves as an ex officio member without voting rights except in certain cases described below. The administrative staff member serves as an ex officio member serves as an ex officio member without voting rights.
- 9.4.3. <u>Chair</u>. The EPP DGS serves as the chair of the GSC. The DGS serves on the Herbert Graduate Council as the representative for EPP. In the unavoidable absence of the Chair, the member with most time served on this committee will act as chair.
- 9.4.4. Procedures.
 - (1) The GSC evaluates applicants and accepts or rejects them based on a holistic review process, including review of previous transcripts, educational institution, degree, field of study, GPA, strength of academic schedule, relevant work experience, publications, presentations, awards/scholarships, research experience, teaching experience, letter of intent, curriculum vitae, letters of recommendation, TOEFL or IELTS scores for international students if the primary language of their country of origin is not English (waived if they have a degree from a U.S. university), identification of an advisor to support the student, availability of funding for an assistantship (if requested by the student), and other factors as appropriate. Acceptance or rejection is determined by majority vote of the voting committee members. In the case of a tie vote, the Department Head casts the deciding vote.
 - (2) Votes on acceptance of applicants will be by voice vote unless a member requests a secret paper ballot. Votes on other matters will be by voice vote unless another means is requested.
 - (3) The DGS reviews the progress of enrolled graduate students and reports perceived problems to the Department Head and the student's major advisor. In addition, the DGS

prepares an annual report on the state of the departmental graduate program for presentation at a faculty meeting or distribution via other means during fall semester.

- (4) The GSC updates and maintains the best practices plan for student-faculty-graduate committee interactions.
- (5) An applicant and (or) prospective major professor may appeal a negative decision by submission of a letter outlining the reasons for the appeal along with additional supporting documentation. The vote of the committee on the appeal will be final.
- (6) Other roles of this committee or the DGS will include the following.
 - Recommend admission and program policy, standards, and procedures for approval by the department faculty.
 - Identify and designate graduate advisors for all applicants accepted for admission.
 - Nominate candidates for fellowships and rank students for appointment to Graduate Research and Teaching Assistantships.
 - Oversee the maintenance of all graduate files and records.
 - Establish rules and guidelines for M.S. and Ph.D. programs of study.
 - Receive, file, and submit thesis and dissertation Graduate School forms.
 - Monitor students' progress toward their degrees, consult with students and advisors where problems are identified, and make recommendations for dismissal for failure to meet conditions or when reasonable progress is not being made.
 - Investigate and respond to graduate student grievances. Inform students about the <u>Office of Ombuds Services</u> for assistance with conflict, and the <u>Office of Investigation</u> <u>and Resolution</u> in cases of non-compliance with federal, state, and local laws and regulations, and university policies.
 - Develop and implement procedures and organization of events to increase the number and quality of student applicants and enhance recruitment of minority applicants
 - Organize graduate student recruitment and orientation events.
 - Identify opportunities to recruit graduate students and funds to support them.
 - Assist in developing an attractive and informative webpage for prospective students.

Table 1. Graduate Studies Committee	
Member and contact information	Role
Dr. Bonnie Ownley (<u>bownley@utk.edu</u>)	Chair
Dr. Kelsey Coffman (<u>kcoffman@utk.edu</u>)	Member
Dr. Jensen Hayter (<u>jhayter1@utk.edu</u>)	Member
Dr. Juan Luis Jurat-Fuentes (<u>jurat@utk.edu</u>)	Member
Dr. Heather Kelly (<u>youngkelly@utk.edu</u>)	Member
Dr. Aaron Onufrak (<u>aonufrak@utk.edu</u>))	Member
Ms. Sonya Dexter (<u>sdexter@utk.edu</u>)	Ex-officio
Dr. DeWayne Shoemaker <u>dewayne.shoemaker@utk.edu</u>)	Ex-officio



Department Head Dr. DeWayne Shoemaker



Director of Graduate Studies Dr. Bonnie Ownley



Administrative Staff Ms. Sonya Dexter



Dr. Kelsey Coffman



Dr. Jensen Hayter



Dr. Juan Luis Jurat-Fuentes



Dr. Heather Kelly



Dr. Aaron Onufrak



Dr. Nar Ranabhat

Review the list of EPP faculty (Table 2) when working with your advisor to select your graduate advisory committee. Additional information about faculty can be found on the <u>EPP website</u>. All EPP faculty can serve as major advisor of M.S. students. Ph.D. students should consult the Graduate Catalog under the heading <u>Doctoral Degree</u> about credentialing of PhD Committee members and who may chair, co-chair, or serve on the committee. This document provides an explanation of five categories of graduate committee members; for some categories (non-UT faculty), the Graduate School requires that a curriculum vitae be submitted to the Graduate School for approval. *Once your committee is selected, it <u>must</u> be approved by the EPP Department Head*.

EPP Faculty

Table 2. EPP Faculty Information					
Faculty	Role	Location	Ph.D. Committee Category		
Dr. DeWayne Shoemaker (<u>dewayne.shoemaker@utk.edu</u>)	Professor & Department Head, Entomology	Knoxville	Category 1		
Dr. Ernest Bernard (<u>ebernard@utk.edu</u>)	Institute Professor, Nematology	Knoxville	Category 1		
Dr. Sebe Brown (<u>sbrow175@utk.edu</u>)	Assistant Professor, Entomology	Jackson	Category 1		
Dr. Kelsey Coffman (<u>kcoffman@utk.edu</u>)	Assistant Professor, Entomology	Knoxville	Category 1		
Dr. Midhula Gireesh (<u>mgireesh@utk.edu</u>)	Assistant Professor, Entomology	Nashville	Category 1		
Dr. Jerome Grant (<u>igrant@utk.edu</u>)	Professor, Entomology	Knoxville	Category 1		
Dr. Kimberly Gwinn (<u>kgwinn@utk.edu</u>)	Professor, Plant Pathology	Knoxville	Category 1		
Dr. Denita Hadziabdic Guerry (<u>dhadziab@utk.edu</u>)	Associate Professor, Plant Pathology	Knoxville	Category 1		
Dr. Reza Hajimorad (<u>mrh@utk.edu</u>)	Associate Professor, Plant Pathology	Knoxville	Category 1		
Dr. Jensen Hayter (<u>jhayter1@utk.edu</u>)	Assistant Professor, Plant Pathology	Knoxville	Category 1		
Dr. Darrell Hensley (<u>dhensley@utk.edu</u>)	Extension Associate Professor, Plant Pathology	Knoxville	Category 2		
Dr. Juan Luis Jurat-Fuentes (j <u>urat@utk.edu</u>)	Professor, Entomology	Knoxville	Category 1		
Dr. Gayan Kariyawasam (<u>gkariyaw@utk.edu</u>)	Assistant Professor, Plant Pathology	Knoxville	Category 1		
Dr. Heather Kelly (<u>youngkelly@utk.edu</u>)	Professor, Plant Pathology	Jackson	Category 1		
Dr. Kurt Lamour (<u>klamour@utk.edu</u>)	Professor, Plant Pathology	Knoxville	Category 1		
Dr. Kevin Moulton (jmoulton@utk.edu)	Professor & Undergraduate Coordinator, Entomology	Knoxville	Category 1		
Dr. Marcin Nowicki (<u>mnowicki@utk.edu</u>)	Research Assistant Professor Plant Pathology	Knoxville	Category 2		
Dr. Bode Olukolu (<u>bolukolu@utk.edu</u>)	Associate Professor, Bioinformatics	Knoxville	Category 1		
Dr. Aaron Onufrak (<u>aonufrak@utk.edu</u>)	Lecturer, Bioinformatics	Knoxville	Category 2		
Dr. Charity Owings (<u>cowings1@utk.edu</u>)	Research Assistant Professor, Entomology	Knoxville	Category 2		
Dr. Bonnie Ownley (<u>bownley@utk.edu</u>)	Chancellor's Professor & Graduate Director, Plant Pathology	Knoxville	Category 1		
Dr. Nar Ranabhat (<u>nranabhat@utk.edu</u>)	Assistant Professor, Plant Pathology	Nashville	Category 1		
Dr. Gautam Shirsekar (<u>gshirsek@utk.edu</u>)	Assistant Professor, Bioinformatics	Knoxville	Category 1		
Dr. Meg Staton (<u>mstaton1@utk.edu</u>)	Professor, Bioinformatics	Knoxville	Category 1		
Dr. Scott Stewart (<u>sdstewart@utk.edu</u>)	Professor, Entomology	Jackson	Category 1		
Dr. Robert Trigiano (<u>rtrigian@utk.edu</u>)	Chancellor's Professor, Plant Pathology	Knoxville	Category 1		
Dr. Becky Trout Fryxell (<u>rfryxell@utk.edu</u>)	Professor, Entomology	Knoxville	Category 1		
Dr. Jennifer Tsuruda (<u>jtsuruda@utk.edu</u>)	Assistant Professor, Entomology	Knoxville	Category 1		
Dr. Karen Vail (<u>kvail@utk.edu</u>)	Professor, Entomology	Knoxville	Category 1		

General Duties, Responsibilities, & Appropriate Behavior of Faculty & Graduate Students

The Student Handbook of the University of Tennessee is titled Hilltopics. An important section of Hilltopics is <u>Principles of Civility and Community</u>. These principles should guide the behavior of every person associated with the university. Hilltopics also contains the <u>Student Code of Conduct</u>.

Principles of Civility and Community

In 2011, the university adopted the Principles of Civility and Community, which are designed to work in concert with all existing codes of conduct. The principles encourage all members of the campus community to foster a learning environment where the differences of our diverse culture are valued, respected, and celebrated. Civility is an act of showing regard and respect for others including politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability, and courteousness. Civility is often described as treating others as we would like to be treated. But consider taking the focus away from yourself and treating others as they would like to be treated. Our community consists of students, faculty, staff, alumni, parents of students and campus visitors. Community members affect the well- being of others and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. By affirming the value of each member of the university community, the campus asks that all its members adhere to the following principles.

AWARENESS - We believe it is important to recognize how others view and relate to the community and recognize that we are part of a larger community.

COLLEGIALITY - We value an environment that facilitates collegial relationships, encourages mutual understanding among diverse individuals, and leads to addressing issues and differences in an atmosphere of mutual respect and civility.

DIALOGUE - We value and encourage, and facilitate free exchange of diverse ideas and points-of-view along with free speech and expression. However, we discourage uncivil speech or expression that infringes upon the ability of others to express themselves.

DIVERSITY - We respect the diverse backgrounds of all members of our community and welcome the opportunity for interpersonal and group interactions.

INCLUSIVITY - We are welcoming to all and hostile to none. We foster an open community in which educational goals may be pursued.

INTEGRITY - We value academic honesty and integrity of all members of the academic community.

KNOWLEDGE - We encourage development of a civil community that values critical inquiry, debate, discovery, and innovation to better the world through teaching, research, and service.

LEARNING - We believe that learning is an interpersonal growth experience that fosters appreciation for diversity.

RESPONSIVENESS - We encourage all community members to speak out against incidents involving bigotry and other types of incivility so the university can fulfill its responsibility of responding in a fair, timely, and consistent fashion.

RESPECT - We believe that a person's views, ideas, and behavior best reflect the goals of the academic community when the dignity of everyone is respected and when members of the community are considerate of the feelings, circumstances, and individuality of others.

Mentors, as defined by The Council of Graduate Schools, are:

Advisors, people with career experience willing to share their knowledge; supporters, people who give emotional and moral encouragement; tutors, people who give specific feedback on one's performance; masters, in the sense of employers to whom one is apprenticed sponsors, sources of information about, and aid in obtaining opportunities; models of identity, of the kind of person one should be to an academic (Zelditch 1990). Good mentoring in all forms involves treating students respectfully and fairly, providing reliable guidance, and serving as a role model for upholding the highest ethical standards.

Role of the Faculty Advisor in Mentoring

(These guidelines were drafted by E. Bernard, K. Gwinn, and B. Ownley in 2012 as an EPP Best Practices document on the mentoring relationship between faculty and students.)

Faculty mentoring of graduate students should be provided in three broad areas:

1. Guiding students through degree requirements

- Ensuring that graduate students receive information about requirements and policies of the graduate program.
- Advising graduate students on developing a program plan, including appropriate course work, research, or creative activity, and defining a timeline for their completion.
- Providing regular feedback on the progress of graduate students toward degree requirements. This should include advising doctoral students on their preparedness to take qualifying exams.
- Providing feedback and advice about the student's performance in coursework, where appropriate.
- Providing for supervision and advising of graduate students when the faculty advisor is on leave or extended absence.

2. Guiding students through thesis or dissertation research

- Advising graduate students on the selection of a thesis or dissertation topic that offers realistic prospects for successful completion within an appropriate period, and on the formation of the thesis or dissertation committee.
- Providing training and oversight in the design of research projects, in rigorous research methodologies, in theoretical and technical aspects of the thesis or dissertation research, and in professional integrity.
- Encouraging graduate students to stay abreast of scholarly literature and of innovative ideas in the field.
- Providing regular feedback on the progress of graduate students toward degree completion, including timely feedback on research, creative activities, and teaching, and constructive criticism if the student's progress does not meet expectations.
- Evaluating clearly and explicitly the strengths and weaknesses of the student's research.
- Encouraging an open exchange of ideas, including contemplation of the student's ideas if considered feasible by the mentor.
- Providing and discussing clear criteria for authorship of collaborative research.
- Assisting in finding sources to support dissertation research, such as teaching assistantships, research assistantships, internal and external fellowships, etc.
- Being aware of the student's research needs and aid in obtaining required resources.

3. Encouraging and constructively criticizing oral and written communication. Guiding students through professional development

- Guiding and/or supervising students' development as teachers, helping them find suitable employment as instructors on campus or elsewhere, visiting their classes, and providing constructive commentary and advice.
- Encouraging participation in professional meetings of regional groups as well as of learned societies.

- Facilitating interactions with other scholars, on campus and in the wider professional community.
- Helping graduate students develop into successful professionals and colleagues, including encouraging students to participate and disseminate results of research or creative activities in the appropriate scholarly or public forums.
- Facilitating career development, including advising graduate students on appropriate job and career options, as well as on the preparation of application materials for appropriate fellowships, scholarships, and other relevant opportunities.
- Assisting with applications for research funding, fellowship applications, field placements, and other applications as appropriate for the respective discipline.
- Being the student's advocate in academic and professional communities as appropriate in the professional judgment of the mentor.
- Providing career guidance and support, including assistance in the preparation of a CV and job applications, writing letters of recommendation in a timely manner, and helping the student prepare for interviews and other recruitment procedures.
- Providing guidance, if asked, about the intersection of concerns around physical and mental health, dealing with stress, or disability with the development of the student as a professional. This requires being cognizant of campus resources that address these issues.
- Helping graduate students to develop professional skills in writing reports, papers, and grant proposals, making professional presentations, establishing professional networks, interviewing, and evaluating manuscripts and papers.

4. Communicating with and striving to understand each student as a unique individual

- Mentors should recognize and seek to understand the various cultures of their students.
- Mentors should build trust and create a comfortable working environment, especially for members of underrepresented groups in the program.
- Graduate research assistants are not automatically granted vacations or leave; they are required by their contract to work 20 hours/week on a 12-month appointment. Students should be aware of and adhere to the university calendar (i.e., weekdays not designated as holidays or official closings are workdays). The major professor must approve all non-sick leave before it takes place. A student should notify the major professor if they will be out for medical reasons.
- With respect to family responsibilities, mentors should be alert to students who need extra support when having a child, raising a child alone, returning to school after child-rearing, caring for an elderly parent, etc. If a student holds an appointment as a GRA or GTA and is unable to fulfill their duties, every effort should be made to modify the student's duties for the remainder of the semester. If family responsibilities (as adequately demonstrated by the student through appropriate documentation) prevent them from performing any duties, it is strongly urged that the student continue to receive a stipend from the department, contract, or grant (if allowed by the funding source) for the leave period.

Graduate Student Responsibilities (from Graduate Council Appeal Procedure Handbook): "A graduate student must abide by the standards for conduct outlined in Hilltopics as specified therein: 'An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty.' A graduate student is required to uphold these standards of integrity and honesty in all learning, teaching, and research activities. A graduate student can, in turn, expect the same degree of integrity and honesty from all teachers, mentors, and advisors."

Role of the Graduate Student Mentee

As partners in the mentoring relationship, graduate students have responsibilities. Students should:

- 1. Be aware of their own mentoring needs and how these change through their graduate student tenure.
 - Graduate students should discuss these changing needs with their mentors. If concerns arise about physical or mental health, dealing with stress, or disability, these may be brought to the attention of the mentor for advice on campus resources.
 - Students should not expect mentors to resolve longstanding health issues or major emotional events that are more properly the province of professional counselors, physicians, and psychotherapists. However, faculty should direct students to university resources.
- 2. Recognize that one faculty member may not be able to satisfy all a student's mentoring needs.
 - Seek assistance from multiple individuals/organizations to fulfill the mentoring roles described above.
- 3. Recognize that their mentoring needs must respect their mentor's other responsibilities and time commitments.
- 4. Become aware of—and meet—the deadlines associated with the degree program.
- 5. Maintain and seek regular communication with their mentors, especially the major professor.
- 6. If a change of advisor is contemplated, inform the Department Head and Graduate Director as soon as possible and keep all parties informed.
 - If specific research plans have been agreed with one advisor, see these through if possible before changing to another advisor.

Advisor/Student Guidelines

Both mentors/advisors and students should be aware of some general common-sense guidelines, as follows:

- 1. Entering a mentoring relationship is voluntary. Mentors and students should discuss their expectations of the mentoring relationship upon entering it. Either party has the right to withdraw from the mentoring "contract" if, despite genuine attempts to make it work, the relationship is not satisfactory. The department head must be included in this discussion. <u>The portability of assistantships must be discussed, and agreements must be codified in writing</u>.
- 2. While often the mentor will have more experience on aspects of work, the relationship should be one of partners who jointly make decisions, with consideration of the budget and time limitations of the specific project.
- 3. Meetings should be held in a quiet environment (or environments, for telephone meetings) where both parties feel they can speak freely without being overheard.
- 4. Meetings should be long enough and paced to allow the two people to get to know each other in a safe and comfortable environment.
- 5. Information shared in mentoring meetings is subject to standard rules of professional confidence (see below).
- 6. Commitments made should be honored by all parties (mentor and mentee). If meetings are canceled or delayed, adequate warning of non-availability or delay should be given. A postponed

meeting should be re-booked promptly.

- 7. Either party has the right to ask for a review of how the mentoring is progressing, or for agreements or plans made at an earlier stage to be reviewed.
- 8. If either party feels unclear about the status of the mentoring, that party should seek to clarify the views and wishes of the other party.
- 9. Mentors should recognize their limitations and avoid working with the student in ways that exceed those limitations.
- 10. Should either party sense there is a conflict of interest between the mentoring and any other role, this should be made known to the other as soon as is practicable.

Requirements and Expectations of UTK, Herbert College, and EPP

The relationship between the mentor and student should always be congenial, professional, and respectful. Both parties bear responsibility for a healthy relationship. The list below applies primarily to the relationship of the student to other university personnel.

Problems and conflicts are best resolved if they are discussed when they first appear. Both mentor and student are expected to listen carefully to what the other has to say. The university, Herbert College, and the department have formal, well-defined avenues to take if conflict cannot be resolved. A student can always speak informally about problems with any trusted faculty member or ask a faculty member to serve as an advocate. If a problem is not resolved by the mentor-mentee (faculty advisor-student) discussion, the following hierarchy of appeal should be followed:

- 1. Meeting of the student's graduate advisory committee
- 2. Director of Graduate Studies (DGS) and Department Head (DH) The DH and DGS may appoint an ad hoc committee to review the situation and recommend solutions. The major advisor and/or student can also request such a committee.
- 3. Dean of Herbert College

All persons within the department, college, and university are deserving of respect and civil discourse. Unprofessional or hostile behavior or grossly intemperate language toward anyone including faculty, technical staff, clerical staff, or other students will not be tolerated and may be grounds for discipline.

In the case of conflict, a student should not denigrate or cast aspersions on the professional reputation of the mentor, the mentor's lab and personnel, or the department in any manner including verbal, written, electronic, or internet-based. Hurtful gossip, rumor-mongering, and attacks via social media are not only harmful to the target, but they ultimately can also cause severe damage to the reputation of the originator. Serious violations may result in dismissal from the program.

Students are expected to follow the directions, advice, and counsel of the mentor and the graduate committee on matters relating to university activities, including research expectations, agreed-upon work hours, laboratory practices, established deadlines and field work. All university regulations regarding best lab practices must be followed.

Ownership of Research Documents

Laboratory notebooks, research findings, and other research documents are the property of the University of Tennessee and the major professor and must be freely shared on request from the major professor. Labs are encouraged to develop shared online resources that are sanctioned by the University of Tennessee, such as the Microsoft One Drive, UTK Google Drive, and T-Storage (http://oit.utk.edu/storage/). Students must keep in mind that some research is proprietary and confidential; sharing with friends and other unauthorized personnel may be a

violation of the agreement the mentor has made with the funding entity. It is essential that the level of confidentiality be understood by all parties because violation could result in the loss of funding.

Course schedules after the first semester MUST be approved by the major professor and the graduate committee before enrollment in classes. The student's graduate committee should have full input into the course of study. Enrollment in extra courses not approved by the advisor or committee costs the department significant funds that could otherwise be used to support another student and may result in the removal of the GRA/GTA tuition waiver.

In addition to current EPP departmental policies, these guidelines are adapted from those published by several other universities and organizations:

Best Practices for Faculty Mentoring of Graduate Students, University of California, Berkeley. Mentoring Guidelines, Graduate Council, University of California, Davis,

http://gradstudies.ucdavis.edu/gradcouncil/mentoring.pdf.

- Advisor, Teacher, Role Model, Friend, National Academy of Sciences, National Academy of Engineering, Institute of Medicine, <u>http://www.nap.edu/readingroom/books/mentor/.</u>Guideline for Faculty Mentors, University of California, San Francisco The Council of Graduate Schools.<u>https://cgsnet.org/.</u>
- Zelditch, M. (1990). Mentor Roles, Proceedings of the 32nd Annual Meeting of the Western Association of Graduate Schools. Cited in Powell, R. C. and Pivo, G. (2001), Mentoring: The Faculty-Graduate Student Relationship. Tucson, AZ: University of Arizona.

Admissions Requirements

For admission to the EPP Master of Science program, a student must meet all requirements of the Graduate School of the University of Tennessee, Knoxville, and must have completed at least 24 credit hours of biological and physical sciences at the undergraduate level or demonstrated relevant research or work experience.

For admission to the EPPN Ph.D. graduate program, students must meet all requirements of the University of Tennessee, Knoxville, Graduate School and must have completed at least 24 credit hours of biological and physical sciences at the undergraduate level.

For admission to a graduate program at the University of Tennessee, a U.S. student must have earned a minimum 2.7 out of a possible 4.0 GPA or a minimum of 3.0 during the senior year of undergraduate study and a minimum of 3.0 on a 4.0 scale on all graduate work.

An international student must have an equivalent 4-year bachelor's degree. Individuals with degrees from foreign institutions must have earned a minimum of 3.0 on a 4.0 scale on all undergraduate work and a minimum of 3.3 on a 4.0 scale on all graduate work. International students who have been awarded a degree from an accredited U.S. institution, must have earned a minimum 2.7 out of a possible 4.0 GPA or a minimum of 3.0 during the senior year of undergraduate study and a minimum of 3.0 on a 4.0 scale on all graduate work.

In EPP, both U.S. and international applicants are more likely to receive a research or teaching assistantship if their undergraduate GPA is a minimum of 3.0, and their graduate GPA is a minimum of 3.3.

English Language Requirement for International Students

English Language Requirement – International students from a country with English as the official language are not required to take an English language test (Table 3). Applicants whose native language is not English are required to take and pass the Test of English as a Foreign Language (TOEFL), or the International English Language Testing System (IELTS), or a Duolingo test of English. Passing marks are 80 (internet-based; iBT) for TOEFL, or 6.5 for IELTS or 120 on a Duolingo test of English. In EPP, international applicants with scores of 100 on the TOEFL iBT test, 7.5 on the IELTS test, or 120 on the Duolingo test of English are more likely to receive a research or teaching assistantship.

The University of Tennessee must receive official scores directly from the appropriate testing service. The University of Tennessee's score reporting code for TOEFL is 1843. The score must not be older than two years from the requested date of entry. International applicants who have received a degree from an accredited U.S. institution in the past two years are exempt from the TOEFL, IELTS, or Duolingo test of English requirement.

English is the official language in the following <u>countries</u>. If your country of citizenship is one of these listed (Table 3), you are exempted from English Language Requirement for application to the Graduate School at UTK. In addition, if you have earned a degree in a country where English is the official language, you are also exempt from examination to certify the English language requirement.

able 3. Countries with English as the Official Language				
Anguilla	Fiji	New Zealand	Singapore	
Antigua & Barbuda	Gambia	Nigeria	Sint Maarten	
Bahamas	Ghana	Niue	Solomon Islands	
Barbados	Grenada	Norfolk Island	Somalia	
Belize	Guyana	Northern Mariana Islands	South Africa	
Belgium	Hong Kong	Pakistan	South Sudan	
Bermuda	India	Palau	Swaziland	
Botswana	Ireland	Papua New Guinea	Tanzania	
British Virgin Islands	Jersey	Philippines	Tonga	
Burundi	Kenya	Pitcairn Islands	Trinidad & Tobago	
Cameroon	Liberia	Rwanda	Turks & Caicos Islands	
Canada	Malawi	Saint Kitts & Nevis	Tuvalu	
Cayman Islands	Malta	Saint Lucia	Uganda	
Christmas Island	Marshall Islands	Samoa	Zambia	
Cook Islands	Micronesia	Seychelles	Zimbabwe	
Dominica	Namibia	Sierra Leone		

Application Procedure

To apply for admission, the following must be submitted to Graduate Admissions through the online application submission process.

- 1. Non-refundable application fee (\$60) for new applications to EPP. This can be paid by credit/debit card or electronic check. If you completed your M.S. in EPP and are transitioning to our Ph.D. program, select the "change of program "option, and the fee is \$30.
- 2. Copies of original transcripts of all prior undergraduate and graduate coursework and degree confirmations (if applicable). This includes transcripts from colleges and universities where a degree was not conferred.
- 3. Uploaded departmental requirements as indicated in the online application system.
- 4. Uploaded degree certificates (if applicable)
- 5. Three recommendations (Graduate Rating Forms; letters can be uploaded too). During the application process, you will be asked for contact information for the individuals writing a recommendation for you. The university will contact those references and recommenders.
- 6. Submit application, fee, official transcripts, three letters of reference (or three Graduate Rating Forms), curriculum vitae, and a detailed statement of professional goals and reasons for applying to Entomology and Plant Pathology directly to the Office of Graduate Admissions. In the statement letter and application, the concentration of interest and preferred major advisor

must be indicated.

The following are EPP requirements for your application.

- 1. <u>Three letters of reference</u> The letters of reference should come from former instructors, mentors, or advisors who know you well. <u>Your recommenders should be able to attest to your academic performance and potential for graduate study</u>. Do not include letters that do not specifically address your academic and research abilities.
- 2. <u>Letter of intent</u> that describes why you are interested in graduate studies in our department. The concentration in which you are interested, and preference for major advisor should be indicated.
- 3. <u>Curriculum vitae</u> Complete supplementary information with emphasis on undergraduate preparation, demonstration of extracurricular or supplemental study related to entomology, plant pathology or bioinformatics, academic honors, awards or scholarships, publications, abstracts, and presentations. We are also very interested in whether applicants have had prior research experience, either as a student or through employment.
- 4. Applicants are strongly encouraged to <u>contact prospective major professors</u> early in the application process to learn if your interests match their programs.

Financial Support

Scholarships in the forms of Graduate Teaching Assistantships (GTA), Graduate Research Assistantships (GRA), and Graduate Assistantships (GA) are awarded on a competitive basis. In EPP, an assistantship covers tuition costs (referred to as maintenance fees) <u>and</u> provides a stipend for living expenses. We offer half- time (20 hours per week) and quarter-time (10 hours per week) assistantships. For a half- time assistantship, our minimum stipend for living expenses is \$28,696 per year for MS and PhD students. Stipends will increase to \$35,386 starting in fall semester 2025. Additional funds may be available, based on student qualifications and application date, from Herbert College, AgResearch, and the Graduate School, especially for PhD students.

Before an I-20/DS-2019 can be issued for an admitted international student, documented availability of sufficient funds for the first 12 months of studies must be submitted to the Center for Global Engagement (CGE).

Registration and Advising

Students should seek the advice of their major advisor about registration for all courses. If more assistance is needed, please contact the Director of Graduate Studies (Dr. Ownley).

Institute Policies and Rights for Graduate Research Assistants

- 1. Graduate Research Assistants (GRAs) and Graduate Teaching Assistants (GTAs) are employees responsible to the Department Head and are under the supervision of their major advisor. They are appointed to contribute to the research or teaching program under the direction of their major advisor and the department head. Their workload (beyond academics and their individual research project) is 50% of a full-time equivalent or 20 hours per week.
- 2. Assistantships, fellowships, and other stipends are paid in equal portions (over 9 or 12 months depending on the source) and may be subject to Federal Income Tax year-round and Social Security Tax when the student is not enrolled in classes, e.g., between semesters and during the summer.
- 3. A maximum of 20 hours of academic work per calendar year may be taken. M.S. students on departmental funding are expected to complete the requirements for the M.S. degree in 2 years. M.S. assistantships are generally funded only for 24 months. Students normally take all

coursework, thesis hours, etc., during fall and spring semesters. Students do not enroll in courses during the summer semester unless: 1) a necessary course is taught only in the summer, or 2) the student is graduating in the summer semester and must enroll for 3 hours of Thesis (EPP 500).

- 4. Ph.D. students are required to take at least 3 credits of EPP 600 every semester (including summer) once they have first received credit for it.
- 5. Out-of-state tuition is waived for all students with assistantships; this means that it is paid at the in-state rate by grants obtained by your major advisor, or the department. University-mandated health insurance and other fees are also paid by the department or from granting agencies. Graduate students on assistantships are eligible for official university holidays.
- 6. GRAs and GTAs will develop a work schedule in consultation with their faculty advisor. The priority of all graduate assistants must be satisfactory progress in their scholastic program. At the same time, acceptance of an assistantship is predicated on the belief that satisfactory progress can be concurrently achieved with additional work assignments. Collaborative efforts between graduate assistants and their major advisors should be focused on the goal of satisfactory performance in both areas.
- 7. An M.S. student on an assistantship and their major advisor together with the student's Graduate Advisory Committee will select a thesis problem that can be completed within the two-year term normally expected for the M.S. degree program. Circumstances beyond the control of the student may take a longer time for completion, but there is no guarantee that a funded assistantship will be continued. However, the student may request an extension of the assistantship through the major advisor to the department head by writing a justification as to why the extension is needed. The major advisor should concur and write a letter in support of the extension. The Department Head and Graduate Studies Director will carefully evaluate requests based on the individual circumstances involved and availability of funds and notify the student of the decision.
- 8. The Student Health Clinic administers the graduate student employee health insurance program. The health plan requires a referral by the Student Health Clinic. Graduate students enrolled in less than 9 hours and who have not paid the student health fee must pay the health fee each semester to utilize the Student Health Service (prior to using the health plan). Students may elect to add spouse or dependent coverage at their own expense. Please direct questions regarding the graduate student employee health insurance to the <u>Student Health Clinic</u>.
- 9. In all cases of appointment and reappointment, the major advisor is responsible for notifying the graduate assistant as early as possible. When an assistantship is not to be renewed, the graduate student should be notified in advance. In most cases, this notice must be given no later than one month prior to the end of the appointment. Specific reasons for not renewing the contract should be given (e.g., discontinuation of the program or grant, significant neglect of duty, unsatisfactory academic performance or progress toward a degree, lack of research progress, non-compliance with university policies, etc.). In cases where an assistantship is for one year only, the student should be informed at the time of appointment. In some circumstances, graduate assistants may be given a conditional appointment such as an appointment in which funding of a grant is pending.
- 10. In cases where graduate assistants feel that they have a legitimate complaint about any aspect of carrying out their assignments (work hours, duties assigned, pay, work conditions, etc.), they have a right to pursue all established channels to resolve the conflict. In the order that follows, the student should speak to their immediate supervisor, the department head, the graduate director, and the dean of Herbert College. If the student feels that a resolution should be sought beyond the department/college level, the Dean of the Graduate School should be contacted. The <u>Office of Investigation and Resolution</u> is available to graduate students for issues involving Equal Employment Opportunity, Mandatory Reporting, Sexual & Other Discriminatory

Harassment, Faculty-Student Relationships, Sexual Harassment, Sexual Assault, Dating and Domestic Violence, and Stalking. Established procedures are available on the <u>OIR website</u>. For issues not related to the ones covered by OIR, see the <u>Graduate Council Appeals Procedure</u> and/or the Student Code of Conduct (<u>Hilltopics</u>).

- 11. The maximum number of years that a graduate assistant can be appointed to an assistantship is 3 years as a master's student, 5 years as a doctoral student, or 8 years in doctoral programs in which students enter with a baccalaureate degree only. Requests for an extension beyond the maximum terms specified here must be made in writing by the academic unit to the Dean of the Graduate School. In EPP, these requests should be routed through the Director of Graduate Studies.
- 12. Information on relationships between students and faculty, including prohibited relationships can be found in section 2.2.6 (<u>Relationships with Students</u>) of the Faculty Handbook. Standards of conduct for students are described in the <u>Student Conduct and Community Standards</u>.

Non-Assistantship Students

Full or part-time employees may pursue graduate degrees. Procedures for regular university employees in relation to making up work and number of hours/semester are detailed in <u>Policy No.:</u> <u>HR0330</u>. Students who are not on assistantship or employed by UT will work with their advisor to determine course loads and research schedules on a case-by-case basis to ensure timely progression through the program.

Fellowships

<u>Graduate Fellowships</u> are available from the University. Students must be nominated by the Director of Graduate Studies. In some cases, support letters are needed from the student's major advisor.

Loans

Student loans for graduate students are administered by the <u>Office of Financial Aid and</u> <u>Scholarships</u>.

Employment

Graduate students with a 50% appointment Research or Teaching Assistantship are advised not to engage in off-campus employment.

Resources for Student Problem Resolution

Learning to address issues and solve problems in an informed, proactive way helps students improve their knowledge of the University as well as develop personally. When students experience problems at UTK, there are several offices available to help them.

Issues Related to Academic Coursework

Issues related to grades or academic coursework should first be addressed with the course instructor, then the appropriate department head, and finally the dean of the college in which the course is offered. If an appropriate solution cannot be reached through discussions with these individuals, the Associate Dean of Graduate Studies can help regarding the best "next steps" for problem resolution.

Issues Related to Campus Life

Staff in the following offices provide support and guidance for students who are pursuing resolution of university-related problems. These staff: (1) explore problems encountered by individual students, (2) inform students of appropriate administrative channels that should be utilized for problem resolution, and (3) work to address the broader issues and policies that impact

all students. Each office is open from 8:00 a.m. - 5:00 p.m. Monday through Friday. Students are encouraged to visit any of these offices to share their concerns and ask for assistance.

- 1. <u>Associate Dean of Graduate Studies</u> (218 Student Services, <u>ebrother@utk.edu</u>, 865-974-3634). The Associate Dean of Graduate Studies is available to assist graduate students who are experiencing difficulties or want to express academic concerns related to their graduate programs.
- 2. <u>Dean of Students</u> (383 Student Union, <u>dos@utk.edu</u>, 865-974-3179). The Office of the Dean of Students sponsors and coordinates activities that focus on student growth and development outside of the classroom. This office advocates, on behalf of all students, supplements existing channels of appeal, and helps students to resolve problems in a variety of areas.
- 3. <u>Equal Opportunity and Accessibility</u> (1840 Melrose Avenue, eoa@utk.edu, 865-974-2498). EOA assists the University community in its goal to affirm diversity as an opportunity for personal growth and ensures that UTK (Institute of Agriculture, Space Institute, UT Athletics, and Institute of Public Service), UT Foundation, and the UT System comply with federal and state laws by granting access to qualified persons regardless of race, color, religion, sex, national origin, disability, age, and genetics seeking to participate in or benefit from programs, activities, facilities, or employment.
- 4. <u>Conflict Resolution Program</u> (105 Student Services Building, <u>hr@utk.edu</u>, 865-946-8847). The Conflict Resolution Program provides mediation services whereby people having conflict can work with a neutral third party to resolve their differences. The Conflict Resolution Program also offers seminars, internship opportunities, and consultation for individuals or groups. Services are available to students, faculty, and staff. They are voluntary and confidential.
- 5. <u>Dean, Herbert College of Agriculture (Herbert)</u> (126 Morgan Hall, <u>dwhite25@tennessee.edu</u>, 865-974-7303).
- 6. <u>Student Disability Services</u> (1534 White Avenue, sds@utk.edu, 865-974-6087). If you need course adaptations or accommodations because of a documented disability or if you have emergency information to share, please contact Student Disability Services. This will ensure that you are properly registered for service.
- 7. Office of Ombuds Services (ombuds@utk.edu, 865-974-6273). Graduate students, staff, & faculty voluntarily visit the ombuds for many reasons. They create a *confidential* and *informal* space where you can *speak freely* and *feel safe* while discussing any challenges you face. Any issue can be brought to the Ombuds no matter how big or small. An ombuds does not serve as an advocate for the faculty or staff member or the university, but as a supporter of fair practices. This office can be utilized for disputes between students and faculty or staff.

Additional Resources

- 1. <u>AgResearch</u>
- 2. <u>Center for Global Engagement</u>
- 3. <u>Center for Student Engagement</u>
- 4. <u>Herbert College of Agriculture (Herbert)</u>
- 5. <u>Department of Entomology & Plant Pathology (EPP)</u>
- 6. <u>Event Calendar</u>
- 7. <u>Financial Aid</u>
- 8. <u>Fitness and Physical Activity</u>
- 9. Graduate and International Admissions
- 10. <u>Graduate Catalog</u>

- 11. Graduate Orientation
- 12. Graduate School
- 13. Graduate School forms
- 14. Graduate Student Appeals Procedure
- 15. Graduate Student Life
- 16. <u>Graduate Student Senate</u>
- 17. <u>Housing (on campus)</u>
- 18. Housing (off campus)
- 19. Information Technology
- 20. International House
- 21. ITA testing for teaching assistants
- 22. Library Resources
 - <u>Scholars' Collaborative</u>
 - <u>Subject Librarians</u>
 - <u>Research Consultation</u>
 - <u>Research Guides</u>
 - <u>Citing Sources</u>
 - <u>EndNote | Zotero</u>
- 23. Multicultural Student Life/Black Cultural Center
- 24. Office of Research and Engagement
- 25. One Stop/Scholarships (internal and external)
- 26. Parking Information
- 27. Publishing Research
- 28. Register for courses (One Stop)
- 29. Spiritual Wellness
- 30. Student Counseling and Mental Health
- 31. Student Health Center
- 32. Student Insurance Information
- 33. <u>Thesis/Dissertation</u>

Degree Requirements for EPP Graduate Programs

Note: Degree requirements change annually. The Graduate School mandates that graduate students must fulfill the requirements of the Graduate Catalog that are in effect during the semester in which they graduate.

This handbook serves as a guide for the M.S. and Ph.D. programs in the Department of Entomology and Plant Pathology at the University of Tennessee, Knoxville. The department offers an M.S. degree in Entomology and Plant Pathology, with concentrations in: **Bioinformatics and Genomics; Entomology;** and **Plant Pathology**, and a Ph.D. degree in Entomology, Plant Pathology, and Nematology, with concentrations in **Bioinformatics, Genomics, and Molecular Interactions**; **Organismal Biology, Ecology, and Systematics**; and **Sustainable Disease and Integrated Pest Management**. Each concentration has different requirements, and students may only graduate with one concentration. <u>For both the M.S. thesis and Ph.D. programs, a concentration must be</u> <u>selected.</u>

The regulations and procedures described in this handbook are consistent with the requirements of the Office of Graduate and International Admissions as well as those of the Herbert College of Agriculture (Herbert), UT AgResearch, and UT Extension at the University of Tennessee.

Master of Science (M.S.) Entomology & Plant Pathology- Thesis Option

The M.S. degree is designed to provide students with the basic disciplinary knowledge and research background for a career in the life sciences. Graduates have proven to be competitive in obtaining positions at academic institutions, in public service or the private sector, or admission to Ph.D. programs.

Many of the specialties within the department involve cross-disciplinary activity, including close cooperation with bioinformaticians, ecologists, horticulturists, geneticists, soil scientists, and veterinarians. The department has expertise in alternative methods of insect and disease management, such as biological control, resistant cultivars, cultural techniques, and integrated pest management to help meet the need for safe food production.

A student seeking the M.S. degree must complete a written thesis based on original research and the completion of a minimum of 24 semester hours of course work for graduate credit, approved by the student's graduate advisory committee. Included in the course requirements are two acceptable seminar presentations. The first seminar (for 1 hour of EPP 640 credit) is a research proposal. The second seminar (no course credit received) is an exit seminar based

on the student's thesis research. In addition, 6 hours of EPP 500 Thesis are required. During their last semester, regardless of how many hours of EPP 500 a student has taken, graduating students must register for 3 hours of EPP 500 – <u>this is a Graduate School Requirement</u>. Plan your course schedule wisely to avoid excessive credit hours of EPP 500.

Students are strongly encouraged to publish papers derived from their theses. An oral final exam must be passed to the satisfaction of the student's graduate advisory committee after the thesis has been completed. The oral exam is both comprehensive and a defense of the thesis.

A minor is not required but may be selected by the student in consultation with their major advisor and graduate advisory committee. The minor must include at least 6 semester hours and not more than 12 hours of graduate-level credit in the minor department. Requirements for Minor programs vary, and the UT Graduate Catalog must be consulted to find these requirements. The student's committee must include a member of the faculty from the minor department to assist in designating courses required for the minor. If you select a minor, be aware that this may increase the number of credit hours that you are required to take. However, depending upon your research topic and career goals, a minor may well be appropriate.

Requirements For M.S. Concentration (Thesis Option)

Bioinformatics and Genomics Concentration

In addition to a strong biological background in entomology, plant pathology or a combination of the two, students will gain foundational knowledge in bioinformatics and genomics. Students concentrating in bioinformatics and genomics can study biological sequencing and analysis of DNA and RNA, epigenetics, metagenomics and metatranscriptomics, phylogenomics, genotyping by sequencing, differential gene expression, population genomics, gene interactions and/or proteomics. A student with prior coursework and/or experience may petition the EPP faculty for a course exemption(s). An exemption may be granted by majority vote based on documentary evidence or written and/or oral exams.

Degree Requirements

Credit Hours Required: 30 graduate credit hours

Required Courses:

- EPP 500 Thesis, 6 credit hours
- EPP 570 Colloquium, 1 credit hour
- EPP 622 Bioinformatics Applications, 3 credit hours
- EPP 640 Graduate Seminar, 1 credit hour, proposal seminar
- A minimum of 9 credit hours from entomology and plant pathology (EPP) courses (excluding EPP 500, EPP 502, EPP 570, EPP 640, and EPP 675)
- Program electives, a minimum of 7 credit hours including, but not limited to BCMB 422, BCMB 510, COSC 594 (section titled Bioinformatics), CBE 672, EEPS 590, LFSC 507, LFSC 520, LFSC 521, MICR 540/LFSC 517. In addition, special topics on bioinformatics are periodically offered in BCMB 520, EPP 602, EPP 604, EPP 606, LFSC 595, LFSC 695, and MICRO 650.
- A quantitative analysis course (minimum 3 credit hours) is highly recommended and usually will be required by the student's thesis advisory committee. Recommended courses include BSE 564, COSC 505, COSC 526, COSC 565, EEB 560, EPP 633, EPP 634, PLSC 561, PLSC 571, STAT 577, and STAT 579.

<u>See below (pg. 25) for additional trainings and non-course requirements for the M.S. Thesis</u> <u>option</u>

Entomology Concentration

Entomology is an interdisciplinary science that specializes in plant, human, and animal health with a focus on problematic and beneficial insects. Students who wish to prepare for further graduate studies or careers as researchers, teachers, Extension specialists, regulators, or practitioners of plant/human/animal health or insect pest management may choose the Entomology concentration.

Degree Requirements

Credit Hours Required: 30 graduate credit hours

- EPP 500 Thesis, 6 credit hours
- EPP 548 Taxonomy of Adult Insects, 4 credit hours
- EPP 570 Colloquium, 1 credit hour
- EPP 640 Graduate Seminar, 1 credit hour
- One course, 3 credit hours, from EPP 530, EPP 552, and EPP 561

- A minimum of one course, 3 credit hours, from EPP 410, EPP 411, EPP 425, EPP 485, EPP 508, EPP 509, EPP 523, EPP 530, EPP 552, EPP 531, EPP 561, and EPP 630.
- Program electives, minimum 9 credit hours, will be selected by the student in consultation with the major advisor and advisory committee. Coursework disciplines include but are not limited to the following.
 - Agricultural and Natural Resources (AGNR),
 - Animal Science (ANSC),
 - Biochemistry and Cellular and Molecular Biology (BCMB),
 - Biomedical Engineering (BME),
 - Biosystems Engineering (BSE),
 - Business Analytics (BZAN),
 - Comparative and Experimental Medicine (CEM),
 - Electrical and Computer Engineering (ECE),
 - Ecology and Evolutionary Biology (EEB),
 - Entomology and Plant Pathology (EPP),
 - Environmental Engineering (ENVE),
 - Environmental and Soil Sciences (ESS),
 - Food Science (FDSC),
 - Forestry (FORS, FWF),
 - Geography (GEOG),
 - Life Sciences (LFSC),
 - Microbiology (MICR),
 - Plant Sciences (PLSC),
 - Statistics (STAT), and
 - Wildlife and Fisheries Science (WFS).
- A quantitative analysis course (3 credit hours) is highly recommended and usually will be required by the student's thesis advisory committee. Recommended courses include but are not limited to ANSC 571, BSE 564, EEB 560, FWF 525, PLSC 561, PLSC 571, STAT 531, STAT 577, and STAT 579.

See below (pg. 25) for additional trainings and non-course requirements for the M.S. thesis option

Plant Pathology Concentration

Plant Pathology is an interdisciplinary science that specializes in plant health with a focus on the organisms that cause plant disease. Students who wish to prepare for further graduate studies or careers as researchers, teachers, Extension specialists, regulators, or practitioners of plant health management may choose the Plant Pathology concentration.

Degree Requirements

Credit Hours Required: 30 graduate credits

- EPP 500 Thesis, 6 credit hours
- EPP 505 Mycology, 3 credit hours
- One course, 3 credit hours, from EPP 512, EPP 516, EPP 531 nematology section, and EPP 531 virology section
- A minimum of one course, 3 credit hours, from EPP 410, EPP 411, EPP 508, EPP 509, EPP 512, EPP 516, EPP 520, and EPP 521, EPP 530, EPP 531, and EPP 630
- EPP 570 Colloquium, 1 credit hour
- EPP 640 Graduate Seminar, 1 credit hour

- Program electives, minimum 10 credit hours, will be selected by the student in consultation with the major advisor and thesis advisory committee. Coursework disciplines include but are not limited to the following.
 - Agricultural and Natural Resources (AGNR),
 - Animal Science (ANSC),
 - o Biochemistry and Cellular and Molecular Biology (BCMB),
 - Biomedical Engineering (BME),
 - Biosystems Engineering (BSE),
 - Business Analytics (BZAN),
 - Comparative and Experimental Medicine (CEM),
 - Electrical and Computer Engineering (ECE),
 - Ecology and Evolutionary Biology (EEB),
 - Entomology and Plant Pathology (EPP),
 - Environmental Engineering (ENVE),
 - Environmental and Soil Sciences (ESS),
 - Food Science (FDSC),
 - Forestry (FORS, FWF),
 - Geography (GEOG),
 - Life Sciences (LFSC),
 - Microbiology (MICR),
 - Plant Sciences (PLSC),
 - \circ $\;$ Statistics (STAT), and
 - Wildlife and Fisheries Science (WFS).
- A quantitative analysis course (3 credit hours) is highly recommended and usually will be required by the student's thesis advisory committee. Recommended courses include but are not limited to ANSC 571, BSE 564, EEB 560, FWF 525, PLSC 561, PLSC 571, STAT 531, STAT 577, and STAT 579.

Additional trainings and non-course requirements for the M.S. - Thesis option

- A minor is not required but may be selected at the option of the student. A minor includes 6 (minimum) to 12 (maximum) credit hours of graduate-level credit in the minor department.
- The student and the major advisor must select a minimum of two additional faculty members from the University of Tennessee, who hold the rank of assistant professor or above, to serve on the student's thesis advisory committee. The responsibility of this committee is to assist the student in planning a program of study and carrying out research, and to assure fulfillment of the degree requirements.
 - The committee should be formed during the first semester of the student's program.
 - If the student has a minor, one member of the committee must be a faculty member from the minor department to assist in designating courses required for the minor.
- Required Professional Trainings provide evidence of training (certificate or test score) in EPP 570.
 - Code of Conduct (UT K@TE)
 - Title IX (UT K@TE)
 - FERPA (UT K@TE)
 - Research Ethics training can be taken through CITI RCR.
 - IT Security Awareness (UT K@TE)
 - UT Emergency Preparedness Training (UT K@TE)
 - Environmental Health and Safety General Laboratory Safety (CANVAS)
 - UTIA Programs for Minors
- Students are expected to attend (in person or online) seminar (EPP 640) each academic

semester of their M.S. program, regardless of whether they are registered for the course.

- Students are expected to prepare a written proposal prior to research for the thesis.
- A written thesis, approved by the major advisor and thesis advisory committee, is required.
- An oral final examination that covers the thesis and coursework is required and must be passed to the satisfaction of the advisory committee after the thesis has been completed.
- An oral departmental seminar presentation on the thesis is required.

Master of Science (M.S.) Entomology & Plant Pathology – Project/Non-Thesis Option

<u>There are no concentrations for the project (non-thesis) option</u>. In lieu of a thesis, students are required to complete a project/practicum and prepare a written report summarizing project findings. Students working on a project/practicum must complete 30 credit hours of graduate credit, which includes one to four credit hours of EPP 503, and an acceptable seminar presentation for one credit hour. A final oral examination covering the project and coursework are required and must be passed to the satisfaction of the advisory committee after the project/practicum has been completed.

Students who select the non-thesis M.S. option are not eligible for Graduate Research or Teaching Assistantships but may receive hourly pay based on availability of major advisor grant/contract funds or scholarships. The non-thesis option is directed primarily at those who are already employed full-time and wish to fulfill degree requirements over a longer time.

Requirements for the M.S. non-thesis project option (no concentrations)

Degree Requirements:

Credit Hours Required: 30 graduate courses

- EPP 503 Project/Practicum, 1-4 credit hours
- EPP 570 Colloquium, 1 credit hour
- EPP 640 Graduate Seminar, 1 credit hour. Students are expected to attend seminar each academic semester of their M.S. program, regardless of whether they are registered for EPP 640 credit. Online options are available.
- A minimum of 15 credit hours from EPP courses that are approved for graduate credit (excluding EPP 500, EPP 502, EPP 503, EPP 570, EPP 640, and EPP 675).
- A minimum of one course (3 credit hours) from EPP 410, EPP 411, EPP 425, EPP 505, EPP 508, EPP 509, EPP 512, EPP516, EPP 520, EPP 521, EPP 523, EPP 530, EPP 531, EPP 552, EPP 561, EPP 575, EPP 622, EPP 633, and EPP 634.
- Program Electives, 9 to 12 credit hours will be selected by the student in consultation with the major advisor and graduate advisory committee. Coursework disciplines include, but are not limited to
 - o Agricultural and Natural Resources (AGNR),
 - o Animal Science (ANSC),
 - o Biochemistry and Cellular and Molecular Biology (BCMB),
 - o Biomedical Engineering (BME),
 - o Biosystems Engineering (BSE),
 - o Business Analytics (BZAN),
 - o Comparative and Experimental Medicine (CEM),
 - o Electrical and Computer Engineering (ECE),
 - Ecology and Evolutionary Biology (EEB),
 - o Entomology and Plant Pathology (EPP),
 - o Environmental Engineering (ENVE),
 - o Environmental and Soil Sciences (ESS),

- o Food Science (FDSC),
- o Forestry (FORS, FWF),
- o Geography (GEOG),
- o Life Sciences (LFSC),
- o Microbiology (MICR),
- o Plant Sciences (PLSC),
- o Statistics (STAT), and Wildlife and Fisheries Science (WFS).
- Course(s) in quantitative analysis of biological data are highly recommended, but not required. Recommended courses include ANSC 571, BSE 564, EEB 560, FWF 525, PLSC 561, PLSC 571, STAT 531, STAT 577, and STAT 579.

Additional Trainings and Non-Course Requirements for the M.S. - Project/Non-Thesis Option

- A minor is not required but may be selected at the option of the student. A minor includes 6 (minimum) to 12 (maximum) credit hours of graduate-level credit in the minor department.
- The student and the major advisor will select a minimum of two additional faculty members from the University of Tennessee, who hold the rank of assistant professor or above, to serve on the student's project advisory committee. The responsibility of this committee is to assist the student in planning a program of study and carrying out research, and to assure fulfillment of the degree requirements.
 - o The committee should be formed during the first semester of the student's program.
 - If the student has a minor, one member of the committee must be a faculty member from the minor department to assist in designating courses required for the minor.
- Required Professional Trainings provide evidence of training (certificate or test score) in EPP 570.
 - Code of Conduct (UT K@TE)
 - Title IX (UT K@TE)
 - FERPA (UT K@TE)
 - \circ $\;$ Research Ethics training can be taken through CITI RCR.
 - IT Security Awareness (UT K@TE)
 - UT Emergency Preparedness Training (UT K@TE)
 - Environmental Health and Safety General Laboratory Safety (CANVAS)
 - UTIA Programs for Minors
- Students are expected to attend (in person or online) seminar (EPP 640) each academic semester of their M.S. program.
- Students are expected to prepare a detailed written proposal prior to initiation of the project/ practicum.
- A final report summarizing the results of the project/practicum is required.
- Final oral examination on the project and coursework are required by the Graduate School and must be passed to the satisfaction of the project advisory committee after the project has been completed.
- An oral departmental seminar presentation on the proposal <u>or</u> results of the project/ practicum is required.

M.S. Student Program Checklist - GUIDELINES

Note: Newest Version of All Forms Mentioned Below Can Be Found at the Graduate School Forms Website - http://gradschool.utk.edu/forms-central/.

Always invite Department Head and/or Director of Graduate Studies to Committee Meetings. This is especially important if you foresee conflict.

<u>First Semester</u>

1. Contact major advisor.

NOTE: International students need to visit the Student Health Services and the Center for Global Engagement (CGE) before reporting to the department.

- 2. Complete departmental paperwork.
 - Bring Passport or driver's license and Social Security card; International students must bring visa paperwork (I-20).
 - Bring Bank account number and Bank routing number. Assistantships are paid via direct deposit to your bank account.
- 3. Register for courses prior to your first semester. All students are required to enroll in courses their first semester, regardless of whether the first semester is spring, summer, or fall.
- 4. Develop first semester's coursework (including deficiencies and prerequisites).
- 5. Attend graduate student orientations provided by the Graduate School (<u>https://gradschool.utk.edu/graduate-student-life/graduate-student-orientations/</u> and EPP.
- 6. Form a graduate advisory committee (preferably before first semester final exams).
 - Consult with the Graduate Director to ensure that the composition of your committee meets the criteria of the Graduate School.
 - Submit the names of your committee members to the Director of Graduate Studies.
- 7. Schedule and convene your first committee meeting.
 - Develop a plan, approved by your graduate advisory committee, for all coursework.
 - Obtain approval of the proposed research project from your committee.
- 8. Complete all required trainings.

Second Semester

- 9. Schedule and convene committee meeting to present your academic and research progress.
- 10. Schedule and present M.S. proposal seminar (EPP 640, 1 credit hour).

<u>Summer Session</u>

- 11. M.S. students should concentrate on their research project, but they are required to take courses if this is their first semester.
- 12. If this is not your first semester, enrollment in classes in your first summer session is not required unless there are courses of interest on your plan of study.

Interim Semesters (for fully employed students who are taking less hours per semester)

13. Schedule and convene a committee meeting each semester to discuss academic and research progress.

Third Semester (or semester preceding graduation)

14. Schedule and convene a committee meeting to discuss academic and research progress.

- 15. Submit the Admission to Candidacy Application.
- 16. Attend thesis workshop (thesis option students only).
- 17. Submit Graduation Application.

Final Semester of Graduation

- 18. Give final exit seminar. *BUT do not enroll in EPP 640 to give your final thesis defense seminar.*
- 19. Schedule Master's thesis defense or project /practicum defense (non-thesis).
- 20. Submit thesis to Thesis/Dissertation Consultant for preliminary review of your thesis (thesis option only).
- 21. Submit thesis to graduate advisory committee 2 weeks prior to defense and to department head 48 hours prior to final exam. Non-thesis option students submit project report.
- 22. Defend your thesis (oral examination) and Submit Report of Final Examination (Pass/Fail) Form to the Graduate School. Non-thesis students take oral and written exam on research project and course work.
- 23. Submit dissertation to iThenticate and submit approved form to the Graduate School. Nonthesis students use iThenticate to check project report, but form is not submitted to the Graduate School.
- 24. Submit final thesis (approved & accepted by Thesis/Dissertation Consultant) (thesis option only).
- 25. In consultation with major advisor, decide whether your thesis should receive an embargo (thesis option only).
- 26. Pay graduation fee at Bursar's office.
- 27. Graduate Hooding Ceremony (optional).

Post-Graduation

- 28. Schedule an exit interview with Department Head.
- 29. Return keys, computer or any other UT-owned items used during your studies.

Ph.D. in Entomology, Plant Pathology, and Nematology

The Ph.D. degree is evidence of exceptional scholarly attainment and demonstrated capacity in original investigation. Requirements for the degree include courses, examinations, and a period of resident study, as well as arrangements that guarantee sustained, systematic study and superior competency in the chosen concentration. The program of study listed by the student on the Admission to Candidacy form must be approved by the doctoral committee and the Director of Graduate Studies before submission to the Graduate School.

A candidate for the doctoral degree must complete a minimum of 24 hours of graduate coursework *beyond* the master's degree, which is a prerequisite for entry into most doctoral programs. The Department of Entomology and Plant Pathology does not ordinarily admit Ph.D. students who have not earned an M.S. degree with a thesis, although there will be exceptions. A student entering the doctoral program without an M.S. degree must complete a minimum of 48 hours of graduate coursework beyond the baccalaureate degree. A minimum of 12 of the 24 hours, or 30 of the 48 hours, must be graded A-F. A minimum of 6 hours of the student's coursework must be University of Tennessee courses at the 600 level, exclusive of dissertation (EPP 600). Students may request that academic graduate coursework that they completed at other universities but was not used toward a degree be used to fulfill up to 12 credit hours towards their PhD degree at UTK. Approvals from EPP and the Graduate School are required.

Ph.D. students are required to give two seminars. The first seminar is the only one required to be taken for credit (1 hour of EPP 640) and is the research proposal seminar. The second is an exit seminar based on the student's dissertation research. In addition, 24 hours of EPP 600 Doctoral Research and Dissertation are required. Written and Oral Comprehensive Exams, as well as the Defense of Dissertation Exam are required of Ph.D. students in the EPPN program. If agreed upon by the graduate student, major advisor, and all members of the graduate committee, the Written Comprehensive exam may consist of a grant proposal.

Requirements for Ph.D. Concentrations

Bioinformatics, Genomics, and Molecular Interactions

Bioinformatics is the retrieval and analysis of biochemical and biological data using mathematics and computer science. Students concentrating in bioinformatics, genomics, and molecular interactions can study biological sequencing and analysis of DNA and RNA, epigenetics, metagenomics and metatranscriptomics, phylogenomics, genotyping by sequencing, differential gene expression, population genomics, gene interactions and/or proteomics. A student with prior coursework and/or experience may petition the EPP faculty for a course exemption(s). An exemption may be granted by majority vote based on documentary evidence or written and/or oral exams.

Degree Requirements

Credit Hours Required: <u>48 beyond the M.S. degree or 72 beyond the baccalaureate degree</u>

- A candidate for the doctoral degree must complete a minimum of 24 credit hours of graduate course work numbered 503 or higher beyond the M.S. degree.
- Candidates not having an M.S. degree must complete a minimum of 48 credit hours of graduate course work beyond the baccalaureate degree, 24 credit hours of which must be numbered 503 or higher.
- A minimum of 12 of the 24 credit hours, or 30 of the 48 credit hours, must be graded A-F. At least 9 credit hours of the student's course work must be from outside the Entomology and Plant Pathology curriculum.

- A minimum of 6 credit hours of courses numbered 601 or higher must be taken at the University of Tennessee, excluding EPP 603.
- A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote based on documentary evidence or written and/or oral exams.
- EPP 570 Colloquium, 1 credit hour
- EPP 600 Doctoral Research and Dissertation, 24 credit hours
- EPP 622 Bioinformatics Applications, 3 credit hours
- EPP 640 Seminar, 1 credit hour
- EPP 675 Scientific Writing and Grantsmanship, 3 credit hours
- A minimum of 6 credit hours from entomology and plant pathology (EPP) courses, including EPP 410, EPP 411, EPP 425, EPP 485, EPP 505, EPP 508, EPP 509, EPP 512, EPP 516, EPP 523, EPP 530, EPP 531, EPP 548, EPP 552, EPP 552, EPP 561, EPP 575, EPP 630, EPP 633 and EPP 634.
- A minimum of 7 credit hours of elective coursework from within or outside EPP; the list of coursework outside EPP is not all-inclusive, as the course needs of individual student programs vary. Recommended courses include BCMB 510, BCMB 511, BCMB 512, BCMB 523, CEM 541, CBE 672, ENVE 561, ENVE 655, EEPS 590, LFSC 507, LFSC 520, LFSC 521, MICR 520, MICR 520 / LFSC 517, MICR 650, PLSC 552, PLSC 553, PLSC 554, and PLSC 653. In addition, special topics on bioinformatics are periodically offered in BCMB 520, EEPS 590, LFSC 595, and LFSC 695.
- Advanced quantitative methods course, 3 credit hours, is required. Recommended courses include BSE 564, COSC 505, COSC 526, COSC 565, EEB 560, EPP 633, EEP 634, PLSC 561, STAT 577, and STAT 579.

See below (pg. 33) for Additional Trainings and Non-Course Requirements for the PhD

Organismal Biology, Ecology, and Systematics Concentration

Organismal biology, ecology, and systematics includes the study of the life history of an organism including its interactions within communities and with the environment, as well as classification, taxonomy, and nomenclature. Topics may include biology and ecology of plant associated insects, nematodes and microbes; plant, human and animal disease vectors; arthropods associated with humans and their structures; disease epidemiology; host-pathogen, host-parasite, and host-parasitoid interactions; biology of biological control agents; entomopathogenic bacteria, fungi and nematodes; plant, insect, and nematode microbial symbioses; nematodes and insects as environmental bioindicators; pollinator biology and ecology, and forensic entomology.

Degree Requirements

Credit Hours Required: <u>48 beyond the M.S. degree or 72 beyond the baccalaureate degree</u>

- A candidate for the doctoral degree must complete a minimum of 24 credit hours of graduate course work numbered 503 or higher beyond the M.S. degree.
- Candidates not having an M.S. degree must complete a minimum of 48 credit hours of graduate course work beyond the baccalaureate degree, 24 credit hours of which must be numbered 503 or higher.
- A minimum of 12 of 24 credit hours, or 30 of 48 credit hours, must be graded A-F.
- At least 9 credit hours of the student's course work must be from outside the Entomology

and Plant Pathology curriculum

- A minimum of 6 credit hours of courses numbered 601 or higher must be taken at the University of Tennessee, excluding EPP 603.
- A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote based on documentary evidence or written and/or oral exams.
- EPP 570 Colloquium, 1 credit hour
- EPP 600 Doctoral Research and Dissertation, 24 credit hours
- EPP 640 Seminar, 1 credit hour
- EPP 675 Scientific Writing and Grantsmanship, 3 credit hours
- A minimum of 9 credit hours selected from EPP courses, including EPP 410, EPP 411, EPP 425, EPP 485, EPP 505, EPP 508, EPP 509, EPP 512, EPP 516, EPP 523, EPP 530, EPP 548, and EPP 552.
- A minimum of 7 credit hours of elective coursework selected from within or outside EPP; the list of coursework outside EPP is not all-inclusive, as the course needs of individual student programs vary. Recommended courses include CEM 504, CEM 507, CEM 601, CEM 602, EEB 509, and WFS 501.
- Advanced quantitative methods course, 3 credit hours. Recommended courses include ANSC 571 / PLSC 571, BSE 564, BZAN 553, EEB 560, FWF 525, PLSC 561, PLSC 571, STAT 531, STAT 573, STAT 577, STAT 578, and STAT 579.

See below (pg. 33) for additional trainings and non-course requirements for the PhD

Sustainable Disease and Integrated Pest Management Concentration

Sustainable disease and integrated pest management (SDIPM) systems provide economic means to reduce pest and disease losses while minimizing negative impacts on the environment. As the global population is expected to reach nine billion people by 2050, production systems will have to become more efficient to produce the quality and quantity of food needed to supply the world. SDIPM systems can provide solutions to positively impact food production and meet the increased global demand. SDIPM systems can also improve plant and animal health in forests, parks, landscapes, and other natural systems and enhance quality of life by balancing and reducing risks from pests and pesticides in residences and other human structures. These systems incorporate many disciplines, including entomology, nematology, plant pathology, weed science, animal science, veterinary medicine, public health, and food science.

Degree Requirements

Credit Hours Required: <u>48 beyond the M.S. degree or 72 beyond the baccalaureate degree</u>

- A candidate for the doctoral degree must complete a minimum of 24 credit hours of graduate course work numbered 503 or higher beyond the master's degree.
- Candidates not having a master's degree must complete a minimum of 48 credit hours of graduate course work beyond the baccalaureate degree, 24 credit hours of which must be numbered 503 or higher.
- A minimum of 12 of 24 credit hours, or 30 of 48 credit hours, must be graded A-F.
- At least 9 credit hours of the student's course work must be from outside the Entomology and Plant Pathology curriculum

- A minimum of 6 credit hours of courses numbered 601 or higher must be taken at the University of Tennessee, excluding EPP 603.
- A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote based on documentary evidence or written and/or oral exams.
- EPP 570 Colloquium, 1 credit hour
- EPP 600 Doctoral Research and Dissertation, 24 credit hours
- EPP 630 Advanced Integrated Pest and Pathogen Management, 3 credit hours
- EPP 640 Seminar, 1 credit hour
- EPP 675 Scientific Writing and Grantsmanship, 3 credit hours
- A minimum of 6 credit hours selected from EPP courses, including EPP 410, EPP 411, EPP 425, EPP 505, EPP 508, EPP 509, EPP 512, EPP 516, EPP 523, and EPP 530.
- A minimum of 7 credit hours of elective coursework selected from within or outside EPP; examples are provided below. This list is not all-inclusive, as the course needs of individual student programs vary. Recommended courses include EPP 548, EPP 561, PLSC 515, PLSC 552, and PLSC 634.
- Advanced quantitative methods course, 3 credit hours. Recommended courses include ANSC 571, BSE 564, EEB 560, FWF 525, PLSC 561, PLSC 571, STAT 531, STAT 577, STAT 578, STAT 579, and WFS 501.

Additional trainings and non-course requirements

- A minor is not required but may be selected at the option of the student. A minor includes 6 (minimum) to 12 (maximum) credit hours of graduate-level credit in the minor department.
- The student and the major advisor will select a minimum of three additional faculty members holding the rank of assistant professor or above, to serve on the student's doctoral committee. The responsibility of this committee is to assist the student in planning a program of study and carrying out research, and to assure fulfillment of the degree requirements.
 - The Department Head and Dean of the Graduate School must approve the major professor and committee members.
 - At least one member of the committee must be from outside the department.
 - If the student has a minor, one member of the committee must be a faculty member from the minor department to assist in designating courses required for the minor.
 - The doctoral committee should be formalized by the end of the second semester of graduate study.
- Required Professional Training provide evidence of training (certificate or test score) in EPP 570.
- Required Professional Trainings provide evidence of training (certificate or test score) in EPP 570.
 - Code of Conduct (UT K@TE)
 - Title IX (UT K@TE)
 - FERPA (UT K@TE)
 - \circ $\;$ Research Ethics training can be taken through CITI RCR.
 - IT Security Awareness (UT K@TE)
 - UT Emergency Preparedness Training (UT K@TE)
 - Environmental Health and Safety General Laboratory Safety (CANVAS)
 - <u>UTIA Programs for Minors</u>

- Students are expected to attend (in person or online) seminar (EPP 640) each academic semester of their Ph.D. program.
- Satisfactory preparation of a written dissertation proposal to the student's committee is required. The dissertation proposal must be completed during the first two semesters of graduate study and before enrollment in EPP 600.
- Both written and oral sections of the comprehensive examination must be passed. The written comprehensive exam can take the form of an examination or a grant proposal. Candidates will be tested on their knowledge of their proposed dissertation and related fields.
- Satisfactory preparation of a written dissertation and an oral defense to the student's doctoral committee are required.
- An oral final examination that covers the dissertation and coursework is required and must be passed to the satisfaction of the student's doctoral committee after the dissertation has been completed.
- An oral departmental seminar presentation on the dissertation is required.

Ph.D. Student Program Checklist GUIDELINES

Note: Newest Version of All Forms Mentioned Below Can Be Found at the Graduate School Forms Website - http://gradschool.utk.edu/forms-central/.

Always invite Department Head and/or Director of Graduate Studies to Committee Meetings. This is especially important if you foresee conflict.

<u>First Semester</u>

1. Contact major advisor.

NOTE: International students need to visit the student health services and the Center for Global Engagement (CGE) before reporting to the department

- 2. Complete departmental paperwork
 - Bring Passport or driver's license and Social Security card. International students must bring visa paperwork (I-20).
- 3. Bring Bank account number and Bank routing number. Assistantship stipends are paid via direct deposit to your bank account. Register for courses prior to your first semester. All students are required to enroll in courses their first semester, regardless of whether the first semester is spring, summer, or fall.
- 4. Develop first semester's coursework (including deficiencies and prerequisites)
- 5. Attend graduate student orientations provided by the Graduate School (https://gradschool.utk.edu/graduate-student-life/graduate-student-orientations/) and EPP.
- 6. Form a graduate advisory committee (preferably before first semester final exams)
 - Consult with the Graduate Director to ensure that the composition of your committee meets the criteria of the Graduate School
 - Submit Graduate Student Committee form to Department Head for signature and delivery to the Graduate School.
- 7. Schedule and convene your first committee meeting
 - Develop a plan, approved by your graduate advisory committee, for remaining coursework.
 - Obtain approval of the proposed research project from your committee.
- 8. Complete all required trainings.

Second Semester

- 9. Schedule and convene committee meeting to discuss academic and research progress
- 10. Schedule and present Ph.D. research proposal seminar (EPP 640, 1 credit hour). This can be done during your third academic semester.

Interim Semesters

11. Schedule and convene committee meetings to discuss academic and research progress

Semester Prior to Intended Graduation

12. Schedule and convene a committee meeting to discuss academic and research progress

13. Attend Dissertation Workshop

- 14. Complete oral and written Comprehensive Exams, report results on the Admission to Candidacy form, and submit to the Graduate School
- 15. Submit Graduation Application

Final Semester of Graduation

- 16. Give final exit seminar (EPP 640, 1 credit hour). *BUT <u>do not enroll</u> in EPP 640 to give your final dissertation defense seminar.*
- 17. Meet with Thesis/Dissertation Consultant for preliminary review of your dissertation.
- 18. Submit Scheduling of Defense of Dissertation Form.
- 19. Submit dissertation to graduate advisory committee at least 2 weeks prior to scheduled defense date and to department head 48 hours prior to scheduled defense date.
- 20. Defend your dissertation (oral examination)
- 21. Submit report of Final Examination (Pass/Fail) Form to the Graduate School
- 22. Submit dissertation to iThenticate and submit form to the Graduate School
- 23. Submit final dissertation (approved & accepted by Thesis/Dissertation Consultant)
- 24. In consultation with major advisor, decide whether your dissertation should receive an embargo.
- 25. Pay graduation fee at Bursar's office
- 26. Graduate Hooding Ceremony (optional)

Post-Graduation

- 27. Schedule an exit interview with Department Head
- 28. Return keys, computer or any other UT-owned items used during your studies

Graduate Minors in Entomology and Plant Pathology

NOTE: EPP will be transitioning to Graduate Certificates to replace our minors - stay tuned.

The Department of Entomology and Plant Pathology offers four different graduate minors. Graduate students who are in rolled in an EPP concentration that includes Bioinformatics are not eligible to enroll in the Bioinformatics: Agriculture and natural Resources minor. For students outside EPP, the student's graduate advisory committee must include a member of the faculty from the Department of Entomology and Plant Pathology who will be responsible for designating courses required for the minor.

A <u>minor in **Bioinformatics: Agriculture and Natural Resources**</u> requires 9 credit hours of bioinformatics-oriented 500-level courses or above (excluding EPP 500, EPP 502, EPP 503, EPP 600, EPP 603, EPP 640, and EPP 675).

A <u>minor in **Entomology and Plant Pathology**</u> requires 9 credit hours of course work in the department with at least 6 credit hours in 500-level courses and above (excluding EPP 500, EPP 502, EPP 503, EPP 600, EPP 603, EPP 640, and EPP 675).

An **Entomology** minor requires 9 credit hours of entomology-oriented 500-level or above courses in the department (excluding EPP 500, EPP 502, EPP 503, EPP 600, EPP 603, EPP 640, and EPP 675).

A <u>minor in **Plant Pathology**</u> requires 9 credit hours of plant pathology-oriented 500-level coursework or above in the department (excluding EPP 500, EPP 503, EPP 600, EPP 603, EPP 640, and EPP 675).

Graduate Minor in Statistics

The department also participates in a program designed to give EPP graduate students the opportunity to pursue a minor in statistics. See the <u>Intercollegiate Graduate Statistics and Data</u> <u>Science Program (IGSDSP)</u> for a description of the program in the Graduate Catalog and the IGSDSP website for approved courses. Please review the <u>currently approved list of faculty</u> who can serve on your graduate advisory committee as a representative of the IGSDSP if you select this program as a minor.

Composition of Graduate Advisory Committee for M.S. Students

- 1. Major Advisor
- 2. Two other faculty members (at the rank of assistant professor or above)
 - If the student has a minor, one member of the committee **must** be from the minor department
 - Two members of the M.S. committee **<u>must</u>** be from EPP, but it is recommended that one member of the committee be from outside the department or from one of the other departmental disciplines. For example, if you are in the plant pathology concentration, another committee member may be from bioinformatics.

Composition of Graduate Advisory Committee for Ph.D. Students

- 1. Major Advisor
- 2. Three Faculty members (at the rank of assistant professor or above)
 - Three of these four faculty members must be approved by the Graduate School to direct doctoral research.
 - At least one member of the Ph.D. committee must be from an academic unit other than the student's major field.

• Ph.D. students are encouraged where appropriate to seek a fifth member in the field of specialization from outside the university to serve on their dissertation committee.

Entomology & Plant Pathology (EPP) and Bioinformatics (BAES) Undergraduate Courses

BAES 111 – Introduction to Bioinformatics in Agriculture and Environmental Sciences 1 Credit Hour Lecture

This course introduces students to the intersection of agricultural science, environmental sciences, and bioinformatics, emphasizing the importance of data analysis in modern agriculture and ecology. It provides an overview of bioinformatics applications in agriculture, including genomics, proteomics, metabolomics, and big data approaches in ecology and climate-smart agriculture. Students will be introduced to basic computational tools and databases used in agricultural research. *Instructor: A. Onufrak*

BAES 202 – Fundamentals in Python Programming in Agriculture and Environmental Sciences

3 Credit Hours Lecture Vol Core EI, QR pending

This course introduces biology students to programming concepts using Python, with a focus on applications in agriculture and environmental sciences. It covers fundamental programming skills and problem-solving techniques to process, analyze, and visualize biological data in agriculture and environmental sciences. By the end of the course, students will develop practical skills to tackle biological challenges using computational tools. *Instructor: A. Onufrak*

BAES 203 – Data Structures for Bioinformatics in Agriculture and Environmental Sciences 3 Credit Hours Lecture Vol Core **QR pending**

This course is designed to provide students with a comprehensive understanding of data structures in Python, with a focus on their applications in bioinformatics of agriculture and environmental sciences datasets. Students will learn about various data structures, their implementations in Python, and how to use them effectively to solve biological problems. The course will cover both theoretical concepts and practical applications, emphasizing hands-on coding exercises and projects relevant to biological research. *Instructor: A. Onufrak*

BAES 204 – Data Algorithms for Bioinformatics in Agriculture and Environmental Sciences 3 Credit Hours Lecture

This course introduces students to fundamental algorithms used in bioinformatics, with a focus on their implementation in Python and applications in agriculture and environmental sciences. Students will learn about key computational approaches used to analyze biological data, including sequence alignment, phylogenetic tree construction, and genome assembly. The course emphasizes both the theoretical foundations of these algorithms and their practical application through hands-on coding exercises and projects. Students will gain experience in implementing, optimizing, and applying these algorithms to real biological datasets in agriculture and environmental sciences. *Instructor: A. Onufrak*

BAES 330 - Data Analysis Reproducibility

3 Credit Hours Lecture

This course is designed to equip students with the essential tools and principles to conduct rigorous, transparent, and reproducible bioinformatic analyses. By the end of this curriculum, students will be prepared for future academic or industry roles where these skills are increasingly valued. Practical sessions will be incorporated into each week, allowing students to gain hands-on experience with the tools and techniques discussed in lectures. These sessions will include guided exercises, peer code reviews, and troubleshooting workshops. *Instructor: G. Shirsekar*

BAES 405 - BioAg Careers: Growing Futures in Bioinformatics

1 Credit Hour Lecture Vol Core **OC pending**

This seminar-style course provides undergraduate students with a comprehensive overview of career opportunities in bioinformatics within agriculture and environmental sciences. Students will engage with professionals from academia, industry, and government who will share their career experiences, insights into emerging trends, and the skills necessary to succeed in bioinformatics roles that intersect with agriculture, food production, sustainability, biotechnology and environmental health. Students will explore career prospects in research, data science, agricultural genomics, precision farming, plant biotechnology, and environmental monitoring. This course is designed to help students make informed decisions about career paths and prepare them for future professional opportunities in the growing field of bioinformatics within sectors of agriculture and environmental sciences. *Instructor: A. Onufrak*

BAES 415 – Scientific Writing Essentials

1 Credit Hour Lecture, Vol Core WC pending

This course is designed to introduce students to the principles and practices of scientific writing in bioinformatics, agriculture, and environmental sciences. Students will learn to structure scientific papers, create effective figures and tables, and develop a clear writing style. The course covers various aspects of scientific communication, including literature reviews, research papers, and grant proposals. *Instructor: A. Onufrak*

BAES 422 – Agricultural Computational Genomics and Bioinformatics

1 Credit Hour Lecture

This course introduces students to the intersection of agricultural science, environmental sciences, and bioinformatics, emphasizing the importance of data analysis in modern agriculture and ecology. It provides an overview of bioinformatics applications in agriculture, including genomics, proteomics, metabolomics, and big data approaches in ecology and climate-smart agriculture. Students will be introduced to basic computational tools and databases used in agricultural research. *Instructor: M. Staton*

BAES 430 - Machine Learning in Agriculture

3 Credit Hours Lecture

This course examines the role of machine learning (ML) in modern agriculture and environmental science. Students will explore statistical methods and core ML techniques to enhance farming efficiency, predict crop yields, manage pests, analyze soil, optimize irrigation, and model climate patterns. Through hands-on coding assignments and projects, they will gain practical experience applying ML models to real-world agricultural and environmental datasets. research. *Instructor: B. Olukolu*

BAES 440 - Precision Agriculture Technologies

3 Credit Hours Lecture

This course introduces students to the integration of agricultural science, big data analytics, and advanced technologies in precision agriculture. It emphasizes the importance of data-driven decision-making in modern farming practices. Students will explore various aspects of precision agriculture, including data collection methods, sensing technologies, machine learning applications, and data management systems. The course covers novel applications of big data in agriculture beyond genomics, such as climate-smart farming, Internet of Things (IoT) in agriculture, and predictive modeling for crop management. *Instructor: TBD*

BAES 460 – Metagenomics and Microbiome Analysis in Agriculture and Environmental Sciences

3 Credit Hours Lecture

This course provides a comprehensive introduction to metagenomics and microbiome analysis, focusing on the study of microbial communities in various environments, including insect and plant-associated microbiomes. Students will learn theoretical concepts and practical skills in experimental design, sequencing technologies, bioinformatics, and data interpretation. The course

emphasizes hands-on experience with cutting-edge tools and techniques used in microbiome research. *Instructor: A. Onufrak*

BAES 492 – Internship in Bioinformatics for Agriculture and Environmental Science 3 Credit Hours Lecture

This course provides students with the opportunity to apply bioinformatics tools and techniques to address challenges in agriculture and environmental sciences. Students will engage in hands-on projects that integrate biological data analysis, computational modeling, and problem-solving to optimize agricultural productivity and study environmental systems. Through interdisciplinary collaboration and experiential learning, students will develop skills in programming, data visualization, and statistical analysis while exploring real-world applications in areas such as crop improvement, microbial interactions, and ecosystem management. This course prepares students for careers in bioinformatics, sustainable agriculture, and environmental research. *Instructor: A. Onufrak*

BAES 495 – Senior Seminar: Perspectives in Bioinformatics

1-4 Credit Hours, VOL Core AOC pending

This is a seminar course designed for senior students in the Bioinformatics major (focused on Agriculture and Environmental Sciences). The course focuses on student presentations of their internship or capstone experiences, fostering critical discussion of current trends, ethical considerations, and future directions in the field. Students will also develop professional skills essential for their careers. *Instructor: A. Onufrak*

BAES 498 – Senior Capstone: Perspectives in Bioinformatics for Agriculture and Environmental Sciences

1 Credit Hour Lecture

This senior capstone course integrates bioinformatics knowledge and skills with applications in agriculture and environmental sciences. Students will undertake a semester-long research project that addresses real-world challenges in sustainable agriculture, environmental management, or related fields using computational and data-driven approaches. *Instructor: A. Onufrak*

EPP 123 - Chocolate: Bean to Bar

3 Credit Hours Lecture, Vol Core GCI

Chocolate is one of the most popular foods in the world. More than 50 million people worldwide currently depend on chocolate (cacao) for their livelihood. Surprisingly, most people know very little about where chocolate comes from, the global impacts on various cultures, both historically and currently, or what "real" chocolate actually tastes like, despite the long history and association with chocolate. This course will introduce students to chocolate – the cacao plant and its associated pests and diseases, the underlying science, its history, and the impacts on past and current societies and cultures. *Instructor: A. Onufrak*

EPP 135 - Eaters of the Dead: Introduction to Forensic Entomology

3 Credit Hours Lecture, Vol Core NS

Forensic entomology is the study of insects and other arthropods in a criminal justice setting, specifically related to death, abuse, or neglect investigations. The topics covered in this class will serve as broad surveys of the various methods used in this field, as well as relevant research areas, future directions of the field, and the importance of this field to human society. This course will prepare students for higher level courses in biology and the forensic sciences. *Instructor: C. Owings*

EPP 201 - Impact of Insects and Plant Diseases on Human Societies

3 Credit Hours Lecture, Vol Core NS

Insects and plant diseases have had a significant influence on human history, culture, and lifestyles. The science of entomology and plant pathology helps humankind understand the impact of insects and plant pathogens on these dimensions of human existence. The development of strategies to capitalize on the beneficial aspects of these organisms will also be explored. *Instructor: K. Gwinn*

EPP 210 - Bugs: Bizarre, Beautiful, and Beneficial

3 Credit Hours Lecture, Vol Core NS

This course will introduce students to the diverse world of insects and the integral interactions between insects and humans. More than one million insect species have been described, with estimates ranging from 10 to 30 million species yet to be discovered. Scientists estimate that there are about 250 million insects for every human on earth and they comprise about 10% of the earth's weight and represent ca. 80 to 85% of all life on earth! Fortunately, only a small percentage of all insects cause us grief, anguish, pain, and misery. The majority of them may be classified as bizarre, beautiful, or beneficial! This course will focus on the role of insects in our world, with an emphasis on their beneficial contributions to our quality of life. *Instructor: C. Owings*

EPP 234 - Medicines and Drugs from Plants and Microbes

3 Credit Hours Lecture, Vol Core, NS

Plants and microbes are an abundant source of medicinal compounds and, until the end of the 19th century all drugs were natural products or minerals. Today, natural products often serve as chemical templates for drug design. The mission of this course is to promote understanding of medicines and drugs that are derived from natural sources. Students in this online course will develop critical thinking skills and an appreciation for the roles that plant- and microbe-derived compounds play in modern medicine use and abuse. *Instructor: K. Gwinn*

EPP 250 - The World of Fungi: Beneficial, Edible, Medicinal, Hallucinogenic, Pathogenic, Toxic, and Deadly

3 Credit Hours Lecture, <u>VOL Core **NS pending**</u>

The World of Fungi is a comprehensive exploration of the diverse fungal kingdom and the impact of fungi on human societies, plants, animals, and ecosystems, as well as their economic importance in various industries. The topics covered will broaden student knowledge on the benefits (food, medicines, waste decomposition), challenges (disease, toxins, food safety and security), and opportunities (industrial uses, environmental clean-up) created by fungi. This course will prepare students for higher level courses in biology, plant pathology, and microbiology. *Instructor: B. Ownley*

EPP 313 - Introductory Plant Pathology

3 Credit Hours Lecture and Lab, VOL Core NS pending

Introduction to microorganisms and environmental conditions causing disease in plants. Biology of pathogens, host-pathogen interactions, and disease development and principles of control. *Instructor: G. Kariyawasam*

EPP 321 - Introductory Entomology

3 Credit Hours Lecture and Lab, VOL Core NS pending Structure, life history, habits, and principles of control of important insect pests of farm, garden, orchard, and household. *Instructor: K. Coffman*

EPP 410 - Diseases and Insects of Ornamental Plants

3 Credit Hours Lecture VOL Core pending

Symptoms, identification, and management of diseases and insect pests that affect plants in greenhouse, nursery, and landscape environments. *Instructor: J. Grant*

EPP 411 - Forest Insects and Diseases

3 Credit Hours Lecture, VOL Core NS pending Insects and pathogens associated with trees and shrubs will be identified and their impacts on host plants evaluated. *Instructors: D. Hadziabdic and J. Grant*

EPP 425 - Medical and Veterinary Entomology

3 Credit Hours Lecture, VOL Core EI

Identification, biology, and control of arthropod parasites of humans and animals. The course focuses on arthropods and their biology, life histories, habitats, hosts, and options for management.

Review and discussion of sampling/monitoring methods and decision-making guidelines to managing vector-borne diseases will also be addressed. Graduate students will be required to complete an in-depth research project that requires manuscript submission for publication. *Instructor: R. Trout Fryxell*

EPP 435 - Molecular Plant-Microbe Interaction (MPMI)

3 Credit Hours Lecture

This course provides an in-depth exploration of the molecular and cellular processes underlying interactions between plants and microbes, encompassing both beneficial and pathogenic relationships. Through a combination of lectures, hands-on activities, and critical discussions, students will investigate historical and modern advancements in Molecular Plant-Microbe Interactions (MPMI) research. The course is organized into six comprehensive modules covering fundamental concepts such as pathogen virulence mechanisms, plant immune responses, beneficial symbioses, and cutting-edge tools and applications in agriculture. Key topics include microbial effectors, host-pathogen co-evolution, plant defense signaling, and the role of beneficial microbes in promoting plant growth and nutrient acquisition. Students will gain practical experience in molecular and bioinformatics techniques, such as genome sequencing, bioinformatics in genome editing, and protein interaction studies, which are vital for characterizing MPMI. The course also emphasizes translating MPMI knowledge into agricultural innovations, such as engineering disease-resistant crops and developing biofertilizers. *Instructor: G. Kariyawasam*

EPP 445 - Plant Immunity: Systems and Evolution

3 Credit Hours Lecture

This course explores the intricate world of plant defense mechanisms, from their historical discovery to cutting-edge applications. Students will delve into the molecular and cellular components of plant immune systems, analyzing how plants recognize and respond to pathogens. The course covers the genomic architecture of immunity genes and the evolutionary processes shaping plant-pathogen interactions. By examining traditional and modern disease resistance approaches, students will gain practical insights into crop improvement strategies. This interdisciplinary course equips learners with the knowledge to understand complex immune networks and apply this understanding to enhance agricultural sustainability and food security. *Instructor: G. Shirsekar*

EPP 455 - Public Health Entomology

3 Credit Hours Lecture, VOL Core EI, NS

This field-based course is designed to provide students with practical knowledge and skills in entomology related to public health. Students will learn to collect and identify vector species, understand vector-borne diseases, and gain hands-on experience in screening vectors for different pathogens for developing vector and vector-borne disease surveillance programs. This course integrates fieldwork with laboratory work and minimal classroom lectures, providing real-world applications and exposure to challenges faced in public health entomology. *Instructor: R. Trout Fryxell*

EPP 461 - Insect Physiology

3 Credit Hours Lecture

Molecular, cellular, and tissue mechanisms involved in relevant physiological processes in insects, and the evolutionary diversity of these processes among insect taxa. Students will be able to identify and understand emerging areas of research in insect physiology and molecular biology. *Instructor: J.L. Jurat-Fuentes*

EPP 465 - Insect - Microbe Interactions

3 Credit Hours Lecture

This course explores the fascinating world of insect-microbe interactions through the lens of bioinformatics. Students will learn to apply computational tools and techniques to analyze the complex relationships between insects and microorganisms, including pathogens, symbionts, and vectored microbes. The course will cover fundamental concepts in entomology, microbiology, and

bioinformatics, with a focus on how these fields intersect to advance our understanding of insectmicrobe biology, ecology, and evolution. *Instructor: K. Coffman*

EPP 485 - Advanced Forensic Entomology

4 Credit Hours Lecture and Lab, VOL Core EI

This course will take a deep dive into the field of forensic entomology, specifically examining the biology and ecology of relevant arthropods; currently accepted practices, methodologies, and research avenues; and ethical considerations for serving as an expert witness in the United States. Students will become familiar with the morphology and taxonomic identification of larval and adult stages of relevant arthropods and pertinent molecular methods to identify unknown samples through experiential learning conducted in the laboratory and at the Anthropology Research Facility (i.e., The Body Farm). Students will perform a mock minimum-time-since-death estimation and craft a written case report. *Contact Hour Distribution: 4 credits (3 hours lecture, integrated 3 hour lab). (DE) Prerequisite(s): Twelve hours of biology (BIOL) and/or anthropology (ANTH), or consent of instructor.* **Instructor: C. Owings**

EPP 493 - Independent Study in Entomology or Plant Pathology

1-4 Credit Hours, VOL Core pending

Laboratory, field, or library research in entomology, plant pathology, or integrated pest management under the guidance of a faculty member. *Instructor: varies*

EPP 499 - Undergraduate Research

1-3 Credit Hours, VOL Core pending

Experience in research projects under supervision of faculty. Student should make arrangements for research project with faculty instructor prior to enrollment. *Instructor: varies*

Entomology and Plant Pathology Graduate Courses

EPP 410 - Diseases and Insects of Ornamental Plants (approved for UG credit)

3 Credit Hours Lecture Symptoms, identification, and management of diseases and insect pests that affect plants in greenhouse, nursery, and landscape environments. *Instructor: J. Grant*

EPP 411 - Forest Insects and Diseases (approved for UG credit)

3 Credit Hours Lecture Insects and pathogens associated with trees and shrubs will be identified and their impacts on host plants evaluated. *Instructors: D. Hadziabdic and J. Grant*

EPP 425 - Medical and Veterinary Entomology (approved for UG credit)

3 Credit Hours Lecture

Identification, biology, and control of arthropod parasites of humans and animals. The course focuses on arthropods and their biology, life histories, habitats, hosts, and options for management. Review and discussion of sampling/monitoring methods and decision-making guidelines to managing vector-borne diseases will also be addressed. Graduate students will be required to complete an in-depth research project that requires manuscript submission for publication. *Instructor: R. Trout Fryxell*

EPP 435 - Molecular Plant-Microbe Interaction (MPMI) (approved for UG credit)

3 Credit Hours Lecture

This course provides an in-depth exploration of the molecular and cellular processes underlying interactions between plants and microbes, encompassing both beneficial and pathogenic relationships. Through a combination of lectures, hands-on activities, and critical discussions, students will investigate historical and modern advancements in Molecular Plant-Microbe Interactions (MPMI) research. The course is organized into six comprehensive modules covering fundamental concepts such as pathogen virulence mechanisms, plant immune responses, beneficial symbioses, and cutting-edge tools and applications in agriculture. Key topics include microbial effectors, host-pathogen co-evolution, plant defense signaling, and the role of beneficial microbes in promoting plant growth and nutrient acquisition. Students will gain practical experience in molecular and bioinformatics techniques, such as genome sequencing, bioinformatics in genome editing, and protein interaction studies, which are vital for characterizing MPMI. The course also emphasizes translating MPMI knowledge into agricultural innovations, such as engineering disease-resistant crops and developing biofertilizers. *Instructor: G. Kariyawasam*

EPP 445 - Plant Immunity: Systems and Evolution (approved for UG credit)

3 Credit Hours Lecture

This course explores the intricate world of plant defense mechanisms, from their historical discovery to cutting-edge applications. Students will delve into the molecular and cellular components of plant immune systems, analyzing how plants recognize and respond to pathogens. The course covers the genomic architecture of immunity genes and the evolutionary processes shaping plant-pathogen interactions. By examining traditional and modern disease resistance approaches, students will gain practical insights into crop improvement strategies. This interdisciplinary course equips learners with the knowledge to understand complex immune networks and apply this understanding to enhance agricultural sustainability and food security. *Instructor: G. Shirsekar*

EPP 455 - Public Health Entomology (approved for UG credit)

3 Credit Hours Lecture, VOL Core EI, NS

This field-based course is designed to provide students with practical knowledge and skills in entomology related to public health. Students will learn to collect and identify vector species, understand vector-borne diseases, and gain hands-on experience in screening vectors for different pathogens for developing vector and vector-borne disease surveillance programs. This course integrates fieldwork with laboratory work and minimal classroom lectures, providing real-world applications and exposure to challenges faced in public health entomology. *Instructor: R. Trout Fryxell*

EPP 461 - Insect Physiology (approved for UG credit)

3 Credit Hours Lecture

Molecular, cellular, and tissue mechanisms involved in relevant physiological processes in insects, and the evolutionary diversity of these processes among insect taxa. Students will be able to identify and understand emerging areas of research in insect physiology and molecular biology. *Instructor: J.L. Jurat-Fuentes*

EPP 465 - Insect -Microbe Interactions (approved for UG credit)

3 Credit Hours Lecture

This course explores the fascinating world of insect-microbe interactions through the lens of bioinformatics. Students will learn to apply computational tools and techniques to analyze the complex relationships between insects and microorganisms, including pathogens, symbionts, and vectored microbes. The course will cover fundamental concepts in entomology, microbiology, and bioinformatics, with a focus on how these fields intersect to advance our understanding of insect-microbe biology, ecology, and evolution. *Instructor: K. Coffman*

EPP 485 - Forensic Entomology and Crime Scene Investigations (approved for UG credit) 3 Credit Hours Lecture and Lab

This course will take a deep dive into the field of forensic entomology, specifically examining the biology and ecology of relevant arthropods; currently accepted practices, methodologies, and research avenues; and ethical considerations for serving as an expert witness in the United States. Students will become familiar with the morphology and taxonomic identification of larval and adult stages of relevant arthropods and pertinent molecular methods to identify unknown samples through experiential learning conducted in the laboratory and at the Anthropology Research Facility (i.e., The Body Farm). Students will perform a mock minimum-time-since-death estimation and craft a written case report. *Instructor: C. Owings*

EPP 500 - Thesis

1-15 Credit Hours

Grading Restriction: P/NP only. Repeatability: May be repeated. Max. 15 hours; Credit Level Restriction: Graduate credit only. Registration Restriction: M.S.-Entomology & Plant Pathology. Instructor: varies

EPP 502 - Registration for Use of Facilities

1-15 credit hours. Required for students not otherwise registered during any semester when student uses university facilities and/or faculty time before degree is completed. *Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated; Credit Restriction: May not be used toward degree requirements. Credit Level Restriction: Graduate credit only; Instructor: D. Shoemaker*

EPP 503 - Non-Thesis Project / Practicum

1-4 Credit Hours

Field, laboratory, or library project under the supervision of a faculty member. *Grading Restriction:* Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 4 hours. Registration Restriction(s): Available only to: Entomology and Plant Pathology major, M.S., in the non-thesis option. **Instructor: varies**

EPP 505 - Mycology

3 Credit Hours Lecture

Survey of the fungal kingdom and traditional allies in the context of phyla and taxonomic classes. Topics include systematics, biology, reproduction, structure-function, physiology, genetics, mycotic diseases of animals and plants, mycotoxins, hallucinogens, and poisons, insect-fungal associations, composting, edible mushrooms, industrial uses of fungi, fermented food and beverages, and fungal ecology. *Instructor: B. Ownley*

EPP 508 - Plant Health Diagnostics - Field Crops

3 Credit Hours - One-week summer workshop offered in even years at the West TN Research and Education Center in Jackson, TN. Practical experience diagnosing plant health problems caused by insects, nematodes, microbial pathogens, and abiotic stresses of field crops. Students will use modern plant health diagnostics tools and techniques, both in the laboratory and field, to diagnose plant health problems of agronomic row crops. *Instructors: H. Kelly and S. Brown*

EPP 509 - Plant Health Diagnostics - Horticulture and Specialty Crops

3 Credit Hours - One-week summer workshop offered in odd years at the Soil, Plant, and Pest Center in Nashville, TN. Practical experience diagnosing plant health problems caused by insects, nematodes, microbial pathogens, and abiotic stresses. Students will use modern plant health diagnostics tools and techniques both in the laboratory and field to diagnose health problems of horticultural crops, orchard, and specialty crops in fields, orchards, forests, and urban landscapes. *Instructors: M. Gireesh and N. Ranabhat*

EPP 512 - Soilborne Plant Pathogens

3 Credit Hours Lecture

Causal agents; host-parasite-soil environment interactions; epidemiology; detection and identification of soilborne plant pathogens; biological, cultural, and chemical control. *Instructor: B. Ownley*

EPP 516 - Biopesticides

3 Credit Hours Lecture

Plant protection; natural products; international issues in crop protection. The history of biopesticides, their modes of actions, challenges, and trends in biopesticide development, and biopesticides in integrated pest management systems will be discussed. *Instructor: K. Gwinn*

EPP 523 - Field Crop and Vegetable Entomology

3 Credit Hours Lecture and Lab

Identification, biology, ecology, and management of insects affecting field crops, commercial vegetables, and home garden crops. *Recommended Background: EPP 321 or basic entomology course. Instructor: J. Grant*

EPP 530 - Integrated Pest Management

3 Credit Hours Lecture Principles and application of biological, cultural, genetic, behavioral, and chemical methods of control to maintain pest populations below economic threshold levels. *Cross Listed: PLSC 530. Recommend Background: EPP 321 or consent of instructor.* **Instructor: J. Grant**

EPP 531 - Nematology

3 Credit Hours Lecture and Lab

Survey of the phylum Nematoda, including free-living, insect-parasitic, vertebrate-parasitic, and plant-parasitic groups. Emphases will be on identification, collecting methodologies, economic importance, and applications to pest management and soil health. *Recommended Background: 8 hours of biology.* **Instructor: E. Bernard**

EPP 531 - Plant Virology

3 Credit Hours Lecture

Symptomatology, epidemiology, and management of virus infection; structure, morphology, replications, transmission, purification, characterization, and classification of plant viruses; serology; plant pathogenic viroids, mycoplasmas and spiroplasmas. *Recommended background: EPP 313 or introductory plant pathology.* **Instructor: R. Hajimorad**

EPP 531 - Special Problems in Entomology, Nematology and Plant Pathology

Credit Hours 1-3. Comprehensive individual study of current problems. *Repeatability: May be repeated. Maximum 9 hr. Instructors: varies*

EPP 531 - Writing Essentials

1 Credit Hour; Online

Writing Essentials is designed to help you get ideas on finding literature to support your thesis work; practice writing abstracts for presentations, theses, and manuscripts; develop attractive and informative resumes and cover letters; get hints for writing extension, popular press, and newspaper articles; practice writing a two-page grant proposal to supplement your graduate stipend/research. *Instructor: R.N. Trigiano*

EPP 548 - Taxonomy of Adult Insects

4 Credit Hours Lecture and Lab

Classification, phylogeny, and distribution of insects and related arthropods. Lectures on theory and practice of insect systematics and major features of insect evolution. Laboratory practice on methods of collection, preservation, and study of insects, with emphasis on order and family identification of adults. Substantial insect collection, one or more field trips, and a taxonomically oriented project required. *Instructors: J. K. Moulton and E. Bernard*

EPP 552 - Insect Morphology

3 Credit Hours Lecture and Lab

Identification of insect structures and relevance of structures to insect development, survival, physiology, and classification. *Instructor: J. K. Moulton*

EPP 561 - Insect Physiology

3 Credit Hours Lecture

Molecular, cellular, and tissue mechanisms involved in relevant physiological processes in insects, and the evolutionary diversity of these processes among insect taxa. Students will be able to identify and understand emerging areas of research in insect physiology and molecular biology. *Recommended background: Biochemistry, molecular biology, basic cell biology. Instructor: J. L. Jurat-Fuentes*

EPP 570 - Entomology and Plant Pathology Colloquium

1 Credit Hour Lecture

Professional development and other essential topics for new Graduate Students, who are enrolled in a graduate academic program in the Department of Entomology and Plant Pathology. *Instructors: B. Ownley and D. Shoemaker*

EPP 575 - Introduction to RNASeq

1 Credit Hour

Computational analysis of RNASeq data. Students will learn the basics of using a command line interface on UT's Linux-based computational resources to analyze RNASeq data. Basic steps such as quality assessment, read mapping and differential gene expression statistical analysis will be covered. *Instructor: M. Staton*

EPP 600 - Doctoral Research and Dissertation

3-15 Credit Hours Grading Restriction: P/NP only Repeatability: May be repeated. Registration Restriction(s): Doctor of Philosophy - Entomology, Plant Pathology, and Nematology major. Ph.D. students only. **Instructor:** varies

EPP 602 - Advanced Topics in Entomology

1-3 Credit Hours

Morphology, systematics, physiology, ecology and genetics of arthropods, apiculture, medical and veterinary entomology, insect biodiversity, insect pathology. *Repeatability: May be repeated. Maximum 12 hours. Registration Restriction(s): Minimum student level – graduate.* **Instructor: varies**

EPP - 603 Research Planning

1-15 Credit Hours

Preliminary research and investigation of dissertation research topic. *Grading Restriction: P/NP only Repeatability: May be repeated. Maximum 15 credit hours.* **Instructors: varies**

EPP 604 - Advanced Topics in Plant Pathology

1-3 Credit Hours

Biological control, disease diagnosis and management, epidemiology, fungal plant pathogens, integrated pest management, molecular plant-microbe interactions, nematology, plant pathogenesis, plant pathogenic bacteria, soil and seed-borne pathogens, and virology. *Repeatability: May be repeated. Maximum 12 hours. Registration Restriction(s): Minimum student level – graduate. Instructor: varies*

EPP 606 - Advanced Topics in Nematology

1-3 Credit Hours

Specialized instruction on systematics, physiology, ecology, genetics, genomics, and evolution of nematodes, plant, insect, mollusk, medical and veterinary nematology, nematode biodiversity, entomopathogenic nematodes, nematode-microbe interactions, plant-nematode interactions, and biological control. *Repeatability: May be repeated. Maximum 12 hours. Registration Restriction(s): Minimum student level – graduate.* **Instructor: varies**

EPP 622 - Bioinformatics Applications

3 Credit Hours Lecture and Lab

Fundamental bioinformatics concepts, principles, and techniques with a focus on the application of bioinformatics to problems in agriculture. Laboratory practical will be taught within a LINUX computational environment where students will gain basic skills in bash and python scripting and construction open source-software based workflows to analyze genomic data. *Prerequisite(s): Life Sciences 520 or introductory genetics course. Registration Restriction(s): minimum student level – graduate.* **Instructor: M. Staton**

EPP 630 - Advanced Integrated Pest and Pathogen Management

3 Credit Hours Lecture

Use of principles and concepts of IPM to focus on real-life, practical applications of IPM programs. This course builds on EPP 530/PLS 530: Integrated Pest Management [IPM]), where students are introduced to principles and concepts of pest and plant disease management and investigate its importance as an environmentally sound practice based on economic, ecological, and sociological consequences. EPP 630 extends these concepts to focus on real-life, practical applications of IPM programs. The course will have a seminar-type format with presentations, guest lecturers, and field trips to both regulatory centers and businesses that have implemented IPM programs. *Prerequisite: EPP 530/PLS 530.* **Instructor: J. Grant**

EPP 633 - Statistical Genetics and Genomics

3 Credit Hours Lecture

Statistical concepts for analysis of genetic and genomics data using classical and state-of-the- art analytical methods. Basic UNIX scripting and R programming, as well as fundamental genetic and - omics principles will be taught. Class activities will include a combination of lectures, review of literature, and hands-on experience with real data sets. The goal is to understand basic analytical concepts to equip students for independent learning. *Registration Restriction(s): minimum student level – graduate.* **Instructor: B. Olukolu**

EPP 634 - Statistical Genetics and Genomics Laboratory

1 Credit Hour

Experiential learning of Basic UNIX scripting and R programming and analysis of real data sets to equip students for independent learning. Laboratory topics include data wrangling and visualization, Quality filtering NGS data, haplotype-based variant calling/filtering, metagenomic profiling, genetic linkage map construction, QTL analysis, genome-wide association analysis

(GWAS), genomic prediction, and meta-analysis (phenotypic, genomic, and metagenomic data. *Registration Restriction(s): minimum student level – graduate.* **Instructor: B. Olukolu**

EPP 640 - Seminar

1 Credit Hour Presentation of research proposals and research (dissertation or thesis) seminars by students. Presentations on current topics by outside speakers *Registration Restriction(s): Minimum student level – graduate. Grading Restriction: Satisfactory/No Credit grading only.* **Instructor: C. Owings**

EPP 675 - Scientific Writing and Grantsmanship

3 Credit Hours Lecture

Preparation of scientific evidence for the thesis or dissertation in scientific journals, parts of the scientific paper, graphical and tabular presentation of data, sources of funding to support research, authoring research grants, the editorial process, elements of style, and ethics. *Registration Restriction(s): Minimum student level – graduate.* **Instructor: TBD**

Entomology and Plant Pathology Graduate Course Schedule – will be revised in July 2025					
Course	FALL Odd years	SPRING Even years	Summer	FALL Even years	SPRING Odd years
410		410: Insects and Diseases of Ornamental Plants			
411	411: Forest Insects and Diseases			411: Forest Insects and Diseases	
425		425: Medical and Veterinary Entomology			
485			485: Forensic Entomology and Crime Scene Investigations		
500	500: Thesis	500: Thesis	500: Thesis	500: Thesis	500: Thesis
502	EPP 502: Registration for Use of Facilities	EPP 502: Registration for Use of Facilities	EPP 502: Registration for Use of Facilities	502: Registration for Use of Facilities	EPP 502: Registration for Use of Facilities
503	503: Non-thesis Project/Practicum	503: Non-thesis Project/Practicum	503: Non-thesis Project/Practicum	503: Non-thesis Project/Practicum	503: Non-thesis Project/Practicum
505				505: Mycology	
508			508: Plant Health Diagnostics - Field Crops (odd years)		
509			509: Plant Health Diagnostics - Horticulture & Specialty Crops (even years)		
512					512: Soilborne Plant Pathogens
516		516: Biopesticides			
520					531: Nematology
521		531: Plant Virology			
523	523: Field Crop & Vegetable Insects				
530				530: Integrated Pest Management	
531	531: Special Problems in Entomology & Plant Pathology	531: Special Problems in Entomology & Plant Pathology	531: Special Problems in Entomology & Plant Pathology	531: Special Problems in Entomology & Plant Pathology	531: Special Problems in Entomology & Plant Pathology

Course	FALL Odd years	SPRING Even years	Summer	FALL Even years	SPRING Odd years
548	548: Taxonomy of Adult Insects				
552		EPP 552: Insect Morphology			
561					561: Insect Physiology
570	570: EPP Colloquium			570: EPP Colloquium	
575			575: Introduction to RNASeq (odd years)		
600	600: Doctoral Research and Dissertation	600: Doctoral Research and Dissertation	600: Doctoral Research and Dissertation	600: Doctoral Research and Dissertation	600: Doctoral Research and Dissertation
602	602: Advanced Topics in Entomology	602: Advanced Topics in Entomology	602: Advanced Topics in Entomology	602: Advanced Topics in Entomology	602: Advanced Topics in Entomology
603	603: Research Planning	603: Research Planning	603: Research Planning	603: Research Planning	603: Research Planning
604	604: Advanced Topics in Plant Pathology	604: Advanced Topics in Plant Pathology	604: Advanced Topics in Plant Pathology	604: Advanced Topics in Plant Pathology	604: Advanced Topics in Plant Pathology
606	606: Advanced Topics Nematology	606: Advanced Topics Nematology	606: Advanced Topics Nematology	606: Advanced Topics Nematology	606: Advanced Topics Nematology
622				622: Bioinformatics Applications	
630					630: Advanced IPM
633	633: Statistical Genetics and Genomics				
634	634: Statistical Genetics and Genomics Laboratory				
640	640: Seminar	640: Seminar		640: Seminar	640: Seminar
675		675: Scientific Writing & Grantsmanship			675: Scientific Writing & Grantsmanship

Note: This schedule is accurate as of August 2024. Some courses are taught on an as-needed basis and instructors may teach in different semesters than indicated. The on-line timetable will be accurate for the current semester. To confirm the availability of a course in future semesters, check with the instructor. For Special Problem and Advanced Topic courses, check with your major advisor.

Seminar (EPP 640)

All students pursuing a graduate degree in the Department of Entomology and Plant Pathology are required to give a seminar in EPP 640 (1 credit). Due to the timing of research defense seminars, these may be given outside of the traditional seminar hour or course. The seminar course is not offered in the summer.

- **M.S. non-thesis option students** are required to present a project seminar any semester in EPP 640 for credit. A total of one seminar will be given by these students.
- **M.S. thesis option students** are required to present a research proposal in EPP 640 for credit and a research defense seminar (not for credit). A total of two seminars will be given by these students.
- **Ph.D. dissertation students** are required to present a research proposal in EPP 640 for credit and a research defense seminar (not for credit). A total of two seminars will be given by these students.
- **Concurrent M.S./Ph.D. students** are required to present a research proposal for each degree and an exit seminar for each degree (not for credit). Thus, during their M.S. work they will register once for EPP 640 and during their Ph.D. work they will register again for EPP 640. A total of four seminars will be given by these students.

While seminar is a formal course in the department, <u>all graduate students in EPP are required</u> <u>to attend all seminars</u>. Exceptions include class conflicts, required field research, and scientific meetings. In the case of anticipated conflicts, students should contact the course instructor prior to the seminar. Attendance will be recorded at the seminar and the results forwarded to the Graduate Studies Committee.

Research Proposal Seminar – Students should work closely with their major advisors to develop their seminar to present it in their second (M.S.) or third (Ph.D.) academic semester.

Exit Seminar – Upon completion (or near completion) of the thesis/dissertation research, all students and M.S. students must present a final thesis/dissertation seminar to the department. While the department prefers Exit Seminars during the Seminar session, Exit Seminars outside of the allotted seminar time are allowed (see more below). A student cannot enroll in EPP 640 during the final semester.

Format and General Instructions

- 1. Seminars will be recorded and stored for at least one year on the cloud. This link will be shared upon request.
- 2. If the student is presenting a seminar in EPP 640, please contact the instructor of record for EPP 640 for any questions or concerns they may have about the electronic technology pertinent to the seminar presentation.
- 3. Students presenting seminars outside of EPP 640 (e.g., Exit Seminar) are responsible for booking the room, managing the Zoom and presentation technology, and working with the front office staff to ensure the department is notified of the seminar time and location at least two weeks ahead of time. The Graduate School requires that public notification be sent university- wide to announce the defense seminars of PhD students. These students are also required to record their defense seminar and provide the recording (may be a zoom link) to the SPAC committee chair (currently Dr. Trout Fryxell) within 14 days of the exit seminar.
- 4. After the seminar, the SPAC committee evaluates the seminar according to the MS/PhD learning outcomes rubric. The rubric is meant to assess program gains for the student, results will not impact the student.

Seminar Length

Research Proposal Seminars (M.S. and Ph.D.) will last for a maximum of 25 minutes, including 5-10 minutes for questions and answers.

Exit Seminars (non-thesis M.S., M.S., and Ph.D.) will last for 50 minutes, which includes 10 to 15 minutes for questions and answers.

Announcing Seminar

Seminars must be announced with a flyer and an abstract.

Written abstracts are limited to 250 words for M.S. and PhD seminars. The quality of the abstract will be evaluated as part of the student's grade.

The flyer should be designed to capture attention when dispersed electronically or printed and posted publicly. Keep in mind that the seminar announcement flyer is viewed by a wide range of readers. Provide an image or group of images, which clearly represents the content of the seminar. Keep the flyer and images as simple as possible with a high resolution. At a minimum, the flyer should include the seminar title, speaker, date, and location of the seminar. The abstract and flyer should be announced (email and printed/posted) at least one week before the seminar. If the presentation is part of EPP 640, the abstract and flyer must be delivered to the instructor of record for distribution to all the departmental faculty, students, and staff. If the student is preparing their presentation outside of EPP 640, the student must ensure that the abstract and flyer are delivered to all departmental faculty, students, and staff via email (work with the EPP front office staff).

Grading

Final grades are decided by the instructor of record. These will be based on title, timeliness of abstract submission, flyers, quality of abstracts, and attendance.

Research Support and Work

If you received a teaching or research assistantship, you are a part-time employee of the State of Tennessee. All state employees are required to follow state and university regulations involving work schedules and productivity. You must pay attention to all e-mail messages to you from your major advisor, department head, graduate director, faculty, staff, Graduate School, and university officials. You are required to maintain contact with your major advisor, effectively communicating your whereabouts and any planned or unplanned absence from work.

Assistantships are awarded to the department in lieu of additional technical support. Therefore, GRAs on departmental funding are expected to perform in a support capacity in addition to their own thesis or dissertation research projects. This requires working the hours mutually agreed upon by the GRA and the major advisor. Hours working in the lab on nonacademic projects should not exceed 20 hours. Students must keep their major professor apprised of any difficulties in meeting their workload or their work in a support capacity.

The work responsibilities for GRAs may include:

- 1. Student's own thesis or dissertation research, when agreed upon by both student and major advisor, and is to be considered a priority.
- 2. Major advisor's research.
- 3. Research of other project leaders in the department.
- 4. Other duties as assigned.

Termination of Assistantship or Dismissal from the Program

Termination of a GRA's assistantship or dismissal from the program may be recommended by the student's committee for poor scholarship, lack of research progress, or failure to comply with University of Tennessee, Herbert College of Agriculture, or departmental guidelines.

Thesis or Dissertation and Ithenticate

It is the responsibility of the student to submit a thesis or dissertation based on substantial original research conducted by the student. The thesis or dissertation must be completed to the satisfaction of the major advisor and graduate advisory committee and the student must furnish an approved electronic copy of the thesis or dissertation (ETD) to the Office of Graduate Student Services, department, major advisor, and each committee member who requests one.

Prior to submission to the Graduate School, all theses and dissertations must be submitted to iThenticate software to check for plagiarism. The major advisor must work with the student to ensure that potential plagiarism is corrected prior to submission to the Graduate School. The major advisor must also sign a form that acknowledges the Thesis/Dissertation has been checked for plagiarism with iThenticate. Access to the UTK sponsored iThenticate software and additional information can be found at: https://gradschool.utk.edu/thesesdissertations/using- ithenticate.

A draft of the thesis or dissertation should be presented to each member of the graduate advisory committee for critique 2 weeks prior to the oral examination. Failure to comply with this time requirement may result in extending the time necessary for completion of the M.S. or Ph.D. program. A copy of the draft is to be made available to the department head, or designee, 24 hours (thesis) or 48 hours (dissertation) prior to the final exam.

Admission to Candidacy - M.S. Degree

Admission to Candidacy indicates agreement among the student's committee that the student has demonstrated the ability to do acceptable graduate work maintaining at least a 3.0 average in all graduate coursework), and that satisfactory progress has been made toward a degree. This action connotes that all prerequisites to admission have been completed, and a program of study has been approved. The Admission to Candidacy Form must be signed by the student, major advisor, graduate advisory committee members, and the EPP Director of Graduate Studies. All courses to be used for the degree must be listed, including transfer coursework. **The form must be submitted to the Graduate School by the deadline, which will occur at the end of the semester preceding the semester in which the student plans to graduate. The form can be revised after the deadline!**

Admission to Candidacy - Ph.D. Degree

Admission to Candidacy indicates agreement that the student has demonstrated the ability to do acceptable graduate work, and that satisfactory progress has been made toward a degree. This action connotes that all prerequisites to admission have been completed, and a program of study has been approved. A student may be admitted to candidacy for the doctoral degree after passing the written and oral comprehensive examinations and maintaining at least a 3.0 average in all graduate coursework. Each student is responsible for filing the Admission to Candidacy Form, which lists all graduate courses to be used for the degree, including courses taken at the University of Tennessee, Knoxville, or at another institution prior to admission to the doctoral program. The form must be signed by the student, major advisor, graduate advisory committee members, and the EPP Director of Graduate Studies. Admission to candidacy must be applied for and approved

by the Graduate School at least one full semester prior to the date the degree is to be conferred.

Expectations to Participate in Professional Conferences

Graduate students are expected to participate in professional scientific society meetings during their program. They are expected to give oral or poster presentations at these meetings. With approval of the major advisor, funding is available through EPP (Thompson Student Development Fund), Herbert College, AgResearch, the Plant Research Center, and the Graduate Student Senate to cover the costs of travel to professional conferences. In addition, most professional scientific societies offer opportunities for competitive funding for meeting travel. Students are strongly encouraged to seek these opportunities also.

Residency Requirements (in-state and out-of-state) (Graduate Catalog)

Initial residency classification is determined by a designated staff member from information included on the UT Graduate Application for Admission. Notice of residency classification is included in the email acknowledging receipt of the application for admission. Students who would like their residency classification reviewed may submit a Graduate Application for In- State Classification appeal form to the graduate residency officer listed on the Office of the University Registrar's Student Residency Classification webpage. The appeal form and supporting documentation must be filed no later than the last day of regular, or priority, registration to have the reclassification effective for the semester. Classification will be determined, and the applicant will be notified by email. Additional information regarding the State of Tennessee regulations for classification may be found under Regulations on the https://registrar.utk.edu/.

Residence Requirements for Ph.D. Students (Admission to Candidacy)

All Ph.D. students have a "residence" requirement. Residence is defined as a minimum of two consecutive semesters of full-time (9 credit hours) enrollment or three consecutive semesters of part-time (6 credit hours) enrollment.

Continuous Enrollment

All degree-seeking graduate students are expected to make a full commitment to their graduate and professional study to ensure that they can complete all degree requirements without unnecessary delay. Graduate students are required to maintain an active status through continuous enrollment from the time of first enrollment until graduation; however, summer semesters are excluded for M.S. students and Ph.D. students who have never registered for EPP 600.

Continuous enrollment is maintained by registering for a minimum of one graduate credit hour per semester (excluding the summer, unless stipulated otherwise by the program or department). However, Ph.D. students who have started taking dissertation hours (course 600) must maintain a minimum of three credit hours of EPP 600 per semester during all semesters, including the summer, as stipulated in the policy under "*Registration and Enrollment Requirements*" to comply with the Continuous Enrollment requirement.

The minimum enrollment for international students may be different, and international students always need to check with the Center for Global Engagement (CGE) to determine the minimum credit hour enrollment that they need to maintain to satisfy all enrollment requirements attached to their specific visa.

Exemption from Continuous Enrollment of Course EPP 600: Internships/Practicum for Ph.D. Students (Graduate Catalog)

Doctoral students who have started taking EPP 600 Dissertation and wish to do an internship/ practicum that is relevant to their degree, but not specific to the dissertation, can petition to be exempted from the Continuous Enrollment requirement for a maximum of up to three semesters or 12 months. The petition should be submitted before the student participates in an internship/ practicum, describe the nature of the internship/practicum, and must include justification. Approval must be granted first by the student's advisor, then the Department, followed by the Graduate School. Multiple terms may be separate in time or back-to-back. Students whose petition is approved need not sign up for any coursework while doing the internship/practicum except international students must always check with the CGE to ensure that they remain compliant with their specific type of visa. The time limit to degree is not extended because of an internship/ practicum. The petition form is available at the <u>Graduate School's Forms Central webpage</u>.

Consequences of Non-enrollment Without Leave of Absence

Graduate students who do not maintain continuous enrollment as stipulated in the Continuous Enrollment policy will lose their active student status. A student who has lost their active status without having been granted a Leave of Absence for the period of non-enrollment will not be allowed to continue in their graduate program until readmitted. (See policy on <u>Readmission</u> for more details.)

Non-enrollment other than during an approved Leave of Absence (LOA) does not alter or affect any of the milestone deadlines, such as admission to candidacy, time to degree, and other milestones depending upon the program.

Students who have begun taking dissertation hours (EPP 600 Doctoral Research/Dissertation) must continually enroll in EPP 600 in spring, summer, and fall semesters (see Continuous Enrollment). If doctoral students taking dissertation hours do not enroll in at least 3 credit hours of EPP 600, the students will be retroactively enrolled in every semester of missed enrollment for 3 credit hours of EPP 600 Dissertation. Students will be responsible for paying the past tuition charges and fees as well as the current university per semester late registration penalty. All past due charges will need to be paid before the Graduate School will approve the student for any future enrollment and/or graduation.

Short-Term Absences

If a student needs to take a short-term leave of absence there is no official graduate school policy. These requests are handled by the departments on a case by case basis. This option may be preferable to the Leave of Absence request described below. If the need arises for this type of request, please discuss it with your major advisor, the graduate studies director, and the department head. If the request is approved, a written plan of action will be developed to accommodate your request.

Leave of Absence (LOA) Request

If extenuating circumstances arise that make it necessary for students to interrupt their studies temporarily, a Request for a Leave of Absence (LOA) for a maximum of two years may be granted by the Graduate School upon approval by the student's home department or program. All Graduate Student Leave of Absence Requests are reviewed and granted on a case-by-case basis. There are

many situations for which a leave can be requested, such as the birth or adoption of a child, dependent care, a serious medical condition, military service, or other personal reasons. An LOA can be granted for financial hardship.

Graduate students are strongly encouraged to consult with their program, advisor, and Director of Graduate Studies of their academic unit in order to determine whether an LOA is the best course of action. International students must also consult with the Center for Global Engagement (CGE) in order to ensure compliance with Federal immigration policy. Prior to requesting an LOA, graduate students should always explore alternatives, which would allow them to remain registered and make progress toward the degree, even if at a slower pace.

Graduate students on an LOA suspend their active study for one semester or more (up to 2 years). While on an LOA they are not able to make any formal progress toward their degree. In addition, they may not use faculty services and/or university facilities for the time that they are on an LOA.

Students are expected to return from an LOA. If they do not return to active student status by the end of the time stipulated in the approved LOA, they will be considered non-enrolled once their LOA has expired and lose their eligibility for Reinstatement. Graduate Students who have lost their eligibility for Reinstatement need to seek Readmission prior to being able to continue work in their graduate degree program (see policies below on Consequences of Non- Enrollment without Leave of Absence and on Readmission).

Reinstatement Following LOA (Graduate Catalog)

To return to an active student status, graduate students on an approved LOA need to establish Reinstatement into their graduate degree program by the end of the leave period stipulated on their approved LOA. Students on an approved LOA need to complete and submit their Request for Reinstatements to the Graduate School no later than on the last day of classes of the semester prior to the semester for which they seek to be reinstated (also see policy below on "Reinstatement").

Graduate students on an approved Leave of Absence (LOA) are expected to seek reinstatement to active student status by the end of the period approved by the Graduate School. Reinstatement Requests need to be initiated by the student, processed by the Director of Graduate Studies in charge of the graduate degree program to which reinstatement is requested, and submitted to the Graduate School no later than the last day of classes of the semester prior to the semester for which reinstatement is requested.

<u>Early Reinstatement</u>. If a student would like to return to active study earlier than originally anticipated and approved on their LOA Request, the student will need to contact the EPP Director of Graduate Studies to discuss available options.

All published deadline dates for new international graduate applications also apply for applications for reinstatement. (See section on <u>Admission Requirements of International Students</u>.)

Time Limit to Obtain Degrees – M.S. Students

M.S. Candidates have six calendar years to complete the degree, starting at the beginning of the semester of the first course counted toward the degree. Students who change degree programs during this six-year period may be granted an extension after review and approval by the Dean of the Graduate School. In any event, courses used toward a master's degree must have been taken within six calendar years of graduation. The term(s) and/or year(s) of an approved LOA will not be counted toward time to degree, and milestone deadlines such as Admission to Candidacy will be adjusted too.

Time Limit to Obtain Degrees – Ph.D. Students

Comprehensive examinations must be taken within five calendar years, and all requirements must be completed within eight calendar years, from the time of a student's first enrollment in a doctoral degree program. The term(s) and/or year(s) of an approved LOA will not be counted toward time to degree, and milestone deadlines such as Admission to Candidacy will be adjusted accordingly.

Exemptions and Substitutions for Required Courses

Please contact the Graduate Studies Director for all requests related to course exemptions and substitutions in your Graduate Program. Your request must be approved by your major advisor and Graduate Advisory Committee. If a similar course is taught in EPP, the instructor of the course must approve. The request will then be considered by the Graduate Studies Committee and the departmental faculty.

Special Graduation Requirements for Ph.D. Students

Comprehensive Written and Oral Exams

A student may be admitted to candidacy for the doctoral degree after passing the comprehensive examination and maintaining at least a 3.00 GPA in all graduate coursework. Each student is responsible for filing the <u>Admission to Candidacy form</u>, which lists all courses to be used for the degree, including courses taken at UTK or at another institution prior to admission to the doctoral program, and is signed by all doctoral committee members. Admission to candidacy must be applied for and approved by the Graduate School at least one full semester prior to the date the degree is to be conferred. The candidacy form must be submitted with original or electronic signatures.

Comprehensive examinations must be taken within five years, and all requirements must be completed within eight years, from the time of a student's first enrollment in a doctoral degree program. The semester(s) and/or year(s) of an approved <u>Graduate Student Leave of Absence</u> (LOA) will not be counted toward time to degree, and milestone deadlines such as Admission to Candidacy will be adjusted accordingly.

The comprehensive examination is normally taken when the doctoral student has completed all or nearly all prescribed courses. Thus, its successful completion indicates that, in the judgment of the faculty, the doctoral student can think analytically and creatively, has a comprehensive knowledge of the field and the specialty, knows how to use academic resources, and is deemed capable of completing the dissertation. The comprehensive examination must be passed prior to Admission to Candidacy. A written examination is required, and an oral examination is encouraged.

The student's doctoral committee will determine the content, nature, and timing of the comprehensive examination and certify its successful completion. The committee may at its discretion subdivide the examination, administering portions of the examination at several times during the student's course of study. Students should carefully discuss the details of timing, topics covered, grading procedures, and provisions for repeating a failed examination.

Both written and oral sections of the comprehensive examination must be passed. A passing grade will be decided by majority vote of the graduate advisory committee. Candidates will be tested on their knowledge of their proposed dissertation and related fields. Members of the graduate advisory committee will participate individually in creation and evaluation of written examination questions. Alternatively, upon request by the student and major advisor, with agreement from the graduate advisory committee, the student may prepare a grant proposal in lieu of the written examination.

Professional Skills

Doctoral students in the Department of Entomology and Plant Pathology at the University of Tennessee are expected to obtain additional professional skills during their graduate program and before graduation. To help students meet this expectation, they should incorporate into their Plan of Study and complete <u>five Professional Experiences from different categories</u> from the nine categories listed below. Students must have SPAC approval for all experiences before completing their experience. In addition to your Advisor and Graduate Advisory Committee, other faculty members are available to serve as mentors for any of these experiences. The Professional Experience categories are described in more detail below and include (1) Academic Outreach, (2) Extension, (3) Leadership, (4) Service, (5) Training and/or Mentoring, (6) Teaching, (7) International, (8) Internship, and (9) Design Your Own Experience.

Academic Outreach:

The University of Tennessee, Knoxville, defines academic outreach and engagement as integrated scholarship, which engages its academic missions of research, creativity, teaching, and service with its community. This type of experience involves students collaborating with external groups (non-UT) such as stakeholders, in mutually beneficial partnerships that extend the University's intellectual resources to its constituents. Graduate students will have opportunities to gain meaningful academic outreach experience through the department's ongoing K-12 activities focused on 4H, FFA, students, and teachers.

Examples of academic outreach experiences include but are not limited to the following:

- 1. Develop and deliver a K-12 teaching lesson or 4-H activity
- 2. Work with an ongoing program or partnership associated with the UT Office of Community Engagement and Outreach
- 3. Participate in community associated programs such as judging Science Fair projects, volunteering with Emerald Youth

Extension Experience:

Extension is one of the three missions of UTK, as a land grant university. UT Extension is the outreach unit of the Institute of Agriculture, and it extends research-based information about agriculture, family and consumer sciences, and resource development to the people of Tennessee. UT Extension's mission is to help people improve their lives through an educational process that uses scientific knowledge to address issues and needs. The department provides opportunities for graduate students to gain meaningful extension experience as part of their graduate education. This experience may involve one of the EPP faculty members with an extension appointment. Students participating in this activity are expected to learn the philosophy and practice of extension education.

Examples of an Extension experience include but are not limited to the following:

- 1. Developing an Extension article for a blog or website delivery
- 2. Working with stakeholders to implement a new practice or policy
- 3. Q/A and troubleshooting pest management issues, involvement in diagnostics in collaboration with Extension specialist or agent
- 4. Developing an Extension App
- 5. Developing an Extension Factsheet

International Experience:

Knowing that local problems are global problems, we want to empower students to be global change agents and partner with the Smith International Center to develop and deploy sustainable solutions to the world's complex agriculture-related challenges. Note, attending an international conference would not be considered as an experience in this category.

Example of International Experience Opportunities:

- 1. Study abroad through a faculty-direct program or international internship
- 2. Involvement with the Smith Center's Student Global leaders program
- 3. Work with the Smith Center and faculty mentor to complete a capstone project

Internship Experience:

Internships provide a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships provide students the opportunity to gain valuable applied experience and make connections in professional fields they are considering for career paths and employers the opportunity to guide and evaluate the student's talent. The internship is typically for the length of one semester or a full summer and may be credit bearing or not. The arrangement must be agreed upon by the student, faculty advisor and committee, department head, and graduate director to ensure student success. Additionally, the arrangement presented to the committee must be as a learning contract and include information about salary/stipend, clear length of time, and learning activities separated from work tasks.

Examples of an Internship experience include, but are not limited to the following:

- 1. Work for a company for one semester
- 2. Shadow with a local government
- 3. Intern with a pest management professional

Leadership Experience:

Leadership skills are essential in all occupations, and are paramount for success in academia, industry, non-profit organizations, government, and other professional careers. Students may meet this experience expectation by leading one or more of the department's activities or committees. Participating in the activities/committees without an identified role will not be considered and will not fulfill the activity requirement.

Examples of a Leadership experience include but are not limited to the following:

- 1. Leading the EPP Graduate Student Association or other campus organization
- 2. Organizing a conference or seminar series
- 3. Develop and lead a new activity

Service Experience:

Service is an important component of the Volunteer experience and can lend meaning to one's career and contribute to professional advancement making them essential to all occupations. Service experiences ensure that students give back to their department or university while developing skills and experiences that can benefit their future careers. Service often involves volunteering time to an organization with the goal of benefiting that organization through the

student's efforts. Students may meet this experience expectation by having a significant role with one (or more) of the department's activities or committees. Participating in the activities/committees without an identified role will not be considered and will not fulfill the activity requirement. Service that involves payment, is associated with current role in the department, is to a family member or faith organization would not be considered.

Examples of a Leadership and Service experience include but are not limited to the following:

- 1. Being a student member of one of the EPP committees (e.g., SPAC committee)
- 2. Serving on a committee for a professional scientific organization
- 3. Serving as a student representative on a search committee for the department or college

Teaching Experience:

Students have opportunities to gain significant teaching experience in the department's academic programs. Students seeking to fulfill the teaching experience requirement should contact an EPP faculty member with a teaching appointment slated to teach an undergraduate or graduate course, and work with them, assisting and engaging in various teaching activities. Depending upon the individual, the student may oversee labs and/or deliver one or more formal lectures.

Examples of teaching experiences include but are not limited to the following:

- 1. Serving as a teaching assistant (can receive credit for AGNR 512 or volunteer)
- 2. Best Practices in Teaching Program (3-month program seven lectures offered during fall and spring semesters. Final product is a teaching portfolio) through the UT Graduate School: <u>https://gradschool.utk.edu/training-and-mentorship/bpit/</u>
- 3. Giving lectures to university students in an undergraduate or graduate course in EPP or the Division of Biology
- 4. Writing and publishing a teaching lesson for educational sections of professional scientific societies

Training and/or Mentoring Experience:

Graduate students may gain formal training and/or mentoring experience by working with other students. Becoming an expert indicates a person can train someone to complete a new task and often has a teacher-student focus. Often trainers are assigned to trainees. Becoming a mentor is a personalized experience that is natural, confidential, and friendly. The key difference between mentoring and training is the relationship. A mentor-mentee relationship is personalized, confidential, and has the mentee's best interest in mind. To fulfill this experience, students can arrange to work for a specified length of time with one or more students as trainees or mentees, and the trainee(s)/mentee(s) must agree with the arrangement.

Examples of a Training experience include but are not limited to the following:

- 1. Train a new student in a specific experimental technique
- 2. Lead a hands-on, face-to-face, or live Zoom workshop
- 3. Develop a training video that would be useful to future cohorts

Examples of a Mentoring experience provided by UTK Graduate School

1. Integrate a student into the culture of a department

- 2. Foster the development of critical professional and social networks
- 3. Provide a pathway for students to succeed in their career goals

Design Your Own Experience:

The committee and faculty recognize that each student enters the program with different experiences and expectations, and as such, this section is designed to allow students to propose their own experience. To do this, students must first identify an experience that does not fall in the other categories and describe it to an EPP faculty member. The student will work with the faculty member to propose and evaluate the experience. No more than two "design your own experiences" will count to the student's Professional Experiences requirements. As a reminder, professional experiences are designed to help employers gain in-depth knowledge about what candidates (you) could contribute to their company, even if they don't have experience within their industry. Note, these activities should not be part of an already planned dissertation objective.

Examples of Designing Your Own Experiences include but are not limited to the following:

- 1. Contribute to a policy statement for a society
- 2. Contribute to an Open Source Project
- 3. Work with the UTIA foundation to create and organize an alumni event

Procedure for Completion of Professional Skills Experiences

In consultation with their Advisor, a student will determine which experiences are appropriate to fulfill the professional skills requirement.

The following step-by-step procedures will guide the student through the process of completing their Professional Experiences:

- 1. **Decide on an activity for the experience.** Student selects an experience and then develops an activity to satisfy that experience. All students should discuss the proposed activities with their Advisor; together they select (or agree upon) the person/people with whom they would like to complete their experience (i.e., Faculty Mentor). Student discusses activity with the Faculty Mentor and finalizes the specifics for completing the activity.
- 2. **Submit your proposed activity to the SPAC committee for preapproval.** All students must complete and submit a Ph.D. Professional Experience Application Form online (access from the EPP website under the "Resources", at the "Professional Experience Proposal Form" link). The SPAC committee will reply to the proposal within five business days with approval or modified recommendations of activity. Once the SPAC committee approves the activity, the student should begin the activity. For each activity, the student will submit separate preapproval forms (five total).
- 3. After the activity is completed, the student will submit the completion form. Once the activity is completed, the student will develop a written report (typically 1-2 paragraphs), and submit it through the "Professional Experience Completion Form" (link). Before submission, be sure your Advisor and Faculty Mentor agree the experience was completed. For each activity, the student will submit separate completion forms (five total).
- 4. **Share your activities with the department.** After completing all five experiences, the student will present a brief (10min) overview of their five Professional Experiences to the department at the Annual Professional Experience seminar. We ask that five minutes be dedicated to four of the experiences and five additional minutes be dedicated to one of the

five experiences of their choice that was significant to them. Students should describe each experience's potential value and impact as well as what they learned from the experience and what they would do differently next time.

Publication Submission Ready Requirement for Ph.D. Students

All Ph.D. students enrolled in the Entomology, Plant Pathology, and Nematology Ph.D. program are required to prepare a submission-ready first-authored scientific paper for a referred journal prior to graduation.

Required Training Certifications

Child Protection Training for Covered Adults

Faculty, staff, and students who work with minors (persons under 18 years of age) are required to take specific training. Go to the following website - <u>https://hr.tennessee.edu/eod/child-protection-training/.</u> Training is required annually. Please complete the training during your first semester or in EPP 570 and email a copy of your completion form to Sonya Dexter (<u>sdexter@utk.edu</u>).

Code of Conduct Training

Online training is required annually through UT@KATE. Please complete the training during your first semester or in EPP 570 and email a copy of your completion form to Sonya Dexter (<u>sdexter@utk.edu</u>).

UT Emergency Preparedness Training

Online training is required annually through UT@KATE. Please complete the training during your first semester or in EPP 570 and email a copy of your completion form to Sonya Dexter (<u>sdexter@utk.edu</u>).

FERPA Training

Online training is required annually through UT@KATE. Please complete the training during your first semester or in EPP 570 and email a copy of your completion form to Sonya Dexter (<u>sdexter@utk.edu</u>).

Information Security Awareness Training

Online training is available at https://oit.utk.edu/security/tools/awareness/. This training site is available for faculty, staff, and graduate students. Training is required annually. Please complete the training during your first semester or in EPP 570 and send a copy of your completion form to Sonya Dexter (sdexter@utk.edu).

Environmental Health and Safety – General Laboratory Safety Training

Login to https://ehs.utk.edu/index.php/training/#canvas. If you are a staff employee working towards a degree, go through K@TE (online) to take the training. If you are a graduate student with or without an assistantship, go through Canvas (online) to take the training and complete all eight modules. Training is required annually. Please complete the training during your first semester or in EPP 570 and send a copy of your completion forms to Sonya Dexter.

Responsible Conduct of Research (Ethics) Training

All EPP graduate students are required to take training in research ethics. Many federal granting agencies require that anyone working on a project that they funded receive this training or take a

formal course that covers this material. The online modules are the easiest way to receive the training. Please complete the training and send a copy of your completion form to the Graduate Studies Director (Dr. Ownley) by the end of your first semester or in EPP 570. The training is good for 5 years and is recognized at other institutions – save your certificate.

Directions for Online Training:

- 1. Go to this site: <u>https://www.citiprogram.org/?pageID=668</u>
- 2. Register to create an account and <u>select University of Tennessee-Knoxville (SSO) as your</u> organization from the dropdown list
- 3. Select Continue to SSO Login/Instructions
- 4. From the instruction page (<u>https://www.citiprogram.org/members/index.cfm?pageID=167#view</u>)
- 5. Got to Question 3, choose Physical Science Responsible Conduct of Research Course.
- 6. Scroll to the bottom of the page and click Submit.
- 7. Complete the RCR training during your EPP 570 course.
- 8. When the training is complete, you will have access to a certificate. Please send an electronic copy of your certificate to Sonya Dexter (<u>sdexter@utk.edu</u>).

Title IX Training

If you are a staff employee working towards a degree, go through K@TE (online) to take the training. TITLE IX training will be under the subject 'Compliance,' If you are a graduate student with or without an assistantship, go to the following website - <u>https://titleix.utk.edu/online-graduate-student-training/</u>. Complete the <u>Mandatory Reporter Online Training</u>, the <u>Online</u> Graduate Student Training and the <u>Title IX Essentials for International Students</u>. Please complete the training during EPP 570 and send copies of your completion forms to Sonya Dexter (<u>sdexter@utk.edu</u>).

Additional and Optional Training Certifications

Compliance regulations at the university, State and Federal levels change periodically and you may be required to take additional trainings for safety and for some research activities. You will be give these options in EPP 570.

Training Opportunities at LinkedIn Learning

Online and classroom training on many different software programs is available to students free of charge through the Office of Information Technology. There are many training opportunities offered. For more information, please go to - https://oit.utk.edu/training/online-training/lil/.

EPP Graduate Student Association

The Entomology and Plant Pathology Graduate Student Association (GSA) is a self-governing student organization. The GSA participates in various community awareness programs, including visits to local elementary schools and the Ijams Insect Walk. The GSA also participates in university events, and information to undergraduates about the Department of Entomology and Plant Pathology. You are strongly encouraged to get involved in your Association.

Officers for the Graduate Student Association are elected each fall semester for 1-year terms. A Student Organization Update Form should be filled out each time there is a change in elected officers. A designated representative from GSA is entitled and expected to attend EPP faculty meetings at the discretion of the department head. A member of the EPP GSA must also serve on the Graduate Student Senate. For additional information, contact the Faculty Advisor for the EPP GSA, Dr. Moulton.

General Procedures for All Students

Building and Room Access

University keys or digital access can be obtained through an online application process. Discuss room and building access with your major advisor.

Room Reservations

Reserve conference rooms through 25Live (https://25live.collegenet.com/pro/utk#!/home/search).

Computer / Software/ Technology Problems

If you have problems with computer hardware or software, visit the OIT website <u>https://oit.utk.edu/</u> for assistance. Communication can be via call (865-974-9900), chat, message, or face-to-face visit if hardware needs repair.

Transportation/ Travel Policies

Please contact Sonya Dexter (<u>sdexter@utk.edu</u>), who is our departmental travel expert for information on in-state, out-of-state, and out-of-country travel for research, training, and professional society meetings.

Motor Pool Vehicles

- 1. Everyone reserves their own Motor Pool cars through <u>https://fleetmanagement.utk.edu/</u>. The first time, you will need to set up an account using your NetID and password.
- 2. No smoking in any university-owned vehicle (or University property, grounds included).
- 3. Upon returning from a trip, remove all trash, equipment and supplies from the vehicle.
- 4. Vehicles taken out-of-town should be refueled after returning to campus. The motor pool is open 7:00 a.m. 11:30 p.m. Monday through Friday.
- 5. Use of UT Transportation equipment is a privilege and not a right. Abuse of privileges by students, staff, or faculty may result in loss of such privilege.
- 6. Wearing seat belts is a state law any traffic citation is the responsibility of the driver. We are expected to obey all posted traffic signs.
- To purchase gas and oil at an out-of-town location, use the university provided fuel cards. All fuel cards are in the leather key pocket of each vehicle. In Knoxville, fuel should be obtained from Fleet Management (*Division of Finance & Administration*, 1201 UT Drive, Knoxville, TN 37996-2920.

What to do in an Emergency involving a University Vehicle

If there is an injury - call 911. If an accident occurs always get a police report. Usually, the Voyager card can be used for minor repairs when out of town. However, should an emergency occur

where the "Voyager" card cannot be used you may call the UT Motor Pool at the following numbers: 7:00 a.m. - 11:30 p.m. 865-974-2134. For emergencies from 11:00 p.m. to 7:00 a.m., you may call UT Safety and Security at 865-974-3114. This number will get a tow-in only. For further safety precautions call 911 and request police to come to where the vehicle has broken down. Flashlights, triangular reflective flares, and other emergency items have been placed in each vehicle for your added personal safety. We encourage you to use these should the need arise.

EPP Travel Procedures

Travel procedures have changed significantly. Please contact Sonya Dexter (<u>sdexter@utk.edu</u>) for information on procedures before any travel is planned. International travel requires additional procedures and approvals, which must be done well in advance of the trip.

All travel must be necessary to conduct official university business or educational objectives. Professional meetings, conferences, or workshops must be directly connected to your duties and role within the university.

Authorization for travel and reimbursement of expenses must follow the provisions of UT and EPP policy. It is the employee's responsibility to be familiar with and follow established travel policies. Deliberate disregard of these regulations while traveling on UT business or filing of an intentionally misleading or fraudulent travel claim, are grounds for disciplinary action, including termination of employment. The travel information can be found at https://finance.tennessee.edu/travel/. Travel Training is available through K@TE.

Funding Sources for Student Travel

There are a number of funds available to support student travel to professional meetings and workshops. These include the EPP Thompson Student Development Fund, The Graduate Student Senate Travel Awards, and the Plant Research Center.

EPP Thompson Student Development Fund:

- 1. EPP Thompson Student Development Funds may be used for travel to scientific meetings, research-relevant training workshops, or other similar venues. If you attend a meeting, you should be an active participant by presentation of an oral paper or a poster. Funds are not transferable to other students and funds remaining after a student has graduated may not be rolled over. Instead, they will remain among the available funds for use by future students.
- 2. A graduated student may still have access to funds for presenting a paper at a meeting if the following criteria are met:
 - The meeting must be no later than six months after graduation,
 - The student's stated affiliation must be The University of Tennessee,
 - The reported research must have been substantially performed in EPP at the University of Tennessee,
 - Requests for fund use must be made and approved before the official graduation date.
 - A student who has finished an M.S. degree in EPP and started a Ph.D. program in EPP must use Ph.D. funds rather than any remaining M.S. funds.
- 3. Major Advisors and graduate students are expected to seek outside funding and to include

travel to meetings and workshops in their grant proposals. Each major advisor and student should plan to ensure that the student has funds available for the activity. Students also should be proactive in seeking potential sources of funding for their travel and plan accordingly.

4. The department head and business manager will periodically review the financial status of the fund and adjust amounts if necessary.

Graduate Student Senate Travel Awards:

See information on deadlines and application submission at <u>https://gss.utk.edu/gss- travel-awards/.</u> It is recommended that you do not request amounts smaller than \$500.

Plant Research Center – Travel and Research Awards:

Please see the <u>PRC website</u> for information on travel and research grants for graduate students. Your major advisor must be a member of the PRC to participate.