

Guide to Graduate Study

Department of Entomology Michigan State University

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DEPARTMENT OF ENTOMOLOGY GRADUATE STUDY GUIDE

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Welcome to Michigan State University, the College of Agriculture and Natural Resources, and the Department of Entomology! The Department was established in 1906 and you are now a part of that heritage and that academic lineage. As an Entomology student you have daily access to some of the world's leading scientists, teachers, and extension specialists. You have access to exceptional fellow students and are supported by an experienced, dedicated, and excellent staff. You have access to a way of thinking. That way of thinking relies on science, curiosity, data, and technology. It relies on long hours and a commitment to answering well thought out questions and to bringing those questions and answers to the scientific community in the form of publications, presentations, and discussions. Your primary goal as a graduate student is to obtain a masters or doctoral degree and use the degree, your knowledge, and your skills to become employed in an area of your choosing. This handbook is a roadmap to achieving this goal, going from the acceptance criteria and processes to selecting a major professor, to timelines, and eventually theses and dissertation defense protocols. We are committed to going the extra mile to help you succeed and I am very pleased that you chose MSU Entomology as your academic home.

Good luck!
Bill

A handwritten signature in black ink, reading "F. William Ravlin". The signature is written in a cursive, flowing style with a large initial "F" and a prominent "R".

F. William Ravlin, Professor and Chairperson
Department of Entomology
Michigan State University

I. Program Overview

About the Department

Michigan Agricultural College, now Michigan State University, was established in 1855 as the first agricultural land grant college in the United States and the model for the Land-Grant University system. Entomology was one of the original disciplines taught at Michigan Agricultural College when the first course was offered in 1858. The Department of Entomology was established 50 years later, in 1906. The Department is administered by the College of Agriculture and Natural Resources (CANR) and graduate degrees are conferred through CANR. Faculty members have expertise in Biomedical Entomology; Aquatic Entomology; Forest Entomology; Fruit Entomology-Nematology; Insect-Nematode Ecology, Behavior and Spatial Dynamics; Insect Systematics; Insect Toxicology; Integrated Pest Management Research/Extension Programs; Molecular Entomology; and Pesticide Education and Policy. Many faculty members have extension appointments to work with farmers, commodity groups, agribusiness, and other clientele. The insect museum, founded in 1862, is now the A.J. Cook Arthropod Collection, with over one million specimens. The Department coordinates a research farm and apiculture facility on the MSU campus, and the Trevor Nichols Research Complex in west Michigan. The Bug House in the Natural Science Building provides outreach and entomology education for school groups and the general public.

Entomology Graduate Programs

The Department of Entomology offers a Doctor of Philosophy, and thesis and non-thesis options for a Master of Science degree in Entomology. Ph.D. students have the option of pursuing a dual degree in Ecology, Evolutionary Biology & Behavior (EEBB) and M.S. students have the option of a specialization in EEBB. Graduate studies are individualized based on student goals and faculty expertise. Graduate students are an integral part of the Department and serve on Department Committees. Graduate students are expected to attend Department of Entomology Seminars, present their work at professional meetings and conferences, and encouraged to participate in teaching, extension, and outreach activities, such as working in the Bug House, as appropriate for their personal program goals. Although individual student programs vary, all graduate programs in the Department of Entomology are designed to provide students training in the basic biology of insects including physiology, morphology, taxonomy/systematics, ecology, and evolution. In addition, students are trained in process skills including communication of scientific findings both to their peers and to a variety of public audiences, experimental design, statistics, critical thinking and analysis of scientific papers. Students demonstrate mastery of this core body of knowledge and skills through oral and written examinations overseen by their Guidance Committee.

Our graduates have successful professional careers where entomology is a critical component of their work. These include:

- Extension Educators
- Private Agricultural Consultants
- State or Federal Departments of Agriculture, Forestry or Natural Resources
- Industry, Research, Technical Services or Sales
- College or University Professors
- Educators or Researchers for Foundations, Museums or Arboreta

II. Program Components / Plan Options

At the graduate level, the Department of Entomology offers three options, sections A-C below, as well as a specialization described in section D.

A. Plan A Master of Science (M.S. Plan A): This option involves coursework, a research topic, a thesis, and a final oral examination. The program is guided by a Major Professor and Guidance Committee. A research topic is usually provided or suggested by the Major Professor, then further developed by the student, Major Professor, and Guidance Committee. The research involves multiple in-depth field, greenhouse, or laboratory studies, generally leading to publication in scientific journals. At the end of their program, students must prepare a written thesis, give a seminar on their research, and pass a final oral examination given by their Guidance Committee. This oral exam focuses on coursework and the student's thesis material. After approval by the Guidance Committee, the thesis is submitted to the Graduate School.

B. Plan B Master of Science (M.S. Plan B): This option involves coursework, a research project, and a final oral examination. It is similar to a Plan A M.S. degree with regards to credit hour requirements, and oversight by a Major Professor and a Guidance Committee. However, instead of conducting in-depth research leading to a thesis, students take additional course work and develop a 3-5 credit research project. This project is written up as a report or paper, but it is not submitted in thesis form to the Graduate School. At the end of their program, Plan B students must give a seminar on their research project and pass a final oral examination given by their Guidance Committee. This oral exam focuses on the student's coursework and research project. The Plan B option is useful for people with a full-time job (for example, state government, agribusiness, or extension employees) who want an advanced degree in entomology, but do not have time to conduct lengthy thesis research. Note, however, students planning to go on for a Ph.D. program should opt for a Plan A instead of a Plan B M.S.

C. Doctor of Philosophy (Ph.D.): This option involves coursework, a research project, a research proposal defense, comprehensive (qualifying) examinations, a dissertation, and a final oral examination, guided by a Major Professor and a Guidance Committee. Although students enrolling in a Ph.D. Program usually have a Plan A Masters degree, this is not a requirement. While a research topic may be provided or suggested by the Major Professor, a Ph.D. student has a greater responsibility for developing and designing their research focus than a student in an M.S. program. As a first step towards a Ph.D., the student must demonstrate general entomological knowledge and competency in to pursue original research. This is done through a research proposal defense with the Guidance Committee, held within a year of enrolling in the Ph.D. Program. This examination may identify deficiencies (for example, in coursework) that must be corrected during the remainder of the degree program, or changes to research objectives or projects. After ~80% of coursework is complete, Ph.D. candidates must pass first a written, and then an, oral Comprehensive Examination administered by the Guidance Committee; these examinations measure the depth and breadth of the candidate's knowledge and understanding in Entomology and closely related areas. To be recognized as a Ph.D. candidate by the University, students must successfully pass both of these qualifying examinations. At the end of their program, Ph.D. candidates must prepare a written dissertation, give a seminar on their research, and pass a final oral examination given by their Guidance Committee. This oral exam focuses on coursework and related areas, but particularly on the student's dissertation material. After approval by the Guidance Committee, the dissertation is submitted to the Graduate School.

D. Specializations: In addition to an Entomology degree, entomology students can earn a specialization (M.S. level) or a dual-degree (Ph.D. level) in Ecology, Evolutionary Biology and Behavior (EEBB). Students interested in pursuing an EEBB specialization or dual degree should submit a one-page application to the Graduate Program in EEBB indicating they have applied to the Department of Entomology (See <http://eebb.msu.edu/howtoapply2015.html> for details).

Generally, Entomology graduate program applicants for fall semester should have their EEBB application materials submitted by January 1. Students must fulfill the requirements of the EEBB Program as well as those of the Entomology Degree Program they are pursuing.

III. Admission and Degree Requirements

A. Admission to the Entomology Graduate Program:

Admission Requirements: A bachelor's degree with a 3.00 grade–point average for the last two years of study is required for admission to the M.S. program. Although the applicant need not have an undergraduate major in entomology for regular admission, training should have been received in the physical and biological sciences equivalent to that required of an undergraduate entomology major at Michigan State University. Graduate Record Examination (GRE) General Test scores are required. Applicants with a good academic record but deficiencies in physics, chemistry, mathematics, or the biological sciences may be accepted on a provisional basis until deficiencies are rectified by collateral course work. Collateral courses are defined as those courses in the undergraduate program below the 400 series and any other courses specifically required by the Guidance Committee to make up deficiencies. Credits from collateral courses do not count towards the degree.

Typically, a Plan A M.S degree in an appropriate field of study is required for admission to the Ph.D. program. However, students with a cumulative 3.0 GPA or higher, and significant independent research experience that demonstrates potential for scientific research, may be admitted directly to the Ph.D. program. Subject matter and training should be in the same general areas as required for admission to the M.S. degree program in Entomology. In either case, the student's past record must indicate maturity, reliability, and scholarly potential of a high order.

Provisional admission status: Students of promise who have some remediable inadequacy of qualification such as a minor deficiency in subject–matter preparation or grade point average can be admitted to the department under provisional status. Students admitted under provisional status must have a written agreement specifying conditions to be met for transfer to regular status. The student and their advisor will develop the agreement with a clear set of outcomes that are to be completed during the first two semesters of enrollment as a graduate student. The agreement will be reviewed and approved by the entomology graduate committee and departmental chair prior to admission to the department.

Acceptance into the Department: Prospective students generally are accepted into the Department only if there is sufficient funding to complete a degree program in a timely fashion. Students must identify a faculty member who has agreed to act as their Major Professor, accept them into their laboratory, and guarantee financial support (usually through grant funding) of at least two years for a M.S. program or three years for a Ph.D. program. Students sometimes propose to pay for their own education. However, the financial resources sufficient to cover tuition and living expenses must be demonstrated (<https://finaid.msu.edu/>) and a Major

Professor still must be identified prior to admission into the Department. Acceptance into the Entomology Graduate Program and a particular laboratory is contingent on review of all application materials and approval of admission by the Entomology Graduate Committee and the Department Chairperson.

B. Degree Requirements:

The requirements for the M.S. programs and the Ph.D. program differ and are detailed in checklists below. Requirements for the EEBB dual degree or specialization are described following the list of requirements for the M.S. and Ph.D. degrees. The University Academic Programs Catalog under which a student enters MSU is their "Master Guide" for degree requirements. If there are program changes during their tenure, students have the option of following either the new program or the program under which they matriculated. Students must meet all University and College requirements and standards as described in the University Academic Programs Catalog. Academically, the Department of Entomology is in the College of Agriculture and Natural Resources. Although Ph.D. students may conduct their research elsewhere, they have a one-year residency requirement during which they must work on campus. The year of residence will be made up of two consecutive semesters involving completion of credits at the level of full-time status of graduate work each semester. The deadlines given in the Academic Calendar for meeting graduation and degree requirements should be followed in order for the degree to be conferred at the end of that semester. The semester begins on the first day of registration and ends on the day before the first day of registration for the next semester. Please be aware that registration is required during any semester that exams for the degree are taken.

1. M.S. Degree Plan A

a. First semester: Meet with the Major Professor to discuss a thesis topic and select Guidance Committee members as soon as possible during the first semester of MS study.

b. First semester: Meet with the Guidance Committee to discuss proposed courses and complete the "MEMORANDUM OF UNDERSTANDING" form (Appendix B).

Plan A M.S. Course Requirements:

A minimum of 30 credit hours are required, including those listed below, and a minimum of 6 and a maximum of 10 thesis research credits (ENT 899). A minimum of 16 credits must be courses at the 800 or 900 level. Credits for collateral courses do not count towards the degree. (Collateral courses are defined as those courses in the undergraduate program below the 400 series and any other courses specifically designated by the Guidance Committee as those required to make up deficiencies.)

I. ENT 404 (Fundamentals of Entomology) or its equivalent, prior to beginning the degree program. If not, ENT 404 should be completed immediately.

II. Six Entomology course credits.

c. By February 15th of each year, complete the ANNUAL RECORD OF ACADEMIC PROGRESS REPORT with your Major Professor. This is not an option; it is a requirement.

d. Before starting your research: Consult with the Manager/Curator of the A.J. Cook Collection concerning the number of voucher specimens for deposition (10 of each sex is common),

method of mounting, date-locality labels, etc. This should be done as a part of the planning your research (Appendix C).

e. Complete the required coursework. Amendments must be made on a “REQUEST FOR COURSE CHANGE” form (Appendix B) and filed with the Department after all members of the Guidance Committee have agreed to the change(s). The usual time of completion of course work is 1½ to 2 years.

f. Apply for graduation no later than the first week of the semester that the defense of the thesis and completion of the degree is anticipated. If the degree is not completed during that semester, graduation must be reapplied for the next semester that graduation is expected.

g. Submit the preliminary thesis draft to the Major Professor for review. If the Major Professor considers it ready to defend, submit a copy to each member of the Guidance Committee. Committee members must be given at least TWO weeks (preferably longer) to review it.

h. Deposit voucher specimens with the Collection Manager of the Museum (Appendix C).

i. Present a seminar to the Department, and take a final *Oral Examination*. Submit “RECORD OF COMPLETION—MASTER’S DEGREE” form (Appendix B) to the Guidance Committee for signatures and further processing.

j. Make necessary changes in thesis as required by the Guidance Committee. Be sure that the thesis is formatted as specified by The Graduate School ‘*Formatting Guide for Master’s Theses and Doctoral Dissertations*’.

k. Submit the completed thesis electronically along with required forms to The Graduate School by the date specified for the semester of graduation. See the “Thesis and Dissertation ELECTRONIC Submissions” page at the Graduate School website for forms and procedures <http://grad.msu.edu/etd/>.

l. Provide your Major Professor and guidance committee members with a pdf file of the final version of the thesis that has been accepted by the Graduate School.

m. Return all borrowed equipment, books, etc. and turn in keys to the Entomology space to the Entomology Business Office for key deposit refund processing.

n. Have an exit interview with the Entomology Chairperson, and fill out the “Termination Check-List” that is provided by the Graduate Secretary. Complete the check-list with the Major Professor and return it to the Graduate Secretary prior to leaving campus. This is an MSU requirement.

2. M.S. Degree Plan B

a. First semester: Meet with the Major Professor to discuss a 3-5 credit project and select Guidance Committee members as soon as possible after starting M.S. study.

b. First semester: Meet with the Guidance Committee to discuss proposed courses and complete the “MEMORANDUM OF UNDERSTANDING” form (Appendix B).

Plan B M.S. Course Requirements

Same as for the Plan A M.S. degree except that students are required to take 3-5 credits of ENT 898 (Masters research) instead of ENT 899. The minimum number of credit hours is 30, of which a minimum of 16 credits must be taken from courses at the 800 or 900 level.

c. By February 15th of each year, complete the ANNUAL RECORD OF ACADEMIC PROGRESS REPORT. This report should be completed with the student's Major Professor. This is not an option; it is a requirement.

d. Before starting your research: Consult with the Manager/Curator of the A.J. Cook Collection concerning the number of voucher specimens for deposition (10 of each sex is common), method of mounting, date-locality labels, etc. This should be done as a part of the planning of your project (Appendix C).

e. Complete the required coursework. Amendments must be made on a “REQUEST FOR COURSE CHANGE” form (Appendix B) and filed with the Department after all members of the Guidance Committee have agreed to the change(s). The usual time of completion of course work is 1½ to 2 years.

f. Apply for graduation no later than the first week of the semester that the defense of the research project and completion of the degree is anticipated. If the degree is not completed during that semester graduation must be reapplied for the next semester that graduation is expected.

g. Submit a written report of the research project to the Major Professor for review. If the Major Professor considers it ready to defend, submit a copy to each member of the Guidance Committee. Committee members must be given at least TWO weeks to review it.

h. Deposit voucher specimens with the Collection Manager of the Museum (Appendix C).

i. Give a presentation to the Department, and take the final *Oral Examination*. Submit “RECORD OF COMPLETION—MASTER’S DEGREE” form (Appendix B) to the Guidance Committee for signatures and further processing.

j. Return all borrowed equipment, books, etc. and turn in all keys issued to Entomology space to the Entomology Business Office for key deposit refund processing.

k. Have an exit interview with the Entomology Chairperson, and fill out the “Termination Check-List” which is provided by the Graduate Secretary. Complete the check-list with the Major Professor and return it to the Graduate Secretary prior to leaving campus. This is an MSU requirement.

3. Ph.D. Degree

a. First semester: Meet with the Major Professor to discuss a dissertation topic and select Guidance Committee members as soon as possible during the first semester of Ph.D. studies.

b. First semester: Meet with the Guidance Committee to discuss proposed courses and dissertation topic.

Ph.D. Course Requirements:

I. ENT 404 (Fundamentals of Entomology), or its equivalent, prior to beginning the degree program. If not, ENT 404 should be completed immediately.

II. Nine entomology course credits.

III. A minimum of 24 but **no more than 36 credits** of doctoral dissertation research (ENT 999).

c. Set up a profile in GradPlan at www.gradplan.msu.edu.

All aspects of the Ph.D. program plan, including the designated Major Professor and Guidance Committee, and planned course work, with the exception of the Comprehensive Exam and the Research Proposal Defense (see e, below), must be entered into GradPlan. For these two examinations students should document completion using the forms in appendix B and submit the signed forms to the Department Chair's office. GradPlan was developed for Ph.D. students to lay out a program of study, record faculty approvals, make notes on requirements as they are completed and facilitate electronic approvals. **GradPlan is also the only way final degree certification/degree audit will be conducted beginning in Spring 2017.**

d. By February 15th of each year, complete the ANNUAL RECORD OF ACADEMIC PROGRESS REPORT. The report should be completed with the student's Major Professor. This is not an option; it is a requirement.

e. Defend the Research Proposal.

Prior to beginning Ph.D. research in the Department of Entomology, the student must demonstrate competency to pursue original research by presenting and defending their research proposal before their Guidance Committee. This exam should be completed within the first 12 months of study because the results determine whether or not the Ph.D. student should proceed in a Ph.D. program. The examination also determines if weaknesses exist in the student's background knowledge, which may be strengthened with additional courses in the Ph.D. program. Notification of the Research Proposal Defense must be given to the faculty at least one week in advance.

Students submit their written proposal to the Guidance Committee ahead of time and present this plan orally during the examination. Following the presentation, the Committee reviews and discusses the research plan with the student, keying in on such things as feasibility, experimental design, statistics, research timeline, and expected completion dates and publications. They also evaluate the student's knowledge of entomology and related fields through oral questioning.

The Committee assesses the Research Proposal Defense as a pass (no more than one dissenting vote) or fail, and members sign a statement of the decision (Appendix B) sent to the Department Chairperson. A student may be given an additional opportunity to qualify if the first evaluation is unsatisfactory.

f. Complete the required coursework. Amendments to the planned coursework must be made by the student through GradPlan. All changes will have to be approved by the Department and the Guidance Committee. The usual time of completion of course work is 2 to 2 ½ years.

g. Take the Doctoral Comprehensive Examination.

When 80% or more of the prescribed course work has been taken, you are eligible to take the Doctoral Comprehensive Examination (Ph.D. Qualifying Examination) covering entomology and related fields. Typically this occurs at the end of the second or beginning of the third year of the program, but no later than one semester prior to receipt of the degree. The examination consists of both written and oral parts. The student must pass the written examination before proceeding with the oral examination.

The student must be registered during the semester in which the Comprehensive Examination is taken. An exception is for students enrolled full-time in the spring but take the Comprehensive Examination during the summer semester immediately following. In that instance, the Department can request a waiver of the requirement that a student be enrolled for at least one credit in the summer in order to take their Comprehensive Examinations. These requests are initiated by the Graduate Secretary and must be approved by the Department Chairperson, College of Agriculture and Graduate School.

The written portion of the examination is administered by the Guidance Committee, as coordinated by the Major Professor. Questions measure the depth and breadth of the student's knowledge and understanding of entomology and closely related areas.

The oral portion of the examination is also administered by the Guidance Committee and is typically taken two weeks following the written portion of the exam. This examination is intended to measure the student's ability to discuss subject matter area in terms of entomological, biological, scientific, practical, educational and philosophical aspects. Notification of the oral examination must be given to the faculty at least one week in advance.

The Committee assesses the Comprehensive Examination as a pass (no more than one dissenting vote) or fail. Record of successful completion of the Comprehensive Exam must be documented through GradPlan. Students must pass both written and oral qualifying exams to be considered a Ph.D. candidate by the University.

h. Complete Original Research

An Entomology student working toward a Ph.D. degree must conduct original research, which leads to the preparation, defense, and publication of a dissertation. The research is conducted under the guidance of a Major Professor. While conducting research and preparing a dissertation, a Ph.D. student should register for ENT 999, doctoral dissertation research credits.

i. Consult with the Collection Manager/Curator concerning the number of voucher specimens for deposition (10 of each sex is common), method of mounting, date-locality labels, etc. This should be done as a part of the planning prior to carrying out the research (Appendix C).

j. Apply for graduation no later than the first week of the semester that that defense of the dissertation and completion of the degree is anticipated. If the degree is not completed during that semester, students must reapply for graduation the next semester graduation is expected.

k. Completion of a Dissertation

Submit the preliminary draft of the dissertation to the Major Professor for review. The form of the dissertation is determined by the Major Professor and Guidance Committee, but it must comply with Graduate School specifications as stated in the *Formatting Guide for Master's Theses and Doctoral Dissertations* (<http://grad.msu.edu/etd/>). If the Major Professor considers it ready to defend, submit a copy to each member of the Guidance Committee. Committee members must be given a minimum of TWO weeks (preferably longer) to review it.

For a dissertation that consists of one or more chapters that are already published, these chapters must be introduced with the list of all authors, citation for the publication, and include a copy or notation of the written permission from the publisher (who generally holds the copyright) to reprint the article.

l. Deposit voucher specimens with the Collection Manager of the Museum (Appendix C).

m. Dissertation defense: Department Seminar and Final Oral Examination

The Final Oral Examination must be scheduled for a date not earlier than two weeks after the final draft of the dissertation and abstract have been submitted to the Major Professor and Guidance Committee members. The dissertation defense involves a public seminar to the Department, and a final oral examination by the Guidance Committee. This exam usually focuses on the dissertation research. Notification of the final examination must be given to the Department at least one week in advance. The student must be registered during the semester the final Oral Examination is taken. All students defending their dissertations in the summer must be registered for at least one credit, regardless of being enrolled full-time the preceding spring semester.

The Guidance Committee assesses the defense as a pass (no more than one dissenting vote) or fail. Record of successful completion of the final exam must be documented through GradPlan by the student for electronic signatures by the Major Professor, Guidance Committee and Entomology Chairperson.

n. Incorporate any changes into the dissertation as required by the Guidance Committee. Be sure that the dissertation is formatted as specified by The Graduate School '*Formatting Guide for Master's Theses and Doctoral Dissertations*' (<http://grad.msu.edu/etd/>).

o. Submit the dissertation electronically along with required forms to The Graduate School by the date specified for the semester of graduation. See the "Thesis and Dissertation ELECTRONIC Submissions" page at the Graduate School website for forms and procedures <http://grad.msu.edu/etd/>. Please be aware that electronic submission does constitute acceptance of a dissertation by the Graduate School. A minimum of two weeks should be allowed for review and Graduate School approval of dissertations.

p. Provide your Major Professor and guidance committee members with a pdf file of the final version of the dissertation that has been accepted by the Graduate School.

q. Return all borrowed equipment, books, etc. and turn in keys issued to Entomology space to the Entomology Business Office for key deposit refund processing.

r. Have an exit interview with the Entomology Chairperson, and fill out the "Termination Check-List" which is provided by the Graduate Secretary. Complete this check-list with the Major

Professor and return it to the Graduate Secretary prior to leaving campus. This is a requirement by MSU.

4. Ecology, Evolutionary Biology and Behavior (EEBB) Specialization (M.S. Degree) and Dual Degree (Ph.D.)

Students pursuing the EEBB specialization or dual degree must fulfill both the departmental requirements and the EEBB graduate degree requirements. See the EEBB website for details: <http://eebb.msu.edu>

IV. Selection of a Major Professor

Before being accepted into the Department, a student must identify a Major Professor who will provide guidance and direction for their degree program. Some Major Professors expect students to come to them only when help is needed; others work very closely with their students and have weekly or even daily contact. Some Major Professors allow students to focus exclusively on their research project while others expect students and staff in the lab to work as a team and assist each other as needed. Some Major Professors expect their students to teach or participate in the extension programming associated with their project, or encourage and allow time for service and outreach. Given the wide variety of mentoring styles, the student should find out how a faculty member operates to determine if his/her style fits the needs and expectations the student has of a Major Professor before joining their laboratory.

Who Can Serve as a Major Professor?

The Graduate School prefers that Major Professors and Guidance Committee members be tenure-stream faculty members at MSU. However, fixed-term faculty, academic specialists with advanced degrees, and faculty members from other universities may also serve on, or chair, Guidance Committees with special approval.

The Roles and Responsibilities of a Major Professor, at a minimum, include the following:

- Provide information about degree requirements and policies;
- Give advice about appropriate coursework;
- Provide or assist in selection of a research topic;
- Provide training and oversight for this research;
- Mentor the development of professional skills, for example, writing, preparing publications, making and giving presentations, interviewing, etc.
- Give regular feedback - at least annually - on progress towards degree, coursework, and other activities;
- Act as chair for the Guidance Committee and run required written and/or oral examinations;
- Read, edit, and approve the research project (Plan B M.S.), thesis (Plan A M.S.), or dissertation (Ph.D.);
- Write letters of reference for scholarships, awards, and jobs, as appropriate.

When a Major Professor Leaves – Temporarily or Permanently

A Major Professor may take an extended sabbatical or leave of absence. If this occurs, he/she should identify someone to cover supervising and advising duties, or develop a plan to maintain contact with graduate students electronically.

If a Major Professor leaves MSU to take an academic appointment at another institution, he/she may arrange to bring their current students to their new location. If that is not possible, or if the student chooses to complete the degree in the Department of Entomology, the Graduate Program Director will make every effort to find a provisional advisor to work with the student to complete their degree program. The Department will try to find, but cannot guarantee, funding for the remainder of degree program. The same applies to situations where a Major Professor retires or falls ill.

Changing Major Professors

Sometimes a student and Major Professor have different styles or research interests and have difficulty working together. Because each student is accepted into a particular laboratory to work on a specific project, changing major professors often means giving up the financial support that came with admission. Therefore, it is important to try to mediate differences before they become irreconcilable. The Graduate Program Director can assist in resolving conflicts.

- If a Major Professor wishes to terminate an advising relationship prior to the student's completion of a degree, and the student is making satisfactory progress in the degree program, the Graduate Program Director and Department Chairperson will work with that faculty member to ensure the student finds another suitable position with equivalent funding. The Department considers a faculty member's commitment to a student to be binding for the minimum expected duration of the degree program (2 years for a M.S.; 3 years for a Ph.D.). If it is in the student's best interest to change Major Professors, the Department will try to provide transitional funding.
- If it is the student's choice to seek another Major Professor, the primary responsibility to find alternative funding falls on the student. The Department will facilitate transfer to another faculty member's program and provide transitional funding if possible; however, Departmental resources are limited and there is no guarantee of funding (or continued funding) in this type of situation.

V. Formation of a Guidance Committee

It is the responsibility of each graduate student, in consultation with their Major Professor, to form a Guidance Committee made up of faculty members from inside and outside of the Department. The purpose of the external member(s) is to add breadth and an outside perspective to a student's program. Students are encouraged to meet with their committee members individually to address their project and research interests. The composition of the Guidance Committee differs depending on the degree program. Approval of a student's Guidance Committee is given by the Department Chairperson. If a student is unable to form a Guidance Committee, the Graduate Program Director will work with the Major Professor to resolve the problem.

M.S. Guidance Committee

Timeline for selection: No later than the end of the first semester of study.

Composition: A minimum of three faculty members including-

- * The Major Professor
- * One additional faculty member from the Department of Entomology
- * One qualified member from a different department

Ph.D. Guidance Committee

Timeline for selection: No later than the end of the first semester of study.

Composition: PhD guidance committees will be comprised of a minimum of four faculty members, with at least two **tenure stream** faculty from the Department of Entomology, and at least one **tenure stream** faculty member from another department at MSU.

Note that faculty members holding joint or adjunct appointments in the Department of Entomology do not qualify as external committee members on a Guidance Committee. Also, note that 3 (M.S.) or 4 (Ph.D.) members is the minimum committee number; students may choose to have more internal or external members.

Who Can Serve on a Guidance Committee?

The Graduate School prefers that Guidance Committee members be tenure-stream faculty members at MSU. However, fixed-term faculty, academic specialists with advanced degrees, and faculty members from other universities may also serve on, or chair, Guidance Committees with special approval. The process requires:

1. A letter from the Department Chairperson or Graduate Program Director requesting approval for the individual
2. A copy of the individual's CV
3. Two letters of recommendation addressing the individual's qualifications to serve on a graduate committee (one letter must come from an off-campus person).

It is the student's responsibility to make sure that their Guidance Committee members are tenure-stream MSU faculty and, if not, that the special process is followed to approve their participation. Students can check with the Graduate Secretary if they have any questions about the status of a particular non-tenure stream faculty member's status to serve on Guidance Committees or the approval process.

The Roles and Responsibilities of the Guidance Committee, at a minimum, include the following:

- Give advice about appropriate coursework and research
- Give regular feedback - at least annually - on progress towards a degree, coursework, and other activities;
- Conduct the required written and/or oral examinations;
- Read, provide feedback on, and approve the research project (Plan B M.S.), thesis (Plan A M.S.), or dissertation (Ph.D.).

Changing the Guidance Committee

Changes in the members of the Guidance Committee can be initiated by the student in concurrence with their Major Professor. The Department Chairperson or Graduate Program Director will review such changes to make sure the reconstituted committee still meets Departmental and University guidelines.

VI. Thesis/Dissertation Defense and Final Oral Examinations

Upon completion of the research for a Plan A M.S. or Ph.D. Degree, students are required to present their research in a public seminar and pass an oral examination administered by the student's Guidance Committee to complete their degree requirements. The oral examination typically follows the public seminar. The procedures and expectations for the thesis/dissertation research, written thesis/dissertation, and oral examination are described below. Although Plan B M.S. students are not required to submit a thesis, they must submit a written report of their research project to their committee, give a public seminar of their research, and pass a final oral examination administered by their Guidance Committee. Students must be registered in the semester that they take any examinations required for their degree.

The Thesis/Dissertation

The Plan A M.S. and Ph.D. Degree programs emphasize independent student research. They differ in the degree of independence and scope of research projects. In both cases, students are expected to contribute new knowledge in the area of Entomology, Nematology, or related fields. The approved thesis/dissertation accepted by the graduate school is a single-author publication that contributes to the body of knowledge of the discipline. Thesis/dissertation research is also expected to lead to published, peer-reviewed research articles.

Thesis Research for the M.S. Degree:

The research project is focused on a topic within the discipline, developed with the guidance of the Major Professor, and has discrete boundaries so that completion is realistic and feasible within the boundaries of 6-10 credit hours of research required for the M.S. Degree. The project must be approved by the Guidance Committee.

Dissertation Research for the Ph.D. Degree:

Research should be an independent, original, experimental study that results in a new and significant contribution to knowledge in the field. The student will develop the research plan in consultation with their Major Professor and Guidance Committee. Within their first year of study, they will write, present, and defend a research proposal describing their plan, which must be approved by their Guidance Committee. See **Research Proposal Defense**, described below.

The Thesis/Dissertation:

The thesis/dissertation is a written description of the student's research that is generally organized so that the document contains an introductory chapter to the general research problem, which includes a summary of relevant literature, and a final chapter that discusses the implications and significance of the research. Chapters describing the research should include the methodology used in sufficient detail to allow replication of the research, present the results clearly using appropriate figures and tables, using appropriate statistical or other analytical tools and methods, and address the interpretation of the data and conclusions of the research. These elements of the research (methods, data, and conclusions) may each be addressed in individual chapters. Alternatively, each chapter presenting research results may take the form of a journal article, reporting a discrete subset of the overall research project that includes all of these elements, including an introduction to, and discussion of, the research presented in that chapter. It is common practice to prepare dissertation chapters in manuscript form for subsequent submission to peer-reviewed journals. It is expected that the Ph.D. dissertation or portions of the dissertation will be published in a reputable peer-reviewed journal(s) and that the dissertation research and the dissertation itself reflect that expectation. If any of these chapters have already been published in a scientific journal: (a) These chapters must be introduced with the list of all authors, citation for the publication, and include a copy or notation of the written permission from the publisher (who generally holds the copyright) to reprint the article. (b) If multiple articles

make up the document, these must be “tied together” with the required general introductory and summary/discussion chapters. The thesis/dissertation should also include a scientific abstract. The Graduate School also suggests the inclusion of a “public abstract” (i.e.: in layman’s terms). The formatting of the thesis/dissertation should follow the guidelines in the Graduate School Formatting Guide.

Defense and Final Oral Examinations

A. Plan A M.S Degrees

Upon completion of their thesis research students prepare a written thesis in accordance with the Graduate School guidelines <http://grad.msu.edu/etd/>. The written document must be reviewed by the Major Professor and the Guidance Committee and approval given to proceed with the public seminar. Following the seminar, the final Thesis Defense and Oral Examination is conducted by the Guidance Committee and is closed to the public. Typically the oral examination covers the student’s research and written thesis, in-depth knowledge about the topics and the research skills that went into the research project, and their general knowledge about entomology gained from classwork and other experiences.

B. Ph.D. Degree

Upon completion of their dissertation research students prepare a written dissertation in accordance with the Graduate School guidelines <http://grad.msu.edu/etd/>. The written document must be reviewed by the Major Professor and the Guidance Committee, and approval given to proceed with the public seminar. Following the seminar, the final Oral Examination and Dissertation Defense is conducted by the Guidance Committee and is closed to the public. Through the dissertation, presentation, and oral examination the student should demonstrate to the Guidance Committee evidence of their ability to: critically examine scientific literature and organize it as the background information for a stated problem(s), formulate hypotheses and design experiments to test them, organize and tabulate data, interpret and set down inferences on the basis of these data, and suggest either practical or theoretical relevance for these data.

Submission of the Written Thesis/Dissertation to the Graduate School

Following successful defense of the thesis/dissertation, the student should incorporate revisions suggested by the Guidance Committee and make sure that the formatting of the written document conforms to the guidelines in the Graduate School Formatting Guide. The thesis/dissertation is submitted electronically to the Graduate School through ProQuest. The Graduate School staff reviews only the PDFs that are uploaded through ProQuest for formatting requirements. In addition to the main body of a thesis or dissertation, the Graduate School now permits the submission of supplementary materials to ProQuest. These supplemental materials will not be reviewed by the Graduate School for formatting requirements, but they must be acceptable by ProQuest and comply with ProQuest’s criteria and storage limits. All supplementary materials need the written approval of the Major Professor. Before submission students must fill out and submit, by fax or email, a signed approval form <https://grad.msu.edu/sites/default/files/content/etd/Approval%20Form%20May%202016.pdf> indicating that the final version of the thesis/dissertation has been reviewed and approved by their Major Professor and Guidance Committee. Follow the directions on the Grad School website to submit the thesis/dissertation electronically <http://grad.msu.edu/etd/>. Please note that submission of the thesis/dissertation to ProQuest does **not** mean that the document has been accepted by the Graduate School. The review process is interactive and can take anywhere from a few hours to weeks, depending on the extent of needed corrections. Please plan accordingly.

Other Required Examinations for the Ph.D.:

Qualifying Examinations: Prior to official recognition as a Ph.D. candidate in the Department of Entomology, the student must pass two examinations, the *Research Proposal Defense* and the *Comprehensive Examination*. The purpose of the *Research Proposal Defense* is to assess the student's competency to pursue original research (see Appendix D). This evaluation should be completed within the first year of study in order to allow for program development. The results are used to determine whether or not the Ph.D. student should be encouraged to proceed in a doctoral program, and if so, to determine if weaknesses exist in background knowledge which may be strengthened by including courses in the doctoral program. If the committee determines that the student's performance on the examination is not satisfactory, they may retake the examination after 3 months.

- a. **The Research Proposal Defense** is conducted by Major Professor and the Guidance Committee. The examination consists of two parts:
 - i) A written research proposal describing the student's research plan
 - ii) An oral examination, with an emphasis on an in-depth evaluation of the proposed research plan and an assessment of the student's reasoning and analytical skills, as an indication their potential in research. In addition, it provides an evaluation of the student's knowledge of entomology and other fields related to the research project. The main purpose of the second part is an assessment of the student's potential in research and a review and discussion of the plan for his/her dissertation.

Notification of the oral examination must be given to the faculty at least one week in advance of the examination.

The criteria used by the committee to render a decision include an assessment of the candidate's ability to identify an important research problem, knowledge in the chosen area of interest and related areas, and his/her ability to design experiments for the solution of the problem and to effectively communicate these ideas both orally and in writing. In addition, questions relating to the proposal and pertinent coursework will be asked.

The committee decision on a pass, fail, or conditional pass of the examination is made by mutual agreement (no more than one dissenting vote), and a signed statement of its decision (Appendix B) is sent to the Department Chairperson. A student may be given an additional opportunity to repeat the examination if the first evaluation is unsatisfactory.

- b. **Comprehensive Examination:** As the second and final step to official recognition as a Ph.D. candidate by the University, the student must pass a *Comprehensive Examination*. When 80% or more of the prescribed course work has been taken, the doctoral student is eligible to take the doctoral comprehensive examination covering coursework topics and those related to their research project. The student must be registered during the semester in which comprehensive examination is taken.

An exception to this is for students who were enrolled full-time in the spring and are taking their Comprehensive Examination during the summer semester immediately following. In that instance, the department can request a waiver of the requirement that the student be enrolled for at least one credit the semester of the Comprehensive

Examination. These requests are initiated by the Graduate Secretary and must be approved by the Department Chairperson,

Students are encouraged to complete this examination as soon as they are eligible and preferably no later than their third year in the program. The examination must be passed within five years after the student's first enrollment as a doctoral student. After the Comprehensive Examination is passed, three more years are allowed to complete the remaining requirements for the degree. Should the degree not be completed within this three-year period, the entire Doctoral Comprehensive Examination must be passed again.

The Doctoral Comprehensive Examination must be completed satisfactorily at least one semester prior to receipt of the degree.

The examination will consist of two parts—one written, the other oral. The student must pass the written examination before proceeding with the oral examination.

The written examination will be administered by the Guidance Committee and coordinated by the Major Professor. Typically each member of the committee will examine the student in a particular subject area relevant to the profession and the student's research area. Questions will be designed to measure the depth and breadth of the candidate's knowledge and understanding of the subject area. Each member's portion of the examination will require no more than eight hours to complete. The format of each member's portion of the examination may vary. Students are encouraged to discuss both the areas to be examined as well as the format and conditions for examination administration with their committee members in advance.

The oral examination is administered by the Guidance Committee. This examination is intended to measure the candidate's ability to discuss the entomological, biological, scientific, practical, educational and philosophical aspects of subject areas being tested. Notification of the oral examination must be given to the faculty at least one week in advance of the examination.

After evaluation of both the written and oral examinations, the Guidance Committee will determine by mutual agreement (no more than one dissenting vote) if the student has responded satisfactorily and passed the examination. The Guidance Committee may permit the student to retake the examinations(s) once after an interval of three months.

Once a candidate passes both parts of the examination, the "Record of Comprehensive Examination for Advanced Graduate Studies" (Appendix B) should be completed, signed, and delivered to the Chairperson's Office. The Graduate Secretary will record completion of the exam in GradPlan.

VII. Departmental Policies: Academic Performance

Academic Standards

Satisfactory progress is deemed to be a 3.0 or higher grade point average (GPA). Students falling below a 3.0 GPA will be notified by The Graduate School. Failure to bring the GPA up to the required 3.0 within one year of notification will lead to dismissal from the program. Any grade below 3.0 in a course will subject the student to review by the Graduate Program Director. The Graduate Program Director, in consultation with the student and major advisor, will determine whether the student will be required to repeat the course or otherwise remediate the deficiency. Courses with grades of less than 3.0 are not included in the 30 credits required for M.S. degree certification. Repeats of courses with grades 2.0 or 3.0 require approval by the Dean's office. According to University policy, students must attain an overall minimum 3.0 GPA to earn their degree.

Annual Evaluation

Graduate students need and deserve periodic evaluation and feedback as a measure of both their academic progress and their professional development. Both of these areas are evaluated by the Guidance Committee on a continuing basis, and by the Department through the **Annual Record of Academic Progress Report**. Students should meet with their Guidance Committee a minimum of once a year to present and discuss their progress and future goals, as well as to discuss any challenges they may be having with their research. This should occur prior to completing the **Annual Record of Academic Progress Report**.

Annual Progress Reports

Each year, graduate students are required to report on their progress towards a degree by submitting the **Annual Record of Academic Progress Report**, prepared by the student and signed by their Major Professor. The report is due to the Graduate Secretary by **February 15th of each year**. Students should also provide a copy of the completed report to each of their Guidance Committee members. The progress report covers courses taken, GPA, and progress in research. In addition, it documents a broad range of experiences and accomplishments that are integral to the student's professional development. These activities include things such as attending and presenting papers at professional meetings, awards or honors received, publications, service on Department or University committees or as an officer of Graduate-Undergraduate Entomology Student Society (G.U.E.S.S.), and volunteering in the Bughouse or for other events. The report should be completed by the student, discussed with and signed by the Major Professor. The Graduate Program Committee reviews the reports and gives feedback to the student and major professor. A copy of the report is then placed in the graduate student's academic file.

If a graduate student's progress is deemed unsatisfactory, the student will be notified in writing in a timely manner and a copy of the notice will be placed in the student's academic file. The student will be asked to meet with the Graduate Director to discuss how the situation might be remedied. Failure to resolve the situation may be grounds for dismissal.

Academic Records File Contents

The Department typically keeps the following information and records in Graduate Student Academic Files:

- Grade reports from the Registrar
- Memorandum of Understanding form (M.S.)
- Report of the Guidance Committee (Ph.D.)

- Research Proposal Defense information form (Ph.D.)
- Comprehensive Examination Form (Ph.D.)
- Requests for course change forms
- Requests for non-tenure stream faculty to be approved to serve on Guidance Committee
- Additional Memorandum of Understanding forms if required during a student's program
- Copies of any Graduate Assistantships processed
- Copies of any fellowships processed, along with their application materials
- Copies of letters-of-offer
- Copies of letters notifying students of awarded fellowships
- Copy of initial application packet when student applied to department
- Copy of completed packet of information sent to Admissions when student is admitted to department
- Copies of all Annual Progress Reports submitted during a student's program
- RCR compliance information when complete
- Lab Safety information that is filled out with major advisor
- Copy of Certification for Degree Form
- Copy of Record of Dissertation and Oral Examination (Ph.D.)
- Program Completion document (internal document for both M.S. and Ph.D.)
- Enrichment proposals for Ph.D. students, where applicable
- Various email correspondence with a graduate student and major professor, when necessary, as it relates to a student's program.

Access to Records

Graduate students have the right to inspect all of their academic records, except confidential letters of recommendation. Students also have the right to inspect reports and evaluations of academic performance. A student can make an appointment with the Graduate Secretary to view these records. The student can challenge the contents of their file by writing a letter to the Chairperson. This letter will be put in their file.

VIII. Departmental Policies: Integrity and Safety in Research and Creative Activities

The Department of Entomology takes its role seriously in training graduate students to be ethical and productive scientists and ethical educators. As part of this responsibility, this section is to inform students of the expectations for responsible conduct of research. Responsible conduct in research involves not only ethical behavior regarding honesty, but also includes policies involving safe and ethical use of animals, human subjects and appropriate handling of hazardous materials including pesticides, laboratory chemicals, radioactive materials, transgenic organisms and pathogenic organisms. Because ethical violations are grounds for dismissal, we suggest that all students familiarize themselves with this section.

1. Research Integrity.

The document *Guidelines for Graduate Student Advising and Mentoring Relationships and Guidelines for Integrity in Research and Creative Activities* is provided to all faculty members and new graduate students. It is found at:

<https://grad.msu.edu/sites/default/files/content/researchintegrity/guidelines.pdf>

Appendix E of this *Handbook* provides guidelines for professional integrity regarding recognition of professional accomplishments. In addition, all graduate students are required to complete a course on Responsible Conduct of Research (RCR) during their first year of study, as well as annual refresher courses. The Department of Entomology offers Responsible Conduct of Research Seminars (see the Department RCR Plan, Appendix F) to fulfill this requirement. Alternatively, this requirement may be fulfilled by participation in the Responsible Conduct of Research Series given by the Graduate School <http://grad.msu.edu/rcr/>. Students and faculty share responsibility for ensuring research integrity.

The *Guidelines for Integrity in Research and Creative Endeavors* outline eight key principles for research integrity:

- Honesty in proposing, performing, and reporting research, including storing and documenting primary data.
- Recognition of prior work.
- Confidentiality in peer review.
- Disclosure of potential conflicts of interest.
- Compliance with institutional and sponsor requirements.
- Protection of human subjects and humane care of animals in the conduct of research.
- Collegiality in scholarly interactions and sharing of resources.
- Adherence to fair and open relationships between senior scholars and their coworkers.

Misconduct in research and creative activities will not be tolerated. Misconduct includes fabrication or falsification of data or information, as well as plagiarism. It also includes serious or continuing non-compliance with government regulations pertaining to research, and retaliation against whistleblowers. It does not include honest errors or honest differences of opinion in the interpretation or judgment of data. Misconduct is an egregious violation of standards of integrity and is grounds for disciplinary action, including the termination of faculty and staff, dismissal of students, and revocation of degrees. Faculty, staff, and students all have the responsibility to understand the University's policy on misconduct in research and creative activities, to report perceived acts of misconduct of which they have direct knowledge to the University Intellectual Integrity Officer, and to protect the rights and privacy of individuals making such reports in good faith.

2. Training and Permission for Safe and Ethical Use of Hazardous Materials, Animals, and Human Subjects.

All research conducted at Michigan State University must be in compliance with current regulations governing laboratory safety and the ethical treatment of both animals and human subjects. Use of vertebrate animals or humans in research requires both training and approval prior to the beginning of the research. For research involving animals see MSU's Institutional Animal Care and Use Committee (IACUC) website: <http://animalcare.msu.edu/>. For research involving humans see the MSU Human Research Protection Program website: <http://hrpp.msu.edu>. Surveys, focus groups and related sociological/human dimensions research are considered research involving humans. In some special cases, where there is use of invertebrates in a human health application, approvals are needed also. The Graduate School will check whether appropriate approvals were obtained at the time the student's thesis or dissertation is submitted. Failure to ensure that graduate research was done with advance approvals could delay or prevent graduation.

Laboratory Safety: All graduate students who work in laboratories outside of regularly scheduled classes must have prior approval by a faculty member. No approval can be given unless the student has completed the Laboratory Safety Training offered by the Environmental Health & Safety (EHS). Students must certify that they have completed this training before working in any laboratory. Maintaining the Department's compliance with safety regulations is a responsibility of all students working in Entomology laboratories. To sign up for the training, students should go to <http://www.ehs.msu.edu>. Follow the "Training" link to "Chemical Hygiene and Laboratory Safety." The training program, as well as the required annual refreshers, are completed online.

Use of biological materials, pathogenic organisms, radioactive substances, or certain hazardous chemicals requires additional training. The student's major professor will provide information about the required training in such cases. Regulations can be obtained from EHS, <http://www.ehs.msu.edu>.

*Note: The Department of Entomology also has its own Lab Safety sheets that must be filled out and on file stating what kind of safety training graduate students need to be in compliance. These forms are given to students at Graduate Student Orientation. These forms **MUST** be filled out with the student's Major Professor and returned to the Graduate Secretary before initiating any research.

Pesticides: Because pesticides are used in the MSU Greenhouse Complex, students must be trained under Worker Protection Standards (WPS) before they can access the complex with their ID card. Watching a video, available in the greenhouses manager's office, meets the training requirement. Under WPS, a worker is defined as anyone entering a pesticide-treated area within 30 days of an application. Thus, most students entering fields to conduct research on campus or commercial farms also fall under WPS. The greenhouse video also serves the training requirements for field worker.

Students applying pesticides must take an examination and be certified as commercial applicators by the State of Michigan; this certification is valid for three years, then can be renewed by test or seminar credit. See the following website for details on the categories, examination process, and fees: http://www.michigan.gov/mdard/0,4610,7-125-1569_16988_35289---,00.html. Students handling, mixing, and loading pesticides need to be trained under WPS, but the MSU Environment Health and Safety (EHS) office requests that MSU employee handlers become certified as commercial applicators. Student's that are

required to get certified should discuss with their Major Professor the appropriate categories and if/how the certification fee will be covered.

Human Subjects: Any research involving human subjects or materials of human origin must be approved before any such research is initiated. Application for approval must be submitted by the major professor jointly with the graduate student. The full review process typically requires a minimum of one month to complete but is longer when revisions are necessary. The application must be renewed annually, and before each portion of research involving human subjects is performed. If a student fails to obtain the appropriate prior approval, the thesis or dissertation containing such work will not be accepted, and the student will not graduate.

Details of training requirements and applications are available at the MSU Human Research Protection Program website: <http://hrpp.msu.edu>.

Vertebrate Animals: The use of vertebrate animals in research, teaching, and outreach activities must be approved by MSU's Animal Care Program (see <http://animalcare.msu.edu/>). Only faculty who are Principal Investigators on a project can submit the animal use form. Graduate students and others who are active in certain activities on a project need to be listed on the form and receive training. The full review process for Animal Use Forms typically requires 4-6 weeks. Once approved, the application is valid for three years. Each year, Principal Investigators will be sent, and are required to complete, sign and return, a brief Annual Review Letter. Failure to return the Annual Review Letter will lead to inactivation of ACP approval to animal use. Any significant changes in animal research activities must be processed and approved through ACP. Although the faculty Principal Investigator is responsible for filing animal use forms, it is the student's responsibility to ensure that his or her research is covered under an approved and active project.

Shipping and Using Insects in Research: Permits are required for shipping insects and for using specific insect species in the laboratory. Please see the APHIS website for forms and procedures <https://www.aphis.usda.gov/aphis/home/>.

Collecting Insects: Be aware that collecting specific insect species or collecting insects in parks or on other public lands in the United States and abroad may require permits. Research the regulations that apply to any planned collecting activities and apply for any required permits before collecting.

3. Integrity in Teaching and Learning.

Graduate students often find themselves playing dual roles of both teacher and learner over the course of their programs. Each of these brings its own set of responsibilities for ethical conduct. It is, therefore, doubly important that graduate students support academic honesty and the highest level of professional integrity in their own classrooms. The details of these responsibilities, which are summarized below, are available as part of the *Spartan Life* Student Handbook and Resource Guide.

Academic Honesty: The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The Department of Entomology, in agreement with the University, expects that both faculty and students will honor these principles. As students, graduate students are expected to adhere to the policies of protection of scholarship and grades which specify that no student shall claim or submit the work of another as his/her own, complete any assignment or examination for another individual, or accept or use any materials containing

questions for examinations or assignments without proper authorization. In addition, students should be familiar with the All-University policy on Integrity of Scholarship, which includes disciplinary procedures in cases of suspected academic dishonesty.

Code of Teaching Responsibility: When a graduate student takes on the formal responsibility of helping with the instruction of other students, whether as a grader, proctor or teaching assistant, he or she accepts a new set of obligations. Although the ultimate responsibility for course management resides with the instructor-of-record, the Department expects graduate student teachers to adhere to the Code of Teaching Responsibility, as detailed in the *Spartan Life* Student Handbook. This code includes, but is not limited to: meeting classes regularly, informing students of methods used to determine their grades, returning graded work with sufficient promptness to enhance the learning experience, and being accessible to students through the use of a reasonable number of scheduled office hours. In addition, the Department expects graduate Teaching Assistants to uphold the highest integrity in assigning graded work, and to protect the privacy of students under their authority.

Conflict of Interests in Educational Responsibilities: Graduate students in teaching roles must realize that there is a significant power differential between them and their students. The University recognizes that any employee, including teaching assistants, may undermine the trust needed for effective teaching if they allow the development of amorous or sexual relationships with their students. The All-University Policy on such conflicts of interest is detailed in the *Spartan Life* Student Handbook.

IX. Student Conduct and Conflict Resolution

1. The *Graduate Student Rights and Responsibilities*. <http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities> describes graduate student rights and responsibilities: *The graduate student, as a member of the academic community, has both rights and responsibilities. Within that community, the graduate student's most essential right is the right to learn. The University has a duty to provide for the graduate student those privileges, opportunities and protections that best promote the learning process in all its aspects. The graduate student has duties to other members of the academic community, the most important of which is to refrain from interference with those rights of others which are equally essential to the purposes and processes of the University.* (Article 1.2) Students are expected to be familiar with codes of conduct and their rights and responsibilities presented in this document.

2. Students share with faculty the responsibility to maintain an atmosphere conducive to teaching and learning, to maintain the integrity of scholarship and grades, and to maintain standards of professional behavior and relationships based on mutual trust and civility. Failure on the part of the student to meet these responsibilities may result in dismissal from the program.

3. The procedure for resolving conflicts between a graduate student and his/her major professor or Guidance Committee, or between the student and another faculty member or department administrator, is outlined in *Graduate Student Rights and Responsibilities* (Article 5). The essential steps are as follows:

a. When conflicts arise it is recommended that the student first seek resolution and redress informally through discussion with the appropriate individual(s). Students are encouraged to contact the graduate director and/or the Department Chairperson if necessary to help resolve the conflict. Students are also encouraged to contact the University Ombudsperson who can provide independent and confidential advice (see #5).

b. If informal resolution cannot be obtained, a formal written grievance may be sent to the Department Chairperson, who will convene a department hearing board that consists of equal numbers faculty and graduate students selected by their respective groups in accordance with the department/school/program hearing procedures, as described in Appendix G.

c. The findings of the departmental hearing board may be appealed to the college-level hearing board.

4. Discrimination is prohibited at Michigan State University. If a student has been discriminated against based on age, race, religion or sexual preference, the student should discuss the situation immediately with the Graduate Program Director or the Department Chairperson. If the issue is not resolved within the department the student has the option of contacting the Office for Inclusion and Intercultural Initiatives (I3) <http://www.inclusion.msu.edu>.

5. Office of the University Ombudsperson

a. Conflicts, disagreements, and issues sometimes arise during the course of a graduate program. If a student finds themselves in this situation and have exhausted the internal resources for resolving the issue, they may contact the Office of the University Ombudsperson.

b. The Office of the University Ombudsperson provides assistance to students, faculty, and staff in resolving University-related concerns. Such concerns include student-faculty conflicts; communication problems; concerns about the university climate; and questions about the options available for handling a problem, according to Michigan State University policy. The University Ombudsperson also provides information about available resources and student/faculty rights and responsibilities. The office operates as a confidential, independent, and neutral resource. It does not provide notice to the University - that is, it does not speak or hear for the University.

c. Students may contact the Ombudsperson at any point during an issue when a confidential conversation or advice may be needed. The Ombudsperson will listen to the student's concerns, provide information about University policies, help evaluate the situation, and assist in making plans to resolve the conflict.

Contact information:

Office of the University Ombudsperson

129 N. Kedzie Hall

(517) 353-8830

ombud@msu.edu

<https://www.msu.edu/unit/ombud/>

X. Work-Related Policies

Graduate Assistantships

What is an Assistantship?

The primary purpose of a graduate assistantship is to provide financial support for a student while he or she performs specific duties. A graduate research assistant (RA) performs duties related to research; the duties may be related to the student's research project or a different project altogether. A graduate teaching assistant (TA) may teach a course, lab, or recitation section, prepare handouts, monitor examinations, grade examinations, or perform other instructional duties.

A graduate student must be registered in the semester he/she receives a graduate assistantship. The percent appointment dictates the minimum/ maximum number of credits that can be taken during the semester. A tuition waiver is provided during the period of the Assistantship up to 9 credits during the school year, and 5 credits in the summer. A waiver of out-of-state tuition is granted to out-of-state students during the semester of appointment. Most fees associated with enrolling each semester (infrastructure/ matriculation/ enrollment) are also waived. Student taxes are not waived and are the student's responsibility. Unsatisfactory performance in course work or in the performance of duties will result in termination of an assistantship.

Research Assistants are typically supported on grants awarded to their Major Professor or Fellowships.

Selection of Research Assistants

The final selection of graduate assistants is made by the Department Chairperson, upon recommendations from faculty members. Appointments of graduate assistants are made on a semester basis, with a maximum appointment of one year. Reappointments are contingent upon continued satisfactory academic progress and performance of duties, plus availability of funding.

By April 22nd of each calendar year, the Department Chairperson will advise each graduate assistant in writing of the following for the next academic year:

- the assistantship will be renewed, or;
- the assistantship will be renewed if the student meets certain specified conditions, or;
- the assistantship will be renewed if the Department is able to meet certain specified conditions, or;
- the assistantship will not be renewed based on the reasons indicated.

Teaching Assistants: The Entomology Department continues to be granted teaching assistantships (TA) as a direct result of Entomology faculty teaching one or more sections of the Center for Integrative Studies in General Science (CISGS) course, Integrative Studies Biology ISB 201. The assistantships exist because of the faculty who agree to teach these challenging courses, which typically have over 150 students enrolled.

The policy of CISGS is that TAs are appointed for a full academic year, thus prospective TAs must be available to teach both fall and spring semesters. Faculty are responsible for requesting a graduate student be considered for an ISB TA.

ISB TAs will be allotted within the Department of Entomology based on the following priorities. Faculty who teach ISB sections will be given the first opportunity to apply for ISB TAs. These faculty members are the reason these assistantships are available. The remaining assistantships will be allocated based on the following:

- The need to cover a funding shortfall with the understanding that ISB TA support should be used to bridge temporary gaps in funding. The ISB TA should not be the sole source of support for students over the life of their graduate programs.
- Students who have a special interest in gaining teaching experience.
- The prospective TA's communication skills.
- The individual faculty member's track record of timely degree completion and financial support for students.

The Department will send out a request for proposals to faculty in the Spring semester prior to the next academic year. Faculty members must justify their request for TA positions based on the priorities listed above.

Graduate Assistantship Levels

Level 1: Must hold a Bachelor's degree and have less than one year of experience as a graduate assistant.

Level 2: Must hold a Master's degree and/or possess one year of experience as a graduate assistant. Advancement from Level 1 to Level 2 is routine on completion of 45 credits or one year (two semesters) of experience at Level 1. Advancement is normally accompanied by an increase in the graduate student's stipend.

Level 3: Must hold a Master's degree or equivalent, and have six semesters of experience as a graduate RA/TE at Michigan State University, or equivalent. The advancement to the rank of a Level 3 graduate assistant does not provide an increase in pay.

Min/Max Credit Loads Per Semester for Graduate Assistants

Assistantship Appointment	Minimum Credit Load		Maximum Credit Load		# Credits Covered by Tuition Waiver	
	M.S.	Ph.D.*	M.S.	Ph.D.	M.S.	Ph.D.
¼- time	6	3	16	16	9	9
½-time	6	3	12	12	9	9
¾-time	3	3	8	8	9	9
Summer	3	3	None	None	5	5

* Doctoral students, both domestic and international, who have passed Comprehensive Examinations may register for one credit and still be considered a full-time student.

Assistantship Workload, Duties, and Evaluation

The normal workload for a ½ time assistantship is 20 hours (10 hours for a ¼-time) per week, averaged over the length of the appointment. The assistantship supervisor (typically the Major Professor or, in the case of teaching assistants, a course instructor) should make assignments and/or duties clear to the assistant. If there is a question of clarity or disagreement about assignments or duties, it is the responsibility of the graduate assistant and the assistantship supervisor to develop a written agreement on the assistant's assignments and duties and have

it signed by both parties. Each student must file a written progress report (the Annual Evaluation) together with their Major Professor with the Department Graduate Committee in the Spring semester. The progress reports should take into account performance as an assistant, even when the student was supervised by another faculty member (as in the case of a TA).

Stipend Amounts

Graduate stipends increase with student experience as follows: Level I, B.S. degree and < one year experience as a graduate assistant; Level II, M.S. degree and/or two semesters as a graduate assistant. The exact amount of graduate assistantship stipends paid to Department of Entomology graduate assistants are determined by the Department in consultation with the Business Manager and the Department Chairperson, but amounts fall within ranges established and published at

<http://www.hr.msu.edu/hiring/studentemployment/gradasst/stipendRanges.htm>.

Payroll and Taxes

Graduate stipends are paid on a biweekly basis (every other Friday). If the payday falls on a weekend or holiday, checks arrive business day before. As of August 1, 2015, Paper checks will longer issued through Payroll. Graduate Assistants must sign up for direct deposit or be issued a payroll debit card (PayCard). If a Graduate Assistant chooses direct deposit, instructions on enrolling are at <http://www.ctlr.msu.edu/copayroll/directdeposit.aspx> while information on the PayCard is available at <http://ctlr.msu.edu/COPayroll/PayCard.aspx>.

Stipends are subject to income taxes with few exceptions. The taxability of stipends is subject to review by the Internal Revenue Service. Graduate Assistants are required to file a W-4 Withholding Allowance Certificate. Domestic students must fill out this form online at www.epayroll.msu.edu. International students must go to the Payroll Office in person, Room 350 Administration Building, to fill out the form.

Student Health Insurance

Enrollment in a health insurance plan is automatic for graduate assistants. The length of coverage depends on the length of the appointment. Students with a nine-month appointment are covered for a full 12 months. Enrolled students may also insure spouses/ same-sex domestic partners and/or dependent children in the MSU plan. For questions or details about insurance, contact the MSU Benefits office at 1407 S. Harrison Road, Suite 140 Nisbet Building, 517-353-4434 or 1-800-353-4434,

https://hr.msu.edu/benefits/student_insurance/Health_Graduate_Assistant.htm#BCNGA16, or <http://www.hr.msu.edu>

For more information on graduate assistantship policies, stipends, and insurance, see this link: <http://grad.msu.edu/assistantships/docs/assistantship.pdf>

Graduate Assistant Parking

Graduate Assistants can purchase a permit to park in all Faculty/Staff lots south of the Red Cedar River. Information on registering a vehicle and purchasing a permit are at <http://police.msu.edu/management-services-bureau/parking-office/student-permits/>

Graduate Assistant Illness/Injury/Pregnancy Leave and Vacation Policy

A graduate assistant unable to fulfill the duties of an appointment because of illness, injury, or pregnancy should notify his or her Major Professor as soon as possible. During the illness, injury, or pregnancy, the Advisor (and the assistantship supervisor, if different) will adjust (reduce, waive, or reschedule) the graduate assistant's duties as physical circumstances

reasonably dictate. If total absence from duties becomes necessary, the Major Professor will maintain the stipend of the appointment, provided the graduate assistant is still enrolled, for a period of two months, or until end of the appointment period or the semester, whichever comes first. Continuation of the appointment is at the discretion of the Major Professor. Vacation time should be arranged in advance with the Major Professor.

Term Limits for Graduate Assistantships

The Department follows MSU's maximum guidelines for assistantship support, 5 years for an M.S. degree and 8 years for a Ph.D. degree. In reality, since most graduate research assistantships are dependent on outside grant funding that is limited to a few months or years, assistantship support is self-limiting. Before starting a program, graduate students should talk with their Major Professor to understand the length of time assistantship funding will be available. Departmental responsibility for funding a graduate assistant will not extend beyond the semester in which the appointment was made.

An assistantship may be terminated at any time, during the semester if the assistant is failing to meet grade standards, because of poor performance as an assistant, or because the student has not satisfactorily completed the minimum credit hours required in each semester that she or he is enrolled.

Terminating a Graduate Assistantship

Assistantships terminate under several circumstances, listed below:

1. Completion of a Degree: When the degree is done, the assistantship ends. A student wishing to terminate an assistantship prior to that time should notify their Major Professor (and the assistantship supervisor if different) and the Graduate Secretary.
2. Substandard Performance: The Department may terminate a graduate assistantship for substandard performance or inability to perform expected duties. Substandard performance may be brought to the attention of the Department Chairperson, typically through the annual Academic Progress Review. Academic difficulty will result in a review of the student's overall situation by the Graduate Committee, Graduate Program Director, and Department Chairperson.
3. Violation of Policies: The Department may terminate an assistantship in cases of violation of the General Student Regulations contained in the *Spartan Life* handbook (<http://splife.studentlife.msu.edu/>), or graduate student responsibilities contained in the "Graduate Student Rights and Responsibilities." (<http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities>). This action may be initiated by the Department Chairperson or by the student's Major Professor.
4. Budgetary Constraints: The Department may terminate assistantships for budgetary reasons. Should this be necessary, affected graduate assistants in good standing will be given some priority over new applicants, depending on their qualifications to perform the required activities.

Fellowships

Fellowships are not the same as assistantships. Fellowships are offered through various sources, (e.g., Science to Achieve Results (STAR), NASA Graduate Student Research Program), and can offer the same benefits as an assistantship. If the student receives a fellowship, communication is necessary between the student, Major Professor, Entomology Business Manager and Graduate Secretary.

If the student receives a fellowship, he or she is not granted in-state residency (unless already a Michigan resident) and needs to be aware of out-of-state tuition rates that will be applied to the fellowship. Receipt of externally funded fellowships by students who have written their own grant applications worth at least \$20,000 (direct costs) makes the students eligible to apply for a "Top-up" Award which will charge these fellowship funds the in-state rate if the student does not already qualify. The "Top-Up" Award must be requested only for the semesters the student is supported by the fellowship. This policy applies only to fellowships funded through a competitive process by a US institution/agency/foundation. Funds obtained through non-competitive processes (e.g., need-based fellowships) or from international sources do not qualify the students for in-state tuition rates. Only a limited number of students with external fellowships that meet the appropriate criteria are provided these tuition awards, each year, by the Graduate School. For more information and how to apply for the tuition "Top-Up" Award contact the Graduate Secretary.

In general, fellowships only cover the amount of a student's stipend. They do not cover health insurance, tuition, fees, and incidentals. However, the student can request funds in addition to the fellowship to cover these expenses. If the student requests monies beyond the stipend amount of the fellowship, he or she must notify the Department Business Manager and Graduate Secretary immediately. There is no guarantee that the requested additional funds will be awarded. Again, if a student receives a fellowship, he or she is not granted in-state residency (unless already a Michigan resident) and needs to be aware of out-of-state tuition rates.

Coverage of health benefits requires a form be filled out and sent to Human Resources from the Department of Entomology (see Graduate Secretary to initiate). To ensure that health coverage begins at the same time as the fellowship, paperwork should be processed prior to the start of the fellowship.

Additionally, to ensure that enough monies are available to cover additional expenses verification of available monies must be approved by the Department Business Manager.

To be eligible for a parking permit, the fellowship must be over \$1,000. If the fellowship is for one semester, the student will be eligible for a permit during that semester. If the fellowship is for Fall through Spring semester, he or she may obtain a permit for the entire year. The student will be required to show a copy of his or her fellowship appointment along with a letter of verification of the fellowship from the Entomology Chairperson to receive the permit at the Department of Public Safety.

Dissertation Completion Fellowships (DCF) received during fall or spring semesters require a minimum enrollment of one credit, which these fellowships do not cover. DCF's received during summer semester do not require enrollment.

Travel on University Business

Travel to professional meetings is highly encouraged. While MSU and the Department of Entomology have some funding for graduate student travel, most graduate student travel in support of research is provided by the Major Professor. Graduate students should consult with their Major Professor on travel interests and opportunities, and work with their Advisor when filing paperwork with the Business Office to agree on the amount of reimbursement and the account number(s) used.

To ensure insurance coverage, graduate students are required to complete a Travel Authorization form any time they travel out of the state of Michigan on MSU business, whether or not they will be reimbursed for their trip. In addition, each graduate student should have a Blanket Travel Authorization on file and update it annually; this provides authorization to travel throughout Michigan to conduct MSU business, for example, to visit research sites. Both forms are handled through the Entomology Business Office.

Using an MSU Vehicle

Graduate students often use university-owned vehicles to get to field sites and professional meetings. However, strict guidelines exist for using University Vehicles. To drive a university vehicle, all employees must:

- Have a valid unrestricted U.S. driver's license, with proper class and endorsements listed for the vehicle(s) to be operated;
- Have a satisfactory driving record;
- Sign an Employee Driver Certification form annually.

Students should consult their Major Professor or the Entomology Business Office if they have questions about policies and procedures regarding University Vehicle use.

Business Procedures in the Department

Graduate students should receive approval from their Major Professor prior to using an MSU account number for purchases or reimbursements of any kind. Direct questions about business policies or procedures to the Entomology Business Office, Room 243 Natural Science Building.

Reimbursement for Misc. Expenditures

Occasionally, graduate students make miscellaneous small purchases for research using personal funds. To receive reimbursement for these expenses an **itemized** receipt must be provided that shows **proof of purchase** to the Entomology Business Office. MSU's Accounting Department will not reimburse for purchases unless an itemized receipt is attached. Students also need to provide the Entomology Business Office with an account number for their reimbursement. Do not purchase items with personal funds if it is possible to get the same item through University Stores or Open Orders using an MSU account number.

University Stores

Many general use items and supplies (office, lab, and field) are available at a reduced price from MSU's University Stores. Materials may be purchased through the EBS Portal at Shop at State. All receipts for any purchase must be turned into the Entomology Business Office

Open Orders

Over 200 vendors participate in MSU's Open Order's program. This is an easy way to make purchases using an MSU account number when University Stores doesn't carry something in stock. A list of participating vendors is on the University Stores website. Open Orders must be placed through the Entomology Business Office. In addition, all packing slips and receipts must be turned in to the Business Office.

Purchase Requisitions

When University Stores and Open Orders can't be used to make a purchase, or an item is more than \$2,500, then a Purchasing Requisition is used. Requisitions are processed through the Entomology Business Office. The Business Office Staff can provide details on what information is needed for processing.

Material Return Forms

Any time University property is sent off campus for repair, return, replacement, exchange, etc., a Material Return (or MR) is required. These forms are processed through the Entomology Business Office.

Building – Card Access

Building access for the Natural Science Building, CIPS, and Giltner Hall is authorized through the Entomology Business Office. An MSU ID card is required.

Key Policy

Entomology currently has a \$10 deposit for each room/lab key. Keys for the Natural Science Building, CIPS and Giltner Hall can be checked out from the Entomology Business Office. If keys are lost the deposit is forfeited and must re-paid to receive another key(s). **Students should be sure to turn in all University keys before leaving MSU.** After students complete their program and return their keys, a check will be processed refunding students for their deposit. No cash will be given when keys are returned.

Copy Machine Policy

Copy charges are the responsibility of the student and their Major Professor, who will supply the appropriate copy code to use the Entomology's Departmental copy machines.

Computer Laptops and LCD Projectors

The Department has laptop computers and LCD projectors that can be reserved for departmental business (e.g. classroom, lectures, seminars, extension talks, etc.). It is recommended that students reserve them in advance whenever possible.

Reserving Conference Rooms

The Department has a conference room for departmental use, 244B Natural Science. Contact the Entomology Business Office to reserve the room. The CIPS Building and the National Food Safety and Toxicology Building also have conference rooms available which Entomology faculty and staff use regularly.

Hutson Travel Funds

Funds to partially pay graduate student travel to professional meetings and conferences are available through Entomology Hutson Endowment Fund. Funding is limited to one domestic trip per year and one international trip during the student's degree programs in the Department of Entomology. Requests for domestic travel funds must be submitted no later than eight weeks prior to the travel date. International travel requests should be initiated as early as 6 months in advance. The request should include the following information:

1. Dates of the meeting or conference.
2. Name or sponsor of the conference or meeting.
3. Meeting location.
4. Information on the student's participation, i.e. presenting a talk or a poster, participating in Linnaean games, or other activities at the meeting.
5. Projected costs of the trip.
6. A brief (one or two paragraphs) narrative statement about how the student's degree program will be benefitted attending this meeting or conference.

XI. University Resources

1. Academic Programs.

<http://www.reg.msu.edu/AcademicPrograms/>

This document includes sections on:

- Graduate Education

<http://www.reg.msu.edu/AcademicPrograms/Text.asp?Section=111#s111>

- Graduate Study in the College of Agriculture and Natural Resources

<http://www.reg.msu.edu/AcademicPrograms/Text.asp?Section=114>

2. Graduate Student Rights and Responsibilities (GSRR) are available as part of the Spartan Life Student Handbook and Resource Guide.

<http://splife.studentlife.msu.edu/>

3. Guidelines for Graduate Student Advising and Mentoring Relationships and Guidelines for Integrity in Research and Creative Activities:

<https://grad.msu.edu/sites/default/files/content/researchintegrity/guidelines.pdf>

4. Access to student records is governed by:

- The provisions of FERPA (Family Educational Rights and Privacy Act)

<http://www.reg.msu.edu/ROInfo/Notices/PrivacyGuidelines.asp> and by

- MSU's Guidelines Governing Privacy and Release of Student Records

<http://www.reg.msu.edu/AcademicPrograms/Text.asp?Section=112#s542>

Degree-Related

Graduate School has a complete website at <http://www.grad.msu.edu>, including:

- **Graduate Employee Union Contract Handbook:**

<https://www.hr.msu.edu/documents/contracts/GEU2015-2019.pdf>

- **Thesis/Dissertation Formatting Guide:**

<https://grad.msu.edu/etd/formatting-guide/>

The **Academic Programs Catalog** is the main source for general regulations, policies, procedures, and academic program requirements:

<http://www.reg.msu.edu/AcademicPrograms/>

The MSU **course schedule** is at <http://www.schedule.msu.edu>

Academic

Learning Resources Center offers free assistance to students who want to improve their study skills. 202 Bessey Hall, 355-2363, <http://lrc.msu.edu/>.

MSU Writing Center offers writing consultation to graduate as well as undergraduate students for papers, abstracts, cover letters, research and conference papers, theses and dissertations. 300 Bessey Hall, 432-3610, <http://writing.msu.edu/>.

Office for International Students and Scholars (OISS) – can answer questions regarding academics, immigration, social, health, employment, and financial matters. OISS also holds seminars and training programs. www.oiss.isp.msu.edu.

Resource Center for Persons with Disabilities provides services for persons with disabilities. 120 Bessey Hall, 884-7273. <http://www.rcpd.msu.edu/>.

Career

Center for Service-Learning and Civic Engagement links students with community service and volunteer opportunities. 27 Student Services, 353-4400, <http://www.servicelearning.msu.edu/>

Career Services Network assists students in career advising and employment upon graduation. 113 Student Services Building, 355-9510. <https://careernetwork.msu.edu/index.html>

Health & Family Services

MSU Student Food Bank supplies supplemental food and other necessities to students and their families in need. <http://foodbank.msu.edu/>

MSU Safe Place operates a free and confidential domestic abuse center, serving MSU students, faculty, staff or their partners, and children, 355-1100. <http://safeplace.msu.edu/>

Health Insurance is offered to graduate assistants as part of their benefits package. Information on the graduate assistant health insurance plan is at: https://www.hr.msu.edu/benefits/student_insurance/Health_Graduate_Assistant.htm

Counseling Center provides confidential professional counseling and psychological services. 207 Student Services, 355-8270, <http://counseling.msu.edu/>

Recreational Sports and Fitness Services - Students have access to equipment and facilities in the intramural facilities located in IM-West, IM-East, and IM-Circle. Students must present a current MSU student ID to be admitted and use equipment. Most facilities are free. <http://recsports.msu.edu/index.php>

Olin Health Center provides general health services, health screening and testing, vaccines, and a pharmacy. Olin Health Center Building, 884- 6546, www.olin.msu.edu. The Travel Clinic, located in Olin, provides advice and immunizations for foreign travel <http://www.travelclinic.msu.edu/>.

Women's Resource Center develops and implements programs targeted for female faculty, staff and students. 332 Union Building, 353-1635. www.wrc.msu.edu

APPENDIX A

TIMELINES FOR:

MS PLAN A

MS PLAN B

and PhD DEGREES

APPENDIX A

Graduate Degree Timeline – Master’s Degree, Plan A

YEAR 1	<ul style="list-style-type: none"> • Fall Semester - Set up Guidance Committee and have first meeting. • Fall Semester – Complete “Memorandum of Understanding” form with Committee and turn in to Graduate Secretary for Department approval. • Spring Semester – Turn in Annual Record of Academic Progress Report to Graduate Secretary by February 15.
	*Summer semester – conduct research and take courses/credits if necessary.
YEAR 2	<ul style="list-style-type: none"> • Fall Semester – Meet with Guidance Committee to discuss progress; continue taking courses/credits to complete MS degree credit requirements; continue with research. • Spring Semester – Continue taking courses/credits to complete MS degree if have not been completed. Turn in Annual Record of Academic Progress Report to Graduate Secretary by February 15. • Spring Semester – write and orally defend thesis with a seminar to the Department; turn in thesis to Graduate School. **
	*Summer semester – if unable to complete thesis for submission to Graduate School spring semester, reapply for graduation for summer semester and submit during the summer. Please note: you must be enrolled the semester you orally defend your thesis.

** If degree is not completed by end of year 2, continue meeting with Guidance Committee, conducting research, and writing thesis until it is completed and oral defense is given to Department.
 Note – there is a 5 year time limit for completion of MS degrees.

APPENDIX A

Graduate Degree Timeline – Master’s Degree, Plan B

YEAR 1	<ul style="list-style-type: none"> • <u>Fall Semester</u> - Set up Guidance Committee and have first meeting. • <u>Fall Semester</u> – Complete “Memorandum of Understanding” form with Committee and turn in to Graduate Secretary for Department approval. • <u>Spring Semester</u> – Turn in Annual Record of Academic Progress Report to Graduate Secretary by February 15.
	*Summer semester – conduct research and take courses/credits if necessary.
YEAR 2	<ul style="list-style-type: none"> • <u>Fall Semester</u> – Meet with Guidance Committee to discuss progress; continue taking courses/credits to complete MS degree credit requirements; continue with research. • <u>Spring Semester</u> – Continue taking courses/credits to complete MS degree if have not been completed. Turn in Annual Record of Academic Progress Report to Graduate Secretary by February 15. • <u>Spring Semester</u> – Complete research project and give oral presentation of research project to Department. **
	*Summer semester – if unable to present oral report during spring semester, reapply for graduation for summer semester. Please note – you must be enrolled the semester you present your oral report.

** If degree is not completed by end of year 2, continue meeting with Guidance Committee, conducting research, and writing research project until it is completed and oral presentation is given to Department. Note – there is a 5 year time limit for completion of MS degrees.

APPENDIX A

Graduate Degree Timeline – PhD Degree

<p>YEAR 1</p>	<ul style="list-style-type: none"> • Fall Semester - Set up Guidance Committee and have first meeting • Fall Semester – Outline courses and Guidance Committee members in GradPlan (www.gradplan.msu.edu) and submit for Department and Guidance Committee approval. • Spring Semester – Finish writing research proposal and take Research Proposal Defense • Spring Semester – Turn in Annual Record of Academic Progress Report to Graduate Secretary by February 15.
	<p>*Summer semester – conduct research and take courses/credits if necessary. If exams are planned during summer semester, you must be registered in at least one credit. Contact Graduate Secretary for details or with questions.</p>
<p>YEAR 2</p>	<ul style="list-style-type: none"> • Fall Semester – Meet with Guidance Committee to discuss progress; continue taking courses/credits to complete PhD degree requirements; continue with research • Fall Semester – DEADLINE - Must complete Research Proposal Defense if not completed previously. • Spring Semester – Continue taking courses/credits to complete MS degree if have not been completed. Turn in Annual Record of Academic Progress Report to Graduate Secretary by February 15. • Spring Semester – Complete research project and give oral presentation of research project to Department.
	<p>*Summer semester – conduct research and take courses/credits if necessary. If exams are planned during summer semester, you must be registered in at least one credit. Contact Graduate Secretary for details or with questions</p>

APPENDIX A

YEAR 3	Fall Semester – Meet with Guidance Committee to discuss progress; complete any needed courses; Fall Semester – Schedule and take Comprehensive Exams* Spring Semester – Turn in Annual Record of Academic Progress Report by February 15 Spring Semester – Write and orally defend dissertation with a seminar to the Department**
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*Comprehensive Examinations must be passed within five years of entering MSU and at least one semester before oral defense of dissertation.

**If degree is not completed by end of year 3, continue meeting with Guidance Committee, conducting research, and writing dissertation until it is completed and defended. Note – there is an 8 year time limit for completion of PhD degrees.

APPENDIX B

SELECTED FORMS PERTAINING TO GRADUATE PROGRAMS

The following forms are found in this section for both degrees:

Request for Course Change

The following forms are used in the M.S. program and are found in this section:

Memorandum of Understanding
Record of Completion - Master's Degree

The following forms are used in the Ph.D. program and are found in this section:

MSU Report of the Guidance Committee
Record of Examination-Doctoral Proposal Defense
MSU Record of Comprehensive Examinations
MSU Record of Dissertation and Oral Examination
Record of Completion - Ph.D. Degree

REQUEST FOR COURSE CHANGE
(Or Other Modifications in Degree Program)
MS and PhD Program
Department of Entomology • Michigan State University

(This form is to be used to effect a change in courses from that listed on the Memorandum of Understanding (MS) or the Report of the Guidance Committee (PhD); it is to be initiated by the student and submitted to the Guidance Committee and Department Chairperson for approval.)

Name _____ PID _____ Degree _____ Date _____

I. Course(s) to be removed (include course number, description, credits):

II. Course(s) to be added or substituted (include course number, description, credits, semester to be taken):

III. Other modifications (e.g. change in Guidance Committee members, thesis area, degree plan, etc.):

IV. Rational for requested changes (use reverse side if needed):

SIGNATURES OF APPROVAL

Guidance Committee:

Major Professor

Department:

Date:

Student:

Department Chairperson:

**MEMORANDUM OF UNDERSTANDING
THE MASTER OF SCIENCE PROGRAM IN ENTOMOLOGY
AT MICHIGAN STATE UNIVERSITY**

Mr./Ms. _____ PID _____ has been admitted to the Master of Science Program in Entomology at Michigan State University. It is agreed that the following courses, or approved substitutes, when completed with satisfactory grades, shall provide a basis for the granting of the Master of Science degree:

[illegible]

OTHER DETAILS OF M.S. PROGRAM

Date of Guidance Committee Meeting _____

☐ Plan A

Tentative thesis title or research subject: _____

☐ Voucher Specimen Collection Plan approved by Collection Manager/Curator of the A.J. Cook Arthropod Research Collection.

☐ Plan B

Special project(s) selected in addition to courses: _____

Expected semester of degree completion: _____

SIGNATURES OF APPROVAL

Guidance Committee:

Department

Date

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Student Date

Department Chairperson Date

Distribution:
Original to Entomology Office Student's File
1 copy to major professor
1 copy to Guidance Committee

RECORD OF COMPLETION -- MASTER'S DEGREE

Michigan State University
Department of Entomology

Student Name _____ Student # _____

This is to certify that:

1. The above names student has completed or is completing all courses prescribed by the Guidance Committee. The committee has approved any course changes.

☐ Yes

2. An oral examination was completed on (date) _____
The Committee decided that the candidate:

☐ Passed the examination

☐ Did not pass the examination. Any comments and recommendations are given under item 4 below.

3. The Master's thesis titled _____

☐ has/☐ has not been found worthy of acceptance on (date) _____

4. Comments and recommendations of Committee members: _____

5. Approved by the Guidance Committee: _____

Chairperson, Guidance Committee

Dept.

Dept.

Dept.

Dept.

Chairperson, Department of Entomology

Date

(over)

6. Items turned in:

Curator	<input type="checkbox"/>	Voucher Specimens _____	Initial/Date
Major Prof.	<input type="checkbox"/>	Equipment _____	Initial/Date
Business Ofc.	<input type="checkbox"/>	Keys _____	Initial/Date
Grad. Sec.	<input type="checkbox"/>	Bound Thesis (dept. copy) _____	Initial/Date

Chairperson, Department of Entomology

Date

See the catalog (Academic Programs) regarding composition of guidance committee and deadlines for its formation and for filing this report listing all degree requirements.

Name _____ Student No. _____

Last First Middle

Ph.D. _____ D.M.A. _____
Ed.D. _____ Ed.S. _____

First Semester in Doctoral Program _____ Dept. _____ Major _____
Semester Year

Bachelor of _____
Institution Year Major

Master of _____
Institution Year Major

Tentative Dissertation Subject _____

Director _____ Languages or Course Substitutes _____

Will the student's research involve the use of human subjects of human materials?	_____ Yes	_____ No
warm-blooded animals?	_____ Yes	_____ No
or hazardous substances?	_____ Yes	_____ No

I understand it is necessary to obtain institutional review and approval prior to initiating any research involving the use of human or animal subjects or hazardous materials.

(STUDENT'S SIGNATURE) _____ Mo./Day/Yr. _____

DOCTORAL PROGRAM

PLEASE PRINT OR TYPE AND CLUSTER BY FIELD

Dept.	Course No.	Semester	Title	No. CR

Dept.	Course No.	Semester	Title	No. CR

Approved

(Please TYPE guidance committee member's names below signatures)

1. _____
Chairperson: _____ Mo./Day/Yr. _____

5. _____

6.

Course Credits *(in addition to at least 24 credits of 999)*

Comprehensive examination areas:

The candidate expects to pass the Comprehensive Examination by _____ Semester, _____ Year.

Student _____
Mo./Day/Yr. _____

Department Chairperson
Mo./Day/Yr.

College Dean
Mo./Day/Yr.

MSU is an Affirmative Action/Equal Opportunity Institution

RECORD OF EXAMINATION
RESEARCH PROPOSAL DEFENSE
Michigan State University - Department of Entomology

Name _____
Last First Middle Student No.

The Research Proposal Defense (primarily the oral presentation and defense of the Dissertation Proposal) has been conducted by the Guidance Committee.

The proposed dissertation subject or title is:

- ☐ Proposal approved
- ☐ Proposal Satisfactory, but another meeting needed; comments on reverse.
- ☐ Proposal Unsatisfactory - major modifications needed; another "Record of Examination" must be completed whenever the Qualifying Examination is retaken. Comments on reverse.
- ☐ Failed. May not be retaken. Reasons given on reverse.

Date _____

Guidance Committee Chairperson

_____ Dept. _____ Dept. _____

_____ Dept. _____ Dept. _____

_____ Dept. _____
Department Chairperson or
Department Representative

Original: Permanent Student File
Copies: Student
Major Professor

RECORD OF COMPREHENSIVE EXAMINATIONS
for
DOCTORAL DEGREE AND EDUCATIONAL
SPECIALIST DEGREE CANDIDATES

☐ Check if this is a re-examination because of expired time limits.

Department of _____

Student's Name _____ Student Number _____
Last, First Middle Initial

Term and Year of First Course Counted towards this Degree _____

Result of Written Comprehensive Examinations:

<u>Field</u>	<u>Examiner(s)</u>	<u>Examination Date (MM-DD-YY)</u>	<u>Passed or Failed</u>
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Result of Oral Comprehensive Examinations:

<u>Field</u>	<u>Examiner(s)</u>	<u>Examination Date (MM-DD-YY)</u>	<u>Passed or Failed</u>
--------------	--------------------	--	-------------------------

OVERALL PASS or FAIL? _____

Signed _____ Date _____
Chairperson of Examination Committee

Signed _____ Date _____
Chairperson of Department

Signed _____ Date _____
Dean of College



Copies to: Dean
Department
Guidance Committee
Student

RECORD OF DISSERTATION AND ORAL EXAMINATION REQUIREMENTS FOR DOCTORAL DEGREE CANDIDATE

Department of: _____

Student's Name: _____ Student Number: _____

1. Dissertation Title: _____

2. Dissertation has been: ☐ Accepted ☐ Rejected ☐ Accepted subject to revisions (beyond minor editorial changes) required by the Committee.

3. Oral examination in defense of the dissertation was conducted on: _____

The student ☐ Passed

Date

☐ Failed Reason: _____

4. Dissenting opinions and signatures of dissenting examiners, if any: _____

5. Subject to the satisfactory completion of other requirements, this student is recommended for the degree Doctor of:

☐ Philosophy

☐ Education

☐ Musical Arts

Signatures of Guidance Committee Members:

Printed names of Guidance Committee Members:

Chairperson of Guidance Committee

Date

6. Major revisions required: _____

7. Revisions, if any, approved: _____

Chairperson of Guidance Committee

Date

Approved: Department Chairperson: _____

Associate/Assistant Dean: _____

RECORD OF COMPLETION – PhD DEGREE

Michigan State University
Department of Entomology

Student Name _____ Student # _____

This is to certify that:

1. The above named student has completed or is completing all courses prescribed by the Guidance Committee. The committee has approved any course changes.

☐ Yes

2. The PhD Enrichment Program has been successfully completed: ☐ Yes ☐ No

3. The PhD dissertation titled: _____

☐ has/☐ has not been found worthy of acceptance on (date) _____

4. The final oral examination was completed on (date) _____
The Committee decided that the candidate:

☐ Passed the examination.

☐ Did not pass the examination. Any comments and recommendations are given under item 5 below.

5. Comments and recommendations of Committee members:

6. The University PhD completion form has been signed by the Guidance Committee:

☐ Yes ☐ No

7. Items turned in:

Curator ☐ Voucher Specimens _____ Initial/Date

Major Prof. ☐ Equipment _____ Initial/Date

Business Ofc. ☐ Keys _____ Initial/Date

Grad. Sec. ☐ Bound Thesis (dept. copy) _____ Initial/Date

Chairperson, Department of Entomology

Date

APPENDIX C

VOUCHER SPECIMEN POLICY

VOUCHER SPECIMEN POLICY

TO: Graduate students, faculty, postdocs and anybody working on research projects

FROM: Department Chair, Collection Director, Collection Manager

SUBJECT: Voucher Specimen Policy

This policy is effective Fall 1981 - all students completing degrees during Fall term 1981 or thereafter must deposit voucher specimens. However, when possible, those who are completing degrees before Fall 1981 are encouraged to deposit voucher specimens.

At the July 16, 1980 faculty meeting a policy requiring the deposition of voucher specimens in an appropriate museum for all M.S. theses and Ph.D. dissertations was unanimously approved.

We all recognize the need for such documentation, since names change, classifications change, misidentifications can be made, and populations evolve. Hence, all of us need to preserve specimens of what we thought we were working with so they will be available in the future if questions or problems arise.

There are some obvious exceptions to this, such as purely taxonomic theses where specimens are routinely preserved, but most research projects save no specimens at all.

The deposition of voucher specimens for all research projects is strongly recommended, whether or not a thesis or dissertation is involved. Research projects involving a single species of laboratory reared animal are not exempt - a series of both males and females of the species involved must be deposited.

As part of the planning prior to carrying out your research, you should meet with the Collection Manager or Curator concerning the number of specimens you will need for deposition (10 of each sex is common), methods of mounting or preservation, date-locality labels, etc. Plan to preserve voucher specimens as you carry out your research. And - protect pinned specimens from ants, cockroaches and dermestids until they are deposited in the museum.

Specimens must be mounted/preserved in the conventional manner for the group or stage of development. NOTE: It is important that some stages (especially larvae) be killed properly or the specimens may be of little value. Check with the Collection Manager for materials and procedures that pertain to your specimens.

Specimens that do not pertain directly to the main thrust of the research efforts (residues from pitfall traps, malaise traps, etc.) should be made available to the Collection Manager to either complement the museum holdings and/or be used for teaching purposes.

Note the following:

1. **A "Record of Deposition of Voucher Specimens" form is available as a MS Word file from the Collection Manager for recording your voucher specimen information. It is to be included as Appendix 1 in all M.S. theses and Ph.D. dissertations** (see attached sample page C-7). It can also be used as a record of deposition of voucher specimens for any research project. "Appendix 1" was selected as the proper location in the thesis or dissertation so the location would be uniform, and since it does not seem to logically fit near the beginning.
2. Voucher submissions will be assigned a voucher number by the Collection Manager (such as 1981-01, 1981-02, etc.). Voucher labels printed on green paper will be provided by the Collection Manager. They will contain the following information (but will of course be much smaller):

VOUCHER SPECIMEN MICHIGAN STATE UNIV. VOUCHER NO. 1981-01 (NAME OF STUDENT)

The voucher label goes on ALL specimens, no matter what museum they are deposited in, so they can be located and tied to MSU research projects. Obviously, most will be deposited at MSU, but when some specimens are deposited in other museums, the MSU Voucher Number and label will connect the specimen with a research project at MSU and indicate that additional data on that species are available here. That is not the primary function of a voucher specimen, but the system does work both ways.

3. Publications resulting from your research. You should state that voucher specimens have been deposited in the Michigan State University A.J. Cook Arthropod Research Collection (or other museum), give the voucher number and other pertinent information.
4. All voucher specimens will be kept in a special cabinet in the main collection unless there is a special reason and agreement to do otherwise by the Collection Manager. If such an agreement is reached it is to be indicated on the "Record of Deposition of Voucher Specimens" immediately below "Entomology Museum, Michigan State University (MSU)". If all specimens are properly labeled with Voucher Labels and properly recorded in Appendix 1, they will be easy to locate.
5. All voucher specimens must bear data labels containing the normally collected data—the voucher label and/or the voucher number by itself is NOT sufficient. The data label is the upper one on pinned specimens. (They never change.)*
6. The voucher label must be beneath the data label(s). (It also will never change.)
7. All voucher specimens must bear identification (I.D.) labels (if they have been identified to genus or below) identical to the I.D. information given on the "Appendix Specimen Data Sheet(s)". I.D. labels are always on the bottom. (They sometimes change.)*

Voucher Specimen Policy, Page 3

8. All labels (Data, Voucher and Identification) must be on the specimens when they are turned over to the Collection Manager.
9. If the Collection Manager will be absent for a while, another faculty member who is familiar with the museum, usually the Museum Director or another curator, will act for the Collection Manager.

* See the next page for guidelines on data and identification label preparation and size.

INSECT LABELS

The purpose of the labels is to let others know **where** the insect was collected, **when** it was collected, **who** collected it, **how** it was collected, and **what** kind of insect it is. Labels with this information should be placed on all pinned, alcohol-stored, or slide mounted specimens.

You should consult with the Collection Manager or Curator before your voucher specimens are finally labeled. The Collection Manager has the appropriate heavy-weight, acid-free, rag paper and laser printer that should be used for most labeling and will print off all your labels for you if you wish. If you decide to print your own labels, you should have access to a computer and laser printer, and follow the guidelines shown below. If your specimens are not preserved, mounted, and labeled properly, you may be asked to correct all the problems before they are accepted.

LOCALITY LABELS

The “main” locality label should include as a minimum the following information:

- 1) STATE
- 2) COUNTY
- 3) A SPECIFIC LOCALITY, (eg. town, river, mountain or distance from a recognized landmark) that can easily be found on a map. We also encourage the use of GPS coordinates, if possible, which give very precise locations.
- 4) DATE (Day-Month-Year)
- 5) COLLECTOR
- 6) Optional: host, habitat, elevation, collecting method, or any other information which could be useful to others as to where and how the specimen was collected (see also “additional labels” below)

STATE	County
Specific Locality	
Date	
Collector	

Examples: MICHIGAN Ingham Co.
E. Lansing–MSU campus
at UV light trap
16 November 1999
G.L. Parsons

MICHIGAN Clinton Co.
Rose Lake Wildlife Res.
Area - 2 mi E. of Bath
16 November 1999
G.L. Parsons

MICHIGAN Clinton Co.
1 mi N. of Lansing
GPS N42°47 W84°32
16 November 1999
G.L. Parsons

ADDITIONAL “LOCALITY” LABELS:

An individual label should not contain more than 5-6 lines of text, or else it will be too large. An additional label can be added for other data such as host plant, how it was collected, a specific habitat, elevation, etc. and placed just below the locality label on the pinned insect.

Examples: Host: on goldenrod flowers	Collected by sweeping in meadow	Collected with UV light trap in spruce forest	Elev. 1500' under rocks along bank of stream
--	---------------------------------------	---	--

IDENTIFICATION LABELS

The identification label should include:

- 1) the GENUS name
- 2) the SPECIES name (or. "sp." if undetermined)
- 3) the AUTHOR name
- 4) and the NAME of the person who made the identification along with the DATE (year) it was identified
- 5) For specimens identified only to Order or Family, those names should appear on the label in lieu of Genus-species-author.

*Megacyllene
robiniae*
(Förster)
det. G.Parsons 1999

SIZE OF LABELS

Ideally, **all labels should be no larger than about ¾ " by ½ "**. Using a word processing program on a computer you type up the label, shrink the font size down to **3 or 4 point**, and then print off the label(s), preferably from a laser printer. At this size, you should be able to get several hundred labels on a page. You should not place borders or boxes around the labels. We recommend using a proportional block font such as ARIAL or CALIBRI, which is still very readable at the reduced font size. Ideally **labels should be printed on a heavy-weight, acid-free, 100% rag paper**. Proper paper can be obtained from the collection manager if needed.

Actual size of finished labels >>>

MICHIGAN Clinton Co.
East Lansing-MSU Campus
16 November 1999
G.L. Parsons coll.
at UV light trap

Voucher Specimen
Michigan State Univ.
Voucher No. _____

*Megacyllene
robiniae*
(Förster)
det. G.Parsons 1999

For specimens stored in 70% alcohol, the labels are placed **inside the vial** with the specimens. So far, most laser-printed labels hold up very well in alcohol, but alcohol dissolves inks from ink-jet type printers. If you do not have access to a laser printer, the labels to be placed in alcohol vials should be neatly hand-printed, as small as possible, using water-proof ink.

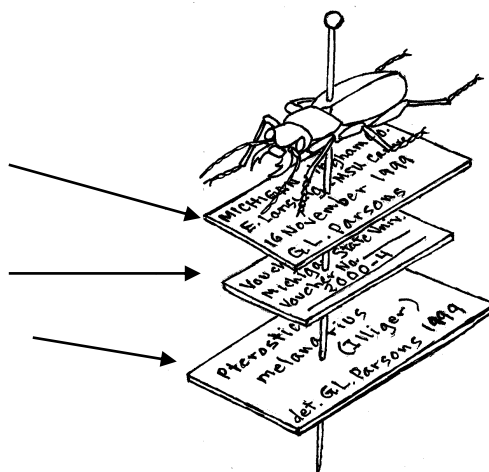
Labels to be placed on slides are usually square and are placed on either end with the specimen centered on the slide. The locality data, and voucher number should be placed on the left side, while the identification label should be to the right. You should indicate the mounting medium on one of the labels.

ARRANGEMENT OF LABELS ON A PINNED SPECIMEN

Locality label on top
(+ additional locality label if necessary below first)

Voucher No. label (green)

Identification label on bottom



FORM 1

RECORD OF DEPOSITION OF VOUCHER SPECIMENS

The specimens listed below have been deposited in the named museum as samples of those species or other taxa, which were used in this research. Voucher recognition labels bearing the voucher number have been attached or included in fluid preserved specimens.

Voucher Number: _____

(note: assigned by curator, voucher recognition labels will be printed by curator for you)

Author and Title of thesis:

Museum(s) where deposited:

Albert J. Cook Arthropod Research Collection, Michigan State University (MSU)

Specimens:

[Note: This can be in the form of a list or table that should include the family, genus-species, life stage (adult, larva, nymphs, eggs, etc), quantity of each, and preservation (pinned in alcohol, slide, etc.). If vouchers are deposited in more than one collection, indicate where each resides.]

Example:

<u>Family</u>	<u>Genus-Species</u>	<u>Life Stage</u>	<u>Quantity</u>	<u>Preservation</u>
Nymphalidae	<i>Neonympha mitchellii</i>	adult	10	pinned
Nymphalidae	<i>Neonympha mitchellii</i>	larva	5	alcohol

Additional pages can be included for long taxa lists.

Form 2

Department of Entomology

M.S. and Ph.D.

PLANNING for Voucher Specimen Collection and Deposition

Each student is required to collect, mount, label and deposit in the A.J. Cook Arthropod Research Collection specimens that document the one or more species upon which the research has been carried out. **These specimens must be taken as the research is being carried out (not as an after-thought).** Certain kinds of research, such as systematics, are exempt since all of the specimens used are normally listed in the thesis/dissertation.

This form must still be filled out. Discussion of what and how many specimens to collect and save, and how they should be preserved and labeled must be done with your guidance committee and the Collection Manager/Curator of the A.J. Cook Arthropod Research Collection.

1. The Guidance Committee and the Collection Manager/Curator have discussed and agreed on the voucher specimen collection, preservation, labeling and deposition procedures for the research of _____ as follows:

Guidance Committee:

_____	_____
Date	Date
_____	_____
Date	Date
_____	_____
Date	
_____	_____

Collection Manager/Curator

Date

Student

Date

Distribution:

Original – Student's file

Copies to Major Professor, Guidance Committee, Collections Manager, Student

APPENDIX D

A STATEMENT ON THE Ph.D. DOCTORAL PROPOSAL DEFENSE:

PURPOSES, PROCEDURES AND PHILOSOPHY

Department of Entomology

The Ph.D qualification examination is used to determine if the student should be encouraged to proceed in a doctoral program, and, if so, to determine any weakness that exists in background knowledge which may be strengthened by including appropriate courses in the doctoral program. It is taken as soon as feasible, but usually about three semesters after the student enrolls in the Ph.D. program if conducting laboratory oriented research, or about one semester after the completion of the first summer of preliminary field work.

The pre-qualification meeting. Soon after the Ph.D. Guidance committee has been approved by the Department chairperson, major professor and the student, a short meeting should be scheduled by the student to explore with the committee his/her plans for Ph.D. research and the academic program (including course work and the enrichment proposal). At this and perhaps other pre-qualification meetings the student has the opportunity to gain feedback from the faculty prior to the formal preparation of the Ph.D. research proposal. It is an excellent opportunity to interact with the faculty and learn of their philosophies and approaches to research and graduate education. All students should have at least one of these meetings before the end of the second semester in residence.

The research proposal. The dissertation proposal should be written as though it was to be submitted to NSF, the USDA Competitive Grants Program, or other granting agencies. Therefore, it must be comprehensive, including rationale, objectives, methodologies, literature review and budget, if appropriate. It should be given to the guidance committee one to two weeks prior to the qualification examination.

The research proposal should also be accompanied by a proposal for the enrichment program and proposed academic course work. The committee should be informed of previous academic training experiences by discipline (see summary sheet in Appendix E, which is available from the graduate secretary). Special efforts should be taken to indicate linkages between the dissertation proposal, the enrichment program, and the academic program. That is not to say that all three components must be linked, but where linkages exist they should be given and explained.

The qualification examination. It is the student's obligation to contact all committee members and schedule this examination. The Department's Graduate Secretary should be notified of the examination 10 days in advance so an announcement can be circulated to the faculty and the necessary forms prepared for the Guidance Committee.

The examination will be conducted orally and will consist primarily of a formal presentation of the research proposal. It is usually best for the research proposal to be presented first, after the committee has been given a few introductory comments about student background and career goals.

The Guidance Committee should be viewed at this examination much as one would view a grant proposal review panel. It is the student's objective to convince the panel that it is a good proposal and worthy of support. The Guidance committee may not

agree to support (accept) the proposal at the first meeting, but, like a grant proposal panel, will probably acknowledge interest in the proposal with acceptance subject to redrafting and further presentation and discussion.

The proposal should be presented in a formal fashion, but the student should expect interruptions when committee members desire additional information or wish to pursue a related point. The Guidance Committee will use this presentation as one measure of the student's ability to orally present scientific materials. Students who appear weak will be encouraged to get additional speaking experience.

During the oral presentation, the goal is to convince the committee that the student is Ph.D. material and knows how to plan original research. The committee will be particularly interested in learning of the student's skill in bringing forth pertinent information and responding intelligently to matters of concern.

Students should expect to be examined on academic work relating to key points made in the dissertation proposal. For example, a student indicating the use of a Latin Square design could very well expect questions on the statistical designs for experiments of a field or laboratory nature. Weaknesses in this aspect of the examination may well necessitate additional course work or other academic experience.

The Guidance Committee will be especially interested in assessing how well the student has thought out the overall system in which his or her research proposal fits. In other words, the committee will be very much interested in the big picture within which the research proposal resides.

The relationships of the enrichment and academic programs to overall goals should be clearly made, and the full details of each program should be well laid out in the proposals. Students should be sure to indicate the type of output to be expected from the enrichment program. The student should present the committee with rationale for selection of proposed academic courses. A short discussion of alternate courses or plans which have been considered usually proves worthwhile to the committee.

Follow-up sessions of the qualification examination may be necessary before acceptance. These are usually needed for reasons relating to the 1) content and organization of the material presented, 2) ability of the student to interact at a philosophical level, 3) quality of proposal presentation, and 4) knowledge base for conduct of proposed research. A follow-up session should be scheduled by the student within one semester of the original meeting. It need not be announced to the faculty as a whole, but announcements must be sent to all committee members and others who attended the original or previous session.

APPENDIX E

GUIDELINES FOR RECOGNITION OF PROFESSIONAL ACCOMPLISHMENTS

Department of Entomology

A Policy approved by vote of the vote of the faculty on March 30, 1981

GUIDELINES FOR RECOGNITION OF PROFESSIONAL ACCOMPLISHMENTS

Department of Entomology

References: Ethics Committee Report of July 18, 1980; Resolution of the Academic council of October 28, 1980; Amendment of Section 4.5 of the Department Bylaws passed on January 27, 1981.

A. Introduction

The relationships between faculty, students and staff in the Department of Entomology at MSU are complex and varied. As individuals work on various projects, the origin of ideas, the development of project strategies, the actual performance of specific tasks and the final analysis and publication of data all take place within rather loosely defined protocols. Authorship on publications is one way of acknowledging some of the activities cited above. The questions of who is listed, in what order and how, are pertinent to developing productive relationships in research activities. This set of guidelines defines some of the factors to be considered in determining credit for work and suggests ways to provide credit. All situations have not been defined. The responsibility for determining proper credit rests with each group of workers and they must clearly agree upon their own arrangements.

B. Authorship of Published Papers

As a general rule, the person who writes the paper should be the senior author.

In cases of papers from student theses and dissertations, the student is generally the senior author and the major professor is the junior author. Other contributors may be listed by agreement as co-authors. Faculty may be senior author of such work when they write the papers. This type of authorship should be agreed upon by all parties.

Extension bulletins, teaching aids, and other similar papers are generally a synthesis from many areas, including original research and published or unpublished data. Authorship is that of the writer but credit should be given, including co-authorship, where appropriate (see section D).

C. Acknowledgement Other Than Authorship

Many publications cite help from individuals or agencies in footnotes or pre/post-paper acknowledgements. The citations indicate help in specific areas where the type or amount of input was judged insufficient or inappropriate for joint authorship. Examples in our department include labor, secretarial or editing, reviewing, graphics, photography, electron microscopy, statistics, loan of materials, use of data (published or unpublished), ideas, etc.

1. (a) Where work has been done at MSU, the department and university should be given credit even if the individual(s) is (are) no longer at MSU. The authors should be listed as:

John/Jane Doe*, Department of Entomology, Michigan State University, etc.

The footnote can then read:

* current address....

- (b) Where a recognized campus facility is involved (Computer Center, Center for Electron Optics, etc.), a pre or post ...

"We thank the Computer Center (names if desired) for assistance...."

type of reference should be used.

- (c) Where individual help has been rendered a similar citation or an inclusion in the text...(insects provided by...) might be sufficient.

2. Recognition of "hired" labor.

It does not appear that all inputs to a research program need to formally acknowledged. Where routine, prescribed tasks are carried out by individuals (students or others) this need not be cited. Where the involvement exceeded this sort of assistance the question of acknowledgement is left to the project leader. Certainly, acknowledgement is rarely inappropriate and may lead to increased involvement in future projects.

D. Use of Materials of Others

1. Use of published materials.

Most published materials are covered under copyright. The right to duplicate such materials must be obtained from the copyright holder and acknowledgement must be given. Short excerpts (usually 100 words or fewer) can usually be used with acknowledgement of source, but it is good policy to obtain written permission of the copyright holder before duplicating any part of the copyrighted material.

2. Use of unpublished data.

Use of term papers, tables, and other data by individuals other than the originators requires permission prior to use. While statutes may not exist to cover each situation, custom and ethics require written or oral agreement of such material. Where slides provided by others are being used in oral presentations it

usually is not possible to acknowledge each use. Such use should be cleared, however, with the contributors prior to use.

3. Teaching handouts or presentations.

The less formal presentations involved in teaching have led to laxity in acknowledgment of authorship. Where materials are being copied and distributed every effort should be made to cite origins. Verbal presentations, again, present unique situations that may allow less rigorous acknowledgements. Signing and dating handouts is recommended to keep "track" of authorship.

APPENDIX F
ENTOMOLOGY RESPONSIBLE CONDUCT OF RESEARCH
(RCR) PLAN

Michigan State University
Department of Entomology

Responsible Conduct of Research (RCR) Plan, 2011-12

MSU RCR Policy

RCR training is required for anyone who contributes in a sustained role in research in faculty laboratories, including post-doctoral researchers, graduate students, technicians, and undergraduate students, even if not supported on grants. Individuals conducting routine maintenance such as washing glassware are not included. Faculty members are responsible for ensuring that training specified by the policy is completed by each person covered. Graduate students or postdocs who come to MSU with "RCR certification" from another institution must provide a copy of the certificate and the curriculum/syllabus. Individuals can be hired on projects before training is completed, but the faculty member must ensure that training is completed promptly each year. A person will not be reappointed to a project if RCR training has not been completed.

Required RCR training consists of initial training (minimum of eight hours) and annual refreshers (minimum of four hours). On-line and face-to-face training is required. Training of undergraduates can be limited by the type of work they conduct; e.g., if authorship is not warranted, then they would not be required to be trained in RCR.

1. INITIAL TRAINING (MINIMUM OF 8 HOURS)

- 1A **RCR Orientation.** All individuals associated that require RCR training will be provided an institutional overview of RCR. This will normally take place at the summer orientation for new graduate students. The overview will draw from the topics below (from the federal Office of Research Integrity; <http://ori.dhhs.gov/education/>), depending on the focus of the research. PowerPoint presentations from the MSU Graduate School (<http://grad.msu.edu/researchintegrity/resources>) will be among the materials used.

Typical topics to be presented during the orientation:

- | | |
|--|--|
| • Introduction to RCR - The Continuum from Research Integrity to Research Misconduct | • Authorship and Publication |
| • Data Acquisition, Management, Sharing and Ownership | • Mentor-Trainee Relationships |
| • Conflict-of-Interest (COI) and Commitment | • Peer Review |
| • Protection of Human Subjects | • Collaborative Research |
| • Use of Animals in Research | • Protection of Intellectual Property |
| • Research Misconduct | • Scientists as Responsible Members of Society - Environmental and Societal Impacts of Scientific Research |

Total for Segment 1A: 2 hours

- 1B **Face-to-Face Discussion.** A designated faculty member (usually the P.I. of the project on which the student or post-doc is working) will be assigned to each individual. The faculty member will assign readings as appropriate to the research, provide each person with a copy of the NSF *Conflict of Interest* form, and initiate a discussion of the specific circumstances related to the funded project.

Total for Segment 1B: 2 hours

- 1C **Workshops and Courses.** This requirement can be met in one of two ways:
- Complete ENT 812 (*Nature and Practice of Science*). This is an intense, highly interactive course that focuses on many RCR issues, such as review of recommended scientific best practices; principles and practices of research integrity and professionalism; foundations of scientific inquiry; and evaluation of scientific quality and productivity.

OR

- b. Complete the Graduate School's RCR Seminar Series (<http://grad.msu.edu/rcr/>). This will include assigned readings from the MSU Research & Scholarly Integrity Website (<http://grad.msu.edu/researchintegrity/resources>), and discussions with a designated faculty member on the material covered.

Total for Segment 1C ~8 hours (15 contact hours if the ENT 812 option is taken)

2. ANNUAL REFRESHER TRAINING (MINIMUM OF 4 HOURS)

- 2A Participate in a formal, department-wide discussion of RCR issues each Fall, with a review of basic information and Q&A.

Total for Segment 2A: 2 hours

- 2B Participate in project-wide group discussions led by the project P.I. Complete assigned readings as assigned from the MSU Research & Scholarly Integrity Website (<http://grad.msu.edu/researchintegrity/resources>), and participate in discussions with a designated faculty member on the material covered. Review new areas of federal research compliance, if necessary.

Total for Segment 2B: 2 hours

3. MONITORING AND DOCUMENTATION

It is the responsibility of each member of the research staff to report complete training through the Research Training Tracking System (RTTS; <https://www.egr.msu.edu/secureresearchcourses/>). The department will ask faculty members to certify annually the accuracy and completeness of the training reported by each member of their laboratory. Each person should complete the departmental RCR Completion Form (below).

4. RCR RESOURCES

Federal and MSU Policies:

- Federal Office of Research Integrity (<http://ori.dhhs.gov/education/>),
- NIH RCR Policy: [NIH_RCR_Update_11-24-09.pdf](#)
- Memo from Provost Wilcox and Vice President Gray: <http://grad.msu.edu/ric/docs/WilcoxMemo.pdf>
- [MSU Policy Statement on NSF RCR requirements](#)
- MSU Research Integrity Office: <http://www.rio.msu.edu/>

MSU Graduate School:

- RCR Seminar series -- <http://grad.msu.edu/rcr/>
- MSU Authorship Guidelines – <http://rio.msu.edu/authorshipguidelines.htm>
- Collaborative Institutional Training Initiative (CITI) Training courses -- (<http://www.citiprogram.org>)
- Research Data: Management, Control, Access – http://rio.msu.edu/research_data.htm
- Research Integrity Newsletter -- <http://grad.msu.edu/researchintegrity/newsletters.aspx>
- Research Integrity Council -- <http://grad.msu.edu/ric/> This last page links to extensive set of references and resources that pertain to other elements of RCR training recommended by the ORI (see above).
- Other readings -- <http://grad.msu.edu/researchintegrity/resources>.
- Teaching Responsible Conduct of Research. 2009. *Lancet* **374(9701)**:1568.
- DeAngelis, C.D. 2004. Duplicate publication, multiple problems. *JAMA* **292**:1745-6.
- Froman, R.D. 2006. The importance of peer review. *Research in Nursing and Health*. **29**:253-5.

Michigan State University
Department of Entomology

Responsible Conduct of Research Completion Form

Name: _____
Last First MI

Category: ☐ Undergraduate Student ☐ Graduate Student ☐ Post-doc

P.I.: _____
Last First MI

Project Title:

Funded by:

IRB #:

Topic	Date Completed	Initials	
		PI	Person
1. Initial Training			
1A RCR Orientation			
1B Face-to-face discussions, including project-specific readings and a COI discussion			
1C Workshops and Courses			
1Ca ENT 812 (<i>Nature and Practice of Science</i>)			
or			
1Cb Graduate School RCR Seminar Series			
2. Annual Refresher Training			
2A Departmental refresher review			
2B Project-specific refresher discussion with PI			

Department of Entomology RCR Contacts and Responsibilities

Person	Telephone	Email	Responsibility
Ernest S. Delfosse.	517-355-4665	delfosse@msu.edu	Content and Orientation
Heather E. Lenartson-Kluge	517-355-4665	lenartso@msu.edu	Compliance Tracking Representative

APPENDIX G

Graduate Student Academic Grievance Hearing Procedures

For the Entomology Graduate Program

Each right of an individual places a reciprocal duty upon others: the duty to permit the individual to exercise the right. The student, as a member of the academic community, has both rights and duties. Within that community, the student's most essential right is the right to learn. The University has a duty to provide for the student those privileges, opportunities, and protections which best promote the learning process in all its aspects. The student also has duties to other members of the academic community, the most important of which is to refrain from interference with those rights of others which are equally essential to the purposes and processes of the University. (GSRR Article 1.2)

The *Michigan State University Student Rights and Responsibilities (SRR)* and the *Graduate Student Rights and Responsibilities (GSRR)* documents establish the rights and responsibilities of MSU students and prescribe procedures to resolve allegations of violations of those rights through formal grievance hearings. In accordance with the SRR and the GSRR, the Entomology Graduate Program has established the following Hearing Board procedures for adjudicating graduate student academic grievances and complaints. (See GSRR 5.4.)

I. JURISDICTION OF THE ENTOMOLOGY GRADUATE PROGRAM HEARING BOARD:

- A. The Hearing Board serves as the initial Hearing Board for academic grievance hearings involving graduate students who allege violations of academic rights or seek to contest an allegation of academic misconduct (academic dishonesty, violations of professional standards or falsifying admission and academic records). (See GSRR 2.3 and 5.1.1.)
- B. Students may not request an academic grievance hearing based on an allegation of incompetent instruction. (See GSRR 2.2.2)

II. COMPOSITION OF THE HEARING BOARD:

- A. The Program Hearing Board pool will comprise the regular faculty of the Department and six graduate students elected by the Graduate and Undergraduate Entomological Student Society (GUESS) no later than the end of the tenth week of the spring semester. The graduate student members of the Hearing Board pool serve one-year terms with reappointment possible. The Hearing Board pool should include both faculty and graduate students. (See GSRR 5.1.2 and 5.1.6.)

- B. The Chair of the Hearing Board shall be the faculty member with rank who shall vote only in the event of a tie. In addition to the Chair, the Hearing Board shall include an equal number of voting graduate students and faculty. (See GSRR 5.1.2, and 5.1.5.)
- C. The Program will train hearing board members about these procedures and the applicable sections of the GSRR. (See GSRR 5.1.3.)

III. REFERRAL TO THE HEARING BOARD:

- A. After consulting with the instructor and appropriate unit administrator, graduate students who remain dissatisfied with their attempt to resolve an allegation of a violation of student academic rights or an allegation of academic misconduct (academic dishonesty, violations of professional standards or falsifying admission and academic records) may request an academic grievance hearing. When appropriate, the Department Chair, in consultation with the Dean, may waive jurisdiction and refer the request for an initial hearing to the College Hearing Board. (See GSRR 5.3.6.2.)
- B. At any time in the grievance process, either party may consult with the University Ombudsperson. (See GSRR 5.3.2.)
- C. In cases of ambiguous jurisdiction, the Dean of The Graduate School will select the appropriate Hearing Board for cases involving graduate students. (See GSRR 5.3.5.)
- D. Generally, the deadline for submitting the written request for a hearing is the middle of the next semester in which the student is enrolled (including Summer). In cases in which a student seeks to contest an allegation of academic misconduct and the student's dean has called for an academic disciplinary hearing, the student has **10** class days to request an academic grievance to contest the allegation. (See GSRR 5.3.6.1 and 5.5.2.2.)
- E. If either the student (the complainant) or the respondent (usually, the instructor or an administrator) is absent from the university during that semester, or if other appropriate reasons emerge, the Hearing Board may grant an extension of this deadline. If the university no longer employs the respondent before the grievance hearing commences, the hearing may proceed. (See GSRR 5.4.9.)
- F. A written request for an academic grievance hearing must (1) specify the specific bases for the grievance, including the alleged violation(s), (2) identify the individual against whom the grievance is filed (the respondent) and (3) state the desired redress. Anonymous grievances will not be accepted. (See GSRR 5.1 and 5.3.6.)

IV. PRE-HEARING PROCEDURES

- A. After receiving a graduate student's written request for a hearing, the Chair of the Department will promptly establish a hearing board from the Program Hearing Board pool and refer the grievance to the Chair of the Hearing Board. (See GSRR 5.3.2, 5.4.3.)
- B. Within **5** class days, the Chair of the Hearing Board will:
 - 1. Forward the request for a hearing to the respondent and ask for a written response;
 - 2. Send the names of the Hearing Board members to both parties and, to avoid conflicts of interest between the two parties and the Hearing Board members, request written challenges, if any, within **3** class days of this notification. In addition to conflict of interest challenges, either party can challenge two hearing board members without cause (GSRR 5.1.7.c);
 - 3. Rule promptly on any challenges, impanel a Hearing Board and send each party the names of the Hearing Board members. If the Chair of the Hearing Board is the subject of a challenge, the challenge shall be filed with the Dean of the College, or designee (See GSRR 5.1.7.). Decisions by the Hearing Board chair or the College Dean (or designee) on conflict of interest challenges are final;
 - 4. Send the Hearing Board members a copy of the request for a hearing and the respondent's written response, and send all parties a copy of these procedures.
- C. Within **5** class days of being established, the Hearing Board shall review the request, and, after considering all requested and submitted information:
 - 1. Accept the request, in full or in part, and promptly schedule a hearing.
 - 2. Reject the request and provide a written explanation to appropriate parties; e.g., lack of jurisdiction. (The student may appeal this decision.)
 - 3. The GSRR allows the hearing board to invite the two parties to meet with the Hearing Board in an informal session to try to resolve the matter. Such a meeting does not preclude a later hearing. However, by the time a grievance is requested all informal methods of conflict resolution should have been exhausted so this option is rarely used. (See GSRR 5.4.6.)
- D. If the Hearing Board calls for a hearing, the Chair of the Hearing Board shall promptly negotiate a hearing date, schedule an additional meeting only for the Hearing Board should additional deliberations on the findings become necessary, and request a written response to the grievance from the respondent.

- E. At least **5** class days before the scheduled hearing, the Chair of the Hearing Board shall notify the respondent and the complainant in writing of the (1) time, date, and place of the hearing; (2) the names of the parties to the grievance; (3) a copy of the hearing request and the respondent's reply; and (4) the names of the Hearing Board members after any challenges. (See GSRR 5.4.7.)
- F. At least **3** class days before the scheduled hearing, the parties must notify the Chair of the Hearing Board the names of their witnesses and advisor, if any, and request permission for the advisor to have voice at the hearing. The chair may grant or deny this request. The Chair will promptly forward the names given by the complainant to the respondent and visa versa. (See GSRR 5.4.7.1.)
- G. The Chair of the Hearing Board may accept written statements from either party's witnesses at least **3** class days before the hearing. (See GSRR 5.4.9.)
- H. In unusual circumstances and in lieu of a personal appearance, either party may request permission to submit a written statement to the Hearing Board or request permission to participate in the hearing through an electronic communication channel. Written statements must be submitted to the Hearing Board at least **3** class days before the scheduled hearing. (See GSRR 5.4.9c.)
- I. Either party to the grievance hearing may request a postponement of the hearing. The Hearing Board may either grant or deny the request. (See GSRR 5.4.8.)
- J. At its discretion, the Hearing Board may set a reasonable time limit for each party to present its case, and the Chair of the Hearing Board must inform the parties of such a time limit in the written notification of the hearing.
- K. Hearings are closed unless the student requests an open hearing, which would be open to all members of the MSU community. The Hearing Board may close an open hearing to protect the confidentiality of information or to maintain order. (See GSRR 5.4.10.4.)
- L. Members of the Hearing Board are expected to respect the confidentiality of the hearing process. (See GSRR 5.4.10.4.and 5.4.11.)

V. HEARING PROCEDURES:

- A. The Hearing will proceed as follows:
 - 1. Introductory remarks by the Chair of the Hearing Board: The Chair of the Hearing Board introduces hearing panel members, the complainant, the respondent and advisors, if any. The Chair reviews the hearing procedures, including announced time restraints for presentations by each party and the witnesses, and informs the parties if their advisors may have a voice in the hearings and if the proceedings are being recorded. Witnesses shall be excluded from the proceedings except when testifying. The Chair also explains:

- In academic grievance hearings in which a graduate student alleges a violation of academic rights, the student bears the burden of proof.
- In hearings in which a graduate student seeks to contest allegations of academic misconduct, the instructor bears the burden of proof.
- All Hearing Board decisions must be reached by a majority of the Hearing Board, based on a "clear and convincing evidence." (See GSRR 8.1.18.)

(See GSRR 5.4.10.1 and 8.1.18.) For various other definitions, see GSRR Article 8.)

2. If the complainant fails to appear in person or via an electronic channel at a scheduled hearing, the Hearing Board may either postpone the hearing or dismiss the case for demonstrated cause. (See GSRR 5.4.9a.)
3. If the respondent fails to appear in person or via an electronic channel at a scheduled hearing, the Hearing Board may postpone the hearing, hear the case in the respondent's absence, or dismiss the case. (See GSRR 5.4.9-b.)
4. If the respondent is absent from the University during the semester of the grievance hearing or no longer employed by the University before the grievance procedure concludes, the hearing process may still proceed. (See GSRR 5.3.6.1.)
5. To assure orderly questioning, the Chair of the Hearing Board will recognize individuals before they speak. All parties have a right to speak without interruption. Each party has a right to question the other party and to rebut any oral or written statements submitted to the Hearing Board. (See GSRR 5.4.10.2.)
6. Presentation by the Complainant: The Chair recognizes the complainant to present without interruption any statements relevant to the complainant's case, including the redress sought. The Chair then recognizes questions directed at the complainant by the Hearing Board, the respondent and the respondent's advisor, if any.
7. Presentation by the Complainant's Witnesses: The Chair recognizes the complainant's witnesses, if any, to present, without interruption, any statement directly relevant to the complainant's case. The Chair then recognizes questions directed at the witnesses by the Hearing Board, the respondent, and the respondent's advisor, if any.

8. Presentation by the Respondent: The Chair recognizes the respondent to present without interruption any statements relevant to the respondent's case. The Chair then recognizes questions directed at the respondent by the Hearing Board, the complainant, and the complainant's advisor, if any.
9. Presentation by the Respondent's Witnesses: The Chair recognizes the respondent's witnesses, if any, to present, without interruption, and statement directly relevant to the respondent's case. The Chair then recognizes questions directed at the witnesses by the Hearing Board, the complainant, and the complainant's advisor, if any.
10. Rebuttal and Closing Statement by Complainant: The complainant refutes statements by the respondent, the respondent's witnesses and advisor, if any, and presents a final summary statement.
11. Rebuttal and Closing Statement by Respondent: The respondent refutes statements by the complainant, the complainant's witnesses and advisor, if any, and presents a final summary statement.
12. Final questions by the Hearing Board: The Hearing Board asks questions of any of the participants in the hearing.

VI. POST-HEARING PROCEDURES

A. Deliberation:

After all evidence has been presented, with full opportunity for explanations, questions and rebuttal, the Chair of the Hearing Board shall excuse all parties to the grievance and convene the Hearing Board to determine its findings in executive session. When possible, deliberations should take place directly following the hearing and/or at the previously scheduled follow-up meeting. (See Section IV.D above.)

B. Decision:

1. In grievance (non-disciplinary) hearings involving graduate students in which a majority of the Hearing Board finds, based on a "clear and convincing evidence," that a violation of the student's academic rights has occurred and that redress is possible, it shall recommend an appropriate remedy to the Department Chair or School Director. Upon receiving the Hearing Board's recommendation, the Department Chair or School Director shall implement an appropriate remedy, in consultation with the Hearing Board, within **3** class days. If the Hearing Board finds that no violation of academic rights has occurred, it shall so inform the Chair or Director. The Chair of the Hearing Board shall promptly forward copies of the final decision to parties and the University Ombudsperson. (See GSRR 5.4.11.)

2. In grievance (non-disciplinary) hearings involving graduate students in which the Hearing Board serves as the initial hearing body to adjudicate an allegation of academic dishonesty and, based on a "clear and convincing evidence," the Hearing Board finds for the student, the Hearing Board shall recommend to the Department Chair or School Director that the penalty grade be removed, the Academic Dishonesty Report be removed from the student's records and a "good faith judgment" of the student's academic performance in the course take place. If the Hearing Board finds for the instructor, the penalty grade shall stand and the Academic Dishonesty Report regarding the allegation will remain on file, pending an appeal, if any to the College Hearing Board within **5** class days of the Hearing Board's decision. If an academic disciplinary hearing is pending, and the Hearing Board decides for the instructor, the graduate student's disciplinary hearing before either the College Hearing Board or the Dean of The Graduate School would promptly follow, pending an appeal, if any, within **5** class days. (See GSRR 5.5.2.2 and 5.4.12.3)

C. Written Report:

The Chair of the Hearing Board shall prepare a written report of the Hearing Board's findings, including recommended redress or sanctions for the complainant, if applicable, and forward a copy of the decision to the appropriate unit administrator within **3** class days of the hearing. The report shall indicate the rationale for the decision and the major elements of evidence, or lack thereof that support the Hearing Board's decision. The administrator, in consultation with the Hearing Board, shall then implement an appropriate remedy. The report also should inform the parties of the right to appeal within **5** class days following notice of the decision, or **5** class days if an academic disciplinary hearing is pending. The Chair shall forward copies of the Hearing Board's report and the administrator's redress, if applicable, to the parties involved, the responsible administrators, the University Ombudsperson and the Dean of The Graduate School. All recipients must respect the confidentiality of the report and of the hearing board's deliberations resulting in a decision. (See GSRR 5.4.12 and 5.5.2.2)

VII. APPEAL OF THE HEARING BOARD DECISION:

- A. Either party may appeal a decision by the Hearing Board to the College Hearing Board for cases involving (1) academic grievances alleging violations of student rights and (2) alleged violations of regulations involving academic misconduct (academic dishonesty, professional standards or falsification of admission and academic records.) (See GSRR 5.4.12.)
- B. All appeals must be in writing, signed and submitted to the Chair of the College Hearing Board within **5** class days following notification of the Hearing Board's decision. While under appeal, the original decision of the Hearing Board will be held in abeyance. (See GSRR 5.4.12, 5.4.12.2 and 5.4.12.3.)

- C. A request for an appeal of a Hearing Board decision to the College Hearing Board must allege, in sufficient particularity to justify a hearing that the initial Hearing Board failed to follow applicable procedures for adjudicating the hearing or that findings of the Hearing Board were not supported by the "clear and convincing evidence." The request also must include the redress sought. Presentation of new evidence normally will be inappropriate. (See GSRR 5.4.12.1, 5.4.12.2 and 5.4.12.4.)

VIII. RECONSIDERATION:

If new evidence should arise, either party to a hearing may request the appropriate Hearing Board to reconsider the case within **30** days upon receipt of the hearing outcome. The written request for reconsideration is to be sent to the Chair of the Hearing Board, who shall promptly convene the Hearing Board to review the new material and render a decision on a new hearing. (See GSRR 5.4.13.)

IX. FILE COPY:

The Chair of the Department shall file a copy of these procedures with the Office of the Ombudsperson and with the Dean of The Graduate School. (See GSRR 5.4.1.)

Approved by Faculty on 4/20/2015

APPENDIX H

GRADUATE AND UNDERGRADUATE ENTOMOLOGY STUDENT SOCIETY (GUESS)

BYLAWS
Revised 4/22/2015

Graduate and Undergraduate Entomology Student Society

(GUESS)

Article I. NAME

The entomology student organization shall be known as Graduate and Undergraduate Entomology Student Society (GUESS).

Article II. OBJECTIVE

GUESS seeks to represent the graduate and undergraduate student body within the Department of Entomology, as well as support the development of professional skills among students, foster an environment for the exchange of scientific ideas, and create a social network for the student body.

Article III. MEMBERSHIP

All current MSU entomology students are considered members of this organization.

Article IV. DUES

Section 1. Membership dues

1. There shall be no dues for membership in GUESS.

Article V. OFFICERS

Section 1. Duties of the officers

1. The President shall chair general meetings, shall be the official spokesperson for the society, prepare general meeting agendas, and coordinate organizational functions.
2. The Vice President shall assume the presidency in the absence of the president and shall coordinate the standing committees.
3. The Secretary shall record the minutes of the general meetings and any executive committee meetings.
4. The Treasurer shall oversee the management and reporting of GUESS finances. This person shall be responsible for bank account maintenance and developing the annual budget.

Section 2. Nomination of officers

1. Nominations occur in the last month of the fall term
2. Nominations for officers shall be made by any GUESS member
3. Persons nominated shall be present at the time of nomination or notified prior to election

Section 3. Election of officers

1. Election of new officers will occur during the first general meeting of each spring term by written ballot.
2. Newly elected officers shall assume their duties at the end of spring term.
3. Candidates must be elected by a majority of votes cast.
4. Officer positions will be appointed by the President for persons who must leave their position during their term. The interim officer may be elected during the regular election.

Section 4. Rules governing officers.

1. Officers shall serve for a term of one year, or until their successors are elected. One year is defined as the first day following the end of the spring semester until the last day of the following spring semester.
2. Officers may not hold the chairpersonship of a standing GUESS committee.
3. Officers may hold the chairpersonship of an ad-hoc GUESS committee.
4. Officers may hold student representative positions on faculty committees.
5. Officers must remain in good standing as determined by GUESS members. Officers not in good standing may be removed from office by majority vote.
6. In the event that President is removed or must leave office, the Vice President assumes the position until the next election.

Article VI. FACULTY ADVISOR

Section 1. Definition and Role

The role of the Faculty Advisor is to serve as a liaison between GUESS and the entomology faculty and staff, and advises students on department and university policy. The Faculty Advisor must be a member of the MSU faculty or staff.

Section 2. Term

The Faculty Advisor serves a one-year term (as defined in Article IV, Section 4.1), or until a successor is elected. There is no limit to the number of terms a faculty member can serve as Faculty Advisor.

Section 3. Nomination and Approval

The Faculty Advisor is nominated by officers of GUESS and must be approved by two-thirds of those present at the first general GUESS meeting of the fall semester.

Article VII. STUDENT REPRESENTATIVES

Section 1. Faculty Meeting Representative

1. Definition and role: The Faculty Representative serves as a liaison between GUESS and the entomology faculty and staff, and is responsible for casting votes at the faculty meetings representing the student body. The Faculty Representative must be a member of GUESS.

Section 2. Faculty Committee Representatives

1. Definition and role: The Curriculum, Graduate, Seminar, and Awards Committee representatives serve as liaisons between GUESS and the entomology faculty and staff at their respective faculty committee meetings.

Section 3. COGS Representative

1. Definition and role: The COGS (Council of Graduate Students) Representative serves as a liaison between GUESS and COGS, attends COGS meetings and casts votes representing GUESS.

Section 4. Bug Club Representative

1. Definition and role: The Bug Club representative attends a majority of Bug Club meetings and acts as a liaison between GUESS and Bug Club.

Section 5. Nomination and Approval

1. Nominations are held at the same time as officer nominations, and elected during the general GUESS election each year.

Section 6. Term limit

1. Representatives serve a one-year term (as defined in Article IV, Section 4.1) or until a successor is elected.

Article VIII. MEETINGS AND VOTING

Section 1. General Meetings

1. Meetings occur monthly during each Fall and Spring semester.
2. The agenda will be sent out a week prior to each meeting, along with a reminder.
3. Current officers will serve as mentors to officers-elect during the Spring semester. Newly-elected officers assume their duties the day after the end of the Spring semester.

Section 2. Ad-hoc and Standing Committee Meetings

1. Committee meetings are called by the chair of each committee.
2. Ad-hoc committee meetings are called as needed, by an officer or appointed chair.
3. Meeting announcements and/or minutes will be reported to executive officers following the conclusion of committee meetings.

Section 3. Voting

1. All members shall have one vote in elections and motions. Votes may be cast in general meetings, or online ballots may be conducted.

Article IX. STANDING COMMITTEES

Section 1. Titles and duties of the standing committees:

1. The Exectutive Committee is composed of the executive officers (President, Vice President, Secretary, and Treasurer). It shall serve to interpret the bylaws, address motions for amendments to the bylaws, and have the power to call special general meetings.
2. The Welcome Committee is composed of GUESS members appointed by the President. The Welcome Committee seeks out new students, introduces them to the department, and helps them to feel welcome. The committee also reports on business at each meeting.
3. The Events Committee coordinates social and sporting events among students in the organization. Activities include at least the Departmental Picnic, the Fall Collecting & Camping Trip, and the Department Holiday Event. Other activities may include organization of intramural sporting activities, and inter-departmental sporting and social activities.
4. The Simmons Speaker Committee accepts nominations exclusively from students for the spring Simmons Speaker, narrows the candidate pool, and runs student elections. The committee also coordinates the Simmons Speaker seminar. The Simmons Speaker Committee also reports on nominations and status of the seminar at each general GUESS meeting.
5. The Grants and Awards Committee keep track of grants and awards available within and outside of the department, and encourage students to apply. [Proposed committee to be decided]
6. The Mentorship Program is a volunteer committee comprised of students who advise other students with regards to completing their degree program and academic path. This program serves to provide students with peers who can advise and help hold them accountable to their goals. Mentorship is available to students at any point in their program. [Proposed committee to be decided]

Section 2. Rules governing committees

1. Committee membership is voluntary at the beginning of each term. The size of the committee is open. The internal structure of a committee is defined by the committee members.
2. Committee Chairpersons are elected by members of the new committee formed after each election. Committee chairpersons may hold no other elected posts in the organization at the same time they hold a committee chairpersonship. They may not be re-elected to the chairpersonship of the same committee.

Article X. AMENDMENTS

These bylaws may be amended by a vote of two-thirds of the members of the organization present at any regular meeting or at a special meeting called for that purpose. Members shall be notified of adopted bylaw amendments.

Bylaws shall be reviewed yearly by incoming elected officers preceding their first meeting in office.

Article XI. UNIVERSITY POLICY

This organization shall abide by all applicable policies instituted by Michigan State University.

APPENDIX I

SUGGESTIONS FOR PREPARING CURRICULUM VITAE

In the job market a well organized and neatly presented c.v. can make the difference between serious consideration of your candidacy and instant rejection.

For professional employment purposes a c.v. can omit certain kinds of information which may be desirable for publicity or similar uses. Too much detail makes the reading of hundreds of vitae difficult for those who also must examine them.

We have worked out the enclosed suggested format and the following suggestions:

1. ADDRESS

Be sure to include your zip code and area code number.

2. EDUCATION

Do not include high school. College or graduate school grade point averages are superfluous.

3. PROFESSIONAL EMPLOYMENT

Omit summer or short term jobs unless relevant.

Omit elaborate course and research project description.

Omit months in employment chronology. 9/98-6/99 is more confusing to read than 1998-1999.

Give only title of position rather than an elaborate description of duties.

Distinguish between teaching assistantships and regular faculty appointments, such as lecturer or instructor.

4. PROFESSIONAL ACTIVITIES

Include only those activities which contribute to your professional picture. Undergraduate activities and community service projects may round out the picture of a candidate but are not a substitute for your professional activities.

5. PUBLICATIONS

This should include only already completed publications, or those in press. Addresses, invited papers, etc. should be listed separately. Do not include book reviews or other contributions to local newspapers, house organs, etc. unless they constitute your major occupation. Omit references to projected work.

6. REFERENCES

References should be recent ones with complete addresses, and should be listed only with the consent of the person named. This avoids negative references and embarrassment to candidates. Also, while references from the family minister or a good neighbor are interesting for personal reasons, they are irrelevant for professional evaluation.

You may check verbally whether people are willing to write a letter of recommendation for you, but it is necessary to follow up in writing. State clearly the purpose for which the letter is intended- i.e., for a general file of your credentials and oriented to either faculty or administrative posts (or both), or for a specific professional opening. With your written request, enclose a stamped envelope addressed to the intended recipient of the reference and a stamped, self-addressed postcard to let you know when the recommendation has actually been sent.

7. EXTRANEIOUS DETAIL

Much material may be of interest in rounding out a candidate's personal life but its place in a curriculum vitae is of doubtful value. The following are examples of information some consider extraneous.

- a) References to health or physical appearance
- b) References to your marital status
- c) Hobbies
- d) Job objectives (should go in a covering letter)
- e) Geographical preferences
- f) Children's names, ages or academic status
- g) Social Security number
- h) Any statements in the first or third person

The following is a horrible but typical example of much superfluous detail:

Secondary Education: Flower Hill Academy, El Paso, Texas. Graduated with high distinction in June, 1984; elected to National Honor Society, Res Gestae Chapter, Flower Hill Academy.

Undergraduate Education: Western College, Oxford, Ohio, 1984-87. Pennsylvania State College, State College, Pa. Summer 1987. (Took off a year because of ill

health). St. Ambrose College, Davenport, Iowa. Fall 1988-June 1989. Graduated cum laude with a major in history and a minor in music. Dean's list for two semesters, elected to Phi Lambda Xi National Honorary Society.

Graduate Education: Juniper-Sierra University, 1992 to Present. Major in historio-anthropology (cultural, social, ethnic, history of linguistics) and minor in psycho-historical studies. Elected to Tau Omega Mu (national women's honorary) in 1994. Doctoral examinations passed and admitted to candidacy for the Ph.D. degree 3 June 1999. My advisor will be Dr. Hugo R. Barnett, director of dissertations.

INSTEAD OF:

St. Ambrose	History	B.A. 1989
Juniper-Sierra U.	Anthropology	M.A. 1994
Juniper-Sierra U.	Hist.-Anthro	ABD 1999

8. GENERAL APPEARANCE

All vitae and correspondence should be typed or laser printed. Use good bond paper of standard 8 1/2 x 11" size, and a good clear font or typeface to ensure good reproduction of the c.v. You are likely to need to 100-200 copies of your c.v. in the job-hunting process; the best and cheapest duplicating process is laser printing.

9. COVERING LETTER

No matter how many places you are applying to, do not under any circumstances send form letters. Take the trouble to find out the chairperson's name and what the general strengths and interests of the department or institution are. Emphasize your possible contribution to their program.

While many of the points mentioned above may sound out of place or foolish, they have all been pulled from many of the vitae in our files!

HIGHER EDUCATION RESOURCE SERVICES CURRICULUM VITAE

Name

Address Home Telephone
 Office Telephone

Date and Place of Birth (Optional)

Education

Institution Major Degree and Year

(If incomplete Ph.D. give date degree is expected)

Ph.D. Dissertation Title

(Give name of advisor)

Fellowship

(Graduate and Post-doctoral)

Honors

(Omit number of terms on Dean's list, GPA's, or undergraduate fellowships)

Membership in Professional Societies

Professional Employment

(Include only rank or title, department, name of institution and dates. List last position first).

Other Professional Activities

Seminars and Invited Lectures

Grants and Awards

Advisory Committees

Service on Boards, etc.

Research-Teaching Interests

Short description of current and planned research or teaching interests. (A few phrases will do).

Publications

1. Books
2. Papers (sample reprints of your best papers are good)

(Append separately if list is long).

References

List Names and Addresses of three Current References or the Institutional Placement Service if your dossier includes current references.