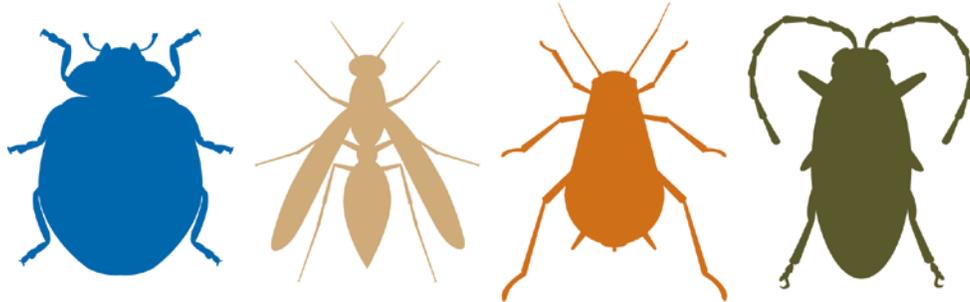


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IOWA STATE UNIVERSITY

Entomology Graduate Student Handbook

November 2014 revision

Department Chair: Dr. Sue Blodgett

Director of Graduate Education (DOGE): Dr. Joel Coats

Departmental Graduate Secretary: Kelly Kyle

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Important information for entomology graduate students

When you first arrive, you may find yourself overwhelmed by the number of things you must do. Here is a list of some of the most important:

1. Visit the Student Services Office in room 124 Science II. Introduce yourself to Kelly Kyle, the Program Coordinator. Kelly can help you find your way around the department and University administrative offices.
2. *Read this HANDBOOK.* It is especially important to read the section on ADMINISTRATIVE MATTERS during your first few days. This handbook is available on-line: <http://www.ent.iastate.edu/dept/grad/handbook.pdf>.
3. Register for e-mail (Durham Hall) and plan to check it regularly. *E-mail is Entomology's most common means of communication.*
4. Read the Graduate College Handbook and Thesis Manual. These references contain all the University regulations and requirements for graduation. They are available on-line at the [ISU Graduate College](#).
5. Understand the ISU University-wide [POLICY LIBRARY](#).

IMPORTANT CONTACTS

Director of Graduate Education (DOGE): Joel Coats, 116 Insectary, 515-294-4776, jcoats@iastate.edu

Entomology Chair: Sue Blodgett, 339 Science II, 515-294-1739, sblodg@iastate.edu

Entomology Graduate Secretary: Kelly Kyle, 124 Science II, 515-294-7400, kalyle@iastate.edu

Entomology IT: John VanDyk, 407 Science II, entit@iastate.edu

Mail Service. You will be assigned a mailbox in the building that houses your lab. You should regularly check for mail. The university mail service should *not* be used for personal mail.

Telephone. Local calls (phone numbers in Ames) may be made on most campus phones. Long distance calls must **not** be made on University phones without the prior approval of the person to whom the phone is assigned.

The following e-mail listservs may be used to reach different groups within the department:

Listserv address	Who is included
entgrads@iastate.edu	All graduate students
entfaculty@iastate.edu	All faculty members
entpostdocs@iastate.edu	All postdoctoral researchers
entstaff@iastate.edu	All staff
entall@iastate.edu	All personnel in Entomology

USEFUL WEBSITES AND INFORMATION

Iowa State University (ISU) Homepage: www.iastate.edu

ISU Department of Entomology Homepage: <http://www.ent.iastate.edu>

ISU Graduate College Homepage: <http://www.grad-college.iastate.edu/>

ISU Graduate Handbook: <http://www.grad-college.iastate.edu/common/handbook/>

AccessPlus is a great source of YOUR Information: go to AccessPlus, Student Tab, Display "Grad Stdnt Status" <https://accessplus.iastate.edu/frontdoor/login.jsp>

Other references you may wish to obtain include:

General Catalog: <http://catalog.iastate.edu/>

Schedule of classes: <http://classes.iastate.edu/>

Iowa State University phone/e-mail directory (ISU bookstore)

Phone/e-mail directory on the web: <http://info.iastate.edu/>

Other References available on the web can be located through the Iowa State University Homepage: www.iastate.edu (Note the alphabet at the top of this page; you can click through to many subject headings.)

Forms

The majority of forms you need as a graduate student can be found through the Graduate College homepage: <http://www.grad-college.iastate.edu/>. Examples include:

- Graduation and Thesis Forms
- Graduate Student Request Forms
- Concurrent Student Request Forms
- When a member of your Ph.D. committee is unable to attend on-site Prelims or Finals
- Preliminary or Final Oral Examinations with Committee Member at a Distance
- To request a final oral examination
- To Graduate during the summer but “walk” at commencement during fall or spring
- Summer Graduates Wanting to Attend Spring or Fall Commencement Ceremony
- Request for Professional Advancement Grant (PAG) to present at conferences or conduct research outside of your thesis/dissertation

The **Program of Study** System will be located in ACCESS PLUS

<https://accessplus.iastate.edu/frontdoor/login.jsp> under the Student Tab at the Graduate Student Status link. You will form your faculty committee and list required courses and any later modifications through this site. See pages 6-8 in this handbook on “Degree Requirements” for list of courses and information on how faculty should be represented on your program of study.

The **Request for Preliminary Examination (PRELIM)** is one form NOT available on-line; however, this can be obtained through departmental office or the Graduate College.

ADD/DROP forms (yellow half-sheet), used to add and drop classes after the first week of classes, are available at the Graduate College, 10 Pearson Hall or in the departmental office, 124 Science II.

If you are unsure as to whether a form is required or where it is located, please contact Kelly Kyle (kakyle@iastate.edu).

Degree Requirements

DEGREES OFFERED

Entomology offers coursework and research experiences leading to the degrees of Master of Science and Doctor of Philosophy. An option for an emphasis in Molecular Entomology is available. The department also offers a minor in Entomology and participates in the Emerging Global Diseases minor. See the course catalog for full details. Because entomology is a research-based discipline, non-thesis Master of Science degrees are not offered.

ADMISSION TO A GRADUATE DEGREE PROGRAM

The degree which a student may pursue in Entomology (that is, M.S. or Ph.D.) is normally determined and specified at the time of the student's admission to the program. Although a prior M.S. is not required for admission to the Ph.D. program, criteria for admission to the Ph.D. program are more stringent than to the M.S. program and excellent performance in a prior M.S. program is helpful. Students wishing to enter a Ph.D. program in entomology after completion of an M.S. in entomology must re-apply to the Department program and submit materials to the DOGE. Again, their application for admission is judged by the same criteria as students applying for admission to the Ph.D. program from other programs or institutions.

REQUIRED PREREQUISITE COURSES

Completion of at least two years of zoological courses is required for students wishing to major or minor in entomology. Courses in closely allied biological sciences may be substituted. Specific course requirements for advanced degrees depend partly upon previous training and experience in the major field of specialization. If a student enters without a course in entomology then he or she must take Insect Biology (ENT 370) or Fundamentals of Entomology and Pest Management (ENT 376).

REQUIRED GRADUATE COURSES

To assure that all our students are trained in key areas of entomology, all students are required to take certain courses and participate in certain activities. A cumulative 3.0 (B) grade point average must be maintained by the student to remain in good standing. For core courses, students must attain a grade of B or higher. Any student receiving the M.S. in entomology shall have at least one course in insect physiology, one course in insect systematics, two courses of ENT 590 (selected from topics A through D, F through I, M and N, inclusive), and at least one credit of ENT 600. Students seeking an M.S. degree must have at least 32 credits, including the core curriculum, and research credits. M.S. students are strongly encouraged to attend departmental seminars.

Any student receiving the Ph.D. in entomology shall have at least one course in insect physiology, one course in insect systematics, four additional courses of ENT 590 (selected from topics A through D and F through I, M through N inclusive), and at least one credit of ENT 600. At least one 590 must be taken from each of these subgroups: Population, Organismal, Sub-organismal (see table below). In addition, Ph.D. students majoring in entomology shall have two semesters of teaching experience, taken as ENT 590K both semesters or ENT 590K one semester and ENT 590L the other semester.

Ph.D. candidates must take at least 72 credits, including the core curriculum, at least 3 research credits, and are expected to attend seminars. Additional course work may be selected to satisfy research interests, and expectations of your Program of Study (POS) committee. (See page 21 for information on your POS committee)

Table 1. Course requirements by degree

Course Number	Course Name	Ph.D.	M.S.
ENT 555	Insect Physiology	X	X
ENT 576	Systematic Entomology	X	X
ENT 590	Special Topics (See Table 2)	4X	2X
ENT 600	Research Seminar	1X	1X
ENT 699	Research	Required	Required
Minimum number of credits		72	32

Table 2. Ent 590 Special Topics, ranging from 1-3 credits for each section

Population	Organismal	Sub-Organismal	Other
C. Ecology and Pest Management	A. Biological Control and Pathology	G. Molecular	E. Special Research Topics
D. Evolution and Systematics	B. Chemical Ecology and Behavior	H. Physiology and Biochemistry	K. Teaching Experience
N. Population Genetics	F. Medical and Veterinary	I. Toxicology	L. Extension Experience
	M. Immature Insects		

REQUIREMENTS FOR AN EMPHASIS IN MOLECULAR ENTOMOLOGY

Any student receiving the M.S. in entomology with an emphasis in molecular entomology is required to take Ent 555, Ent 590G, plus one other course of Ent 590 (selected from topics A through D, F, H, I, M, N), one additional course in molecular entomology, Ent 600 Seminar, BBMB 404, BBMB 542A, and one course from the following: Ent 576, Ent 525, or Ent 568. Any student receiving the Ph.D. in entomology with an emphasis in molecular entomology is required to take Ent 555, Ent 590G, plus three other courses of Ent 590 (selected from topics A through D, F, H, I, M, N), one additional course in molecular entomology, Ent 600 Seminar, BBMB 542A, plus two other workshops selected from BBMB 542 B through E, an additional course with a molecular component, and one from each of the following two categories: Systematics (Ent 576, Ent 525, Ent 568), Biochemistry (BBMB 404, BBMB 405, BBMB 501). <http://www.ent.iastate.edu/molecular/>

REQUIREMENTS FOR A MINOR IN ENTOMOLOGY

A student can receive a Ph.D. minor in Entomology by taking 3 Entomology courses 500 and above for a total of 9 credits as determined by the student's POS and approved by the Entomology Director of Graduate Education. One member of the student's POS committee (see below) must be in Entomology.

"TESTING OUT" OF REQUIRED COURSES

If you feel that you already know the material covered in one or more of the required courses, you may petition to be excused from the requirement. To do this, first discuss the idea with your major professor, POS committee, and the course instructor. If they all agree you know the material, prepare a memo signed by your major professor and course instructor, and submit at the same time you submit your POS form to the DOGE. **A word of caution:** If you are excused from an entomology course requirement, do NOT forget to review the topics covered by the course prior to your preliminary (PhD students) or final exam (MS students)! You will be expected to be as knowledgeable on this topic as all other students.

TRANSFERABILITY OF CREDITS FROM OTHER INSTITUTIONS

The transferability of credits from other institutions will be determined on a case-by-case basis by the student's POS committee and the entomology chair. To waive a course requirement, the student must send a memo signed by his or her major professor (on behalf of the POS committee) and the instructor of the course the student wishes to waive, to the entomology chair. The memo must state that the student has already received satisfactory instruction in the subject matter covered by the required course. Credits for seminars, workshops, and colloquia are not transferable.

REQUIRED ACTIVITIES

As a part of your training, graduate students majoring in Entomology are required to participate in certain, non-course activities. Failure to fulfill these requirements may result in delay of graduation.

GRADUATE ENGLISH EXAMINATION

If your native language is *not* English and you did *not* receive your undergraduate degree from a U.S. institution, or do not meet the TOEFL or IELTS exemption score range, you must take the English Placement Test during your first semester of enrollment. The test is administered by the Department of English and must be taken in addition to TOEFL which is taken as part of the admissions process. Nonnative speakers of English who will have teaching responsibilities are required to take the Oral English Certification Test (OECT).

TEACHING REQUIREMENT

The intent of this requirement is to strengthen graduate student communication skills, reinforce subject matter learning, and form a sound base for achieving departmental teaching objectives. All Ph.D. students are required to teach for two semesters during their Ph.D. enrollment, and M.S. students are also encouraged to participate. Students having had TA experience at another university, or as an M.S. student at ISU, may petition to waive all or part of this rule. This teaching experience can either be in a classroom or a non-classroom situation that requires presenting information to an audience (extension, elementary schools, etc.). Preparation of teaching materials (e.g. insect specimens) may satisfy part of the requirement, but each of the two semesters must include actual teaching. Credit may be obtained through enrollment in either ENT 590K or once only for ENT 590L.

Each teaching experience will be assigned one or two credit hours to be determined in consultation with the instructor. At least one of the semesters of teaching must be at the undergraduate level (100-300 level courses). *Courses selected and proposed semesters for satisfying the requirement should appear on the student's Graduate College Program of Study form.* Students will receive a higher stipend during the semesters when they teach if the funds are available.

Formal training in teaching may be required for specific courses. The additional requirement most likely is enrollment in the two-day college teaching seminar/workshop offered each August by the Center for Excellence in Learning and Teaching (CELT; <http://www.celt.iastate.edu/>), which would be taken prior to enrollment in ENT 590K.

Teaching performance of students enrolled in ENT590K and ENT590L will be evaluated by the faculty member in charge of the course taught or the extension activity planned. An S/U grading system has been encouraged for these courses, but individual faculty may choose to assign a letter grade.

Table 3. Entomology courses that require or desire a teaching assistant (Ent 590K)

Course Number	Course Name	Semester	Instructor
ENT 370	Insect Biology ¹	Fall	Jurenka
ENT 376	Fundamentals of Entomology and Pest Management	Fall/Spring	Gassmann and O'Neal
ENT 374/574	Insects and Our Health	Spring	TBA
ENT 675	Insecticide Toxicology	Fall, odd years	Coats
ENT 425/525	Aquatic Insects	Spring, odd years	Courtney
ENT 555	Insect Physiology	Spring	Jurenka
ENT 576	Systematic Entomology	Fall, odd years	Courtney

¹ multiple sections; ² Teaching Assistant is desirable, but not required.

SCIENTIFIC ETHICS

All students majoring in entomology are required to attend the Scientific Ethics Workshop during Orientation (August or early September). You will be introduced to the concepts of ethical behavior and good practice in science. Included in the presentation will be a discussion of proper research methods, ways to avoid self-deception in the practice of science, and scientific misconduct. Other courses that address scientific and bioethics include:

GDCB 565A, Responsible Conduct of Research

GENET 565B, Working with Industry

PHIL 336, Bioethics and Biotechnology

GENET 539, Ethics and Biological Sciences

Additional resource: "[On Being A Scientist: Responsible Conduct in Research](#)" National Academy Press, Washington D.C. 1995.

OTHER OPTIONAL ACTIVITIES

ENTOMOLOGY SEMINARS

Students are encouraged to attend the Entomology seminars held on Mondays at 4:10 pm and are required to enroll in ENT 600 and present their research results as part of the departmental seminar series. Attendance of these seminars will increase awareness of entomological research conducted both at ISU and at other institutions. Graduate students generally have the opportunity to meet with visiting speakers informally over lunch. Guidelines for preparation and presentation of your seminar will be provided as part of the Ent 600 course.

PROSPECTIVE STUDENT RECRUITMENTS

Occasionally, you may get asked to meet for lunch or evening meals in an informal atmosphere with prospective graduate students. This is an opportunity for the prospective student to get the “real scoop” on graduate training at ISU. Entomology pays for the meals. Notices of meeting opportunities are made through e-mail to all of our graduate students.

SERVICE ON DEPARTMENTAL COMMITTEES

A graduate student representative serves on each committee within the department. Graduate students are encouraged to serve on departmental committees.

MEMBERSHIP AND SERVICE IN PROFESSIONAL SOCIETIES

Membership in professional societies such as the Entomological Society of America (ESA: <http://www.entsoc.org>) is recommended. There are many other professional societies. Consult with your major professor for societies relevant to your research area. See Appendix IV for student awards available through ESA.

TRAINING IN GRANT WRITING AND PUBLISHING

The following are courses that offer training and experience in grant writing and publishing in research journals. Contact instructors prior to enrollment.

Grant Proposal Writing (including proposal critique and budget planning)

English 509, Writing Proposals and Grant Applications (3 cr)

FSHN 695, Grant Proposal Writing (1-0 cr) Fall

GR ST 569, Grant Writing (1-0 cr) Odd Fall

GENET 565F, Grant Writing (1 cr) Odd Fall

Publishing in Plant Science Journals Process of preparing a manuscript for submission to a refereed journal in the plant sciences. Emphasis on publishing self-generated data from thesis or dissertation research.

HORT/AGRON/NREM 529, Publishing in Biological Science Journals (3 cr) Spring

GR ST 566, Communications in Science (0.5-0 cr) Odd spring

GENET 565C, Communications in Science (0.5 cr) Odd spring

PROFESSIONAL DEVELOPMENT

The Graduate College offers many opportunities for professional development in teaching, research, communication, career and wellness. http://www.grad-college.iastate.edu/current/professional_development/writing_seminars/index.php

Preparing Future Faculty (PFF) is a national program for postdoctoral fellows and master's and Ph.D. students, which is designed to supplement your departmental preparation (<http://www.celt.iastate.edu/grad-students-postdocs/preparing-future-faculty/>). It will help you better prepare for a faculty career through a combination of seminars, mentoring, and practical classroom and service experiences. As a result, PFF can help you increase your competitive edge in the academic market.

GR ST 585, Preparing Future Faculty Introductory Seminar (1cr) Fall

GR ST 587, Preparing Future Faculty Intermediate Seminar (1-3 cr) Spring

GR ST 588, Preparing Future Faculty Special Topics (1-3 cr) Fall and Spring

PROGRESSING THROUGH YOUR DEGREE PROGRAM

COMMITTEE APPOINTMENT AND PROGRAM OF STUDY

You will, in consultation with your major professor, decide on a suitable program for completion of your graduate course work. It is then necessary to appoint a graduate Program of Study (POS) Committee. The composition and responsibilities of the POS committee will be in accordance with the Graduate College guidelines.

The POS committee should include faculty whose research interests can aid and complement your research interests, as well as faculty whose expertise will ensure that you graduate with a breadth of knowledge. The POS committee for a **doctoral** program must consist of at least five members of the Graduate Faculty. The committee must include at least three faculty, including the major professor, from within the entomology department. At least one faculty member must be outside the entomology department. This member of the POS committee should be someone who can provide relevant specialized knowledge, a different perspective helpful to the planning, execution, and reporting of research, or some aspect of intellectual diversity deemed important by the committee.

The POS committee for a **master's** student must consist of at least three members of the Graduate Faculty. It must include two members, including the major professor, from inside the ENTOMOLOGY department. One member of the committee must be outside the department. Once the chosen members of the POS committee have agreed to serve, you should complete the Graduate College form "Recommendation for Committee Appointment" and submit it to the ENTOMOLOGY DOGE for approval. On the committee form, under major, print or type: Entomology. After official appointment of the committee, copies of the form will be returned to you and your major professor. A third copy is placed in your file in the department office.

The next step is to convene a POS committee meeting (all committee members must be present), inform them of your research plans, and ask for their evaluation of your plans. This is also the time to complete your Program of Study (POS). The Graduate College Program of Study is one of the more important documents you will encounter while in graduate school. In essence, it is a contract between you and the graduate school indicating the minimum course work which must be taken to complete a Ph.D. or M.S. degree. No changes can be made in it without the mutual approval of yourself, your committee, and the Graduate College. No changes can be made to it without the approval of your committee, and the Graduate College. List the required courses for the Entomology major at the top of the form.

TRICKS OF THE TRADE - A better way to schedule POS meetings

Scheduling POS meeting with faculty who have very full schedules can be facilitated by 1) checking outlook calendars, 2) using a scheduling aid such as doodle, and 3) choosing a sufficient interval (2-3 weeks is recommended) and/or ask the POS committee members to list their free times during that interval. Following the advice of the major professor, the student should determine the amount of time required for the planned meeting (for initial and updating meetings usually 2 hours is scheduled). After the faculty respond, the student can select one time when everyone is free, and confirm the time slot by e-mail with POS committee members. This whole process needs to be completed in one or two days so that slots that were free during the initial inquiry remain free. E-mail is the preferred method of communication. For Preliminary and final exams a minimum of 3 hours will be required. This value should be indicated in the initial message to the POS committee members.

YEARLY POS MEETING

Each year, after the formation of your POS committee, you should set up a time to meet with the members of your POS committee. At least three committee members must be present. M.S. students are encouraged to meet yearly until the final defense; at least two committee members must be present. ***Students are required to give a research presentation at these meetings to facilitate discussion of research progress and feedback.*** Once a time has been determined, the student should reserve a room for the appropriate amount of time. Suggested rooms are 05 or 111 Insectary, 106 or 333 Science II (contact ENT/NREM staff for scheduling). Additionally room 541 Genetics conference room (schedule through GDCB office) or 109 Science I (Microbiology office) may be available.

DISSERTATION RESEARCH PROPOSAL

By the end of their first year in their major professor's laboratory, Ph.D. candidates majoring in entomology must present a description of their proposed dissertation research to their POS committees at or before the time they submit their proposed Program of Study to their committee. The proposal must include a written component submitted to the POS committee at least one week prior to the oral presentation. The length and formality of the written and oral components will be determined by the major professor. However, the written component must be self-contained and understandable independently of the oral presentation. All members of the POS committee must be present during the oral component.

After this initial proposal, a POS committee may require, if it so desires, a longer or more formal proposal; for example, a detailed written proposal as part of the Ph.D. preliminary exam. Research proposal requirements, if any, for Master's degree candidates are determined by their POS committee.

PRELIMINARY EXAMINATION

All graduate students must pass certain examinations before obtaining their advanced degrees. For a Ph.D. candidate, the first of these examinations is the preliminary examination (Master's degree candidates are not required to take a preliminary examination). ***This examination should be completed by the end of the first semester of the third year of graduate training.***

To initiate your preliminary exam, a Request-for-Preliminary-Examination form should be turned into the Graduate College at least two weeks prior to the date of your preliminary examination. Request-for-Preliminary-Examination forms are available in the departmental office and at the Graduate College. After processing your request, the Graduate College will forward the Preliminary-Examination form to Kelly Kyle who will give this form to your major professor. The results of the preliminary examination will be recorded on this form, signed by all committee members and returned to the Graduate College. All committee members must be present at this examination.

The purpose of the preliminary examination is to test: breadth of knowledge in the area of entomology; depth of knowledge in a student's particular research area; and critical thinking skills especially as they pertain to the scientific method and hypothesis - based research. For this purpose, the preliminary exam must contain both a written and an oral component. The written component is to be administered before the oral exam and must include questions testing your knowledge of entomology. Every committee member must be given the opportunity to present written questions to be answered by the candidate in a manner determined by the committee member (e.g., take home exam, open book, time limit, length limit, etc.). Ideally, each committee member will respond to this invitation by providing his/her questions in a timely fashion. One of the written examination tasks, frequently asked for by the major professor, may be the preparation of an updated research proposal about the candidate's dissertation research plans. If applicable, this proposal should be shared with the whole committee before the oral component of the exam.

The oral component of the preliminary examination should cover additional areas of entomology as well as test the candidate's ability to solve problems and address scientific questions in an appropriate manner. For example, the oral section could be structured as follows: i) a short summary of research progress and proposed experiments given by the candidate; ii) a period of questions directly interrogating an understanding of the dissertation research project; iii) a period of questions targeting an understanding of entomology in its widest concept. This is a non-binding suggestion, and ***we very strongly recommend that each PhD student speak with all of his/her committee members well in advance of the preliminary examination to obtain a good concept of what will be expected.***

GUIDELINES FOR PREPARING FOR YOUR PRELIM

Do not underestimate the importance of this examination. Your committee will be particularly interested in your ability to communicate (i) experimental design and interpretation of data, (ii) knowledge of facts that are directly or only indirectly related to your presentation that may pertain to entomology or other fields related to your research, (iii) depth of understanding of material presented and associated information.

Your goal will be to demonstrate proficiency of knowledge and critical thinking skills at the level of a Ph.D. student. To prepare for this exam, you should systematically go through your research presentation and revise material related to it from the literature, textbooks and class notes. You should think about results (achieved or expected), interpretation of those results and subsequent experiments that you might carry out. You should understand the strengths and limitations of the experiments. What will the experiments tell you specifically about your hypotheses? You should understand what positive and negative controls are needed for interpretation of results. Understand the broad picture as well as the specifics. You will be tested on your knowledge and research irrespective of what you ultimately intend to do (teaching, extension, research, other).

MANUSCRIPT REQUIREMENT

Before being awarded their degree, all graduate students majoring in Entomology must have submitted to the major professor one or more manuscripts for publication in scholarly journals based on their thesis or dissertation research, prior to graduation. Following are some useful resources to assist you in this endeavor:

Guidelines for Writing a Scientific Paper:

<http://www.sci.sdsu.edu/~smaloy/MicrobialGenetics/topics/scientific-writing.pdf>

Writing a scientific research article:

<http://www.columbia.edu/cu/biology/ug/research/paper.html>

Victoria E. McMillan. 1997. Writing Papers in the Biological Sciences, Bedford Books, Boston.

Robert S. Day. 1998. How to Write and Publish a Scientific Paper, 5th edition, Oryx Press, Phoenix.

William Strunk, Jr. and E. B. White. 1987. The Elements of Style, 3rd ed. Macmillan, New York.

V. McMillan. 1988. Writing Papers in the Biological Sciences. Bedford Books, NY.

COMPLETION DEADLINES

Students approaching graduation should check appropriate deadlines. Applicable dates that apply for completion of your degree requirements and graduation can be found at:

<http://www.grad-college.iastate.edu/calendar/>

WRITING YOUR THESIS OR DISSERTATION

All students whose programs of study require a Thesis or Dissertation must comply with all Iowa State thesis requirements in order to graduate. Iowa State University requires all Theses and Dissertations to be electronically submitted. A thesis checklist is available online to help you in making sure all formatting is correct.

Thesis seminars are offered every semester to clarify Iowa State University's publishing requirements, submission procedures, and common problems for graduate theses and dissertations. Faculty and others involved in thesis preparation are also welcome to attend.

Electronic Submission: http://www.grad-college.iastate.edu/current/thesis/organizing_thesis/index.php

Thesis Checklist: <http://www.grad-college.iastate.edu/current/thesis/checklist/index.php>

Thesis Requirements: <http://www.grad-college.iastate.edu/current/thesis/>

Journal Paper Format for thesis or dissertation: http://www.grad-college.iastate.edu/current/thesis/organizing_thesis/journal_paper.php

Theses written for M.S. or Ph.D. degrees should be in the Journal Paper Format; that is, they must include one or more papers designed for submission to a journal. Writing in Journal Paper Format will help you learn to write papers and, at the same time, shorten the time it takes for your thesis research to be published. If you are including research data from other students or researchers, follow the instructions in the ISU Thesis Manual describing co-authors roles in the research and/or preparation of the manuscript.

FINAL EXAMINATION

The Final Examination for the Ph.D. and M.S. degrees is an oral defense of the Ph.D. dissertation or M.S. thesis. All members of your POS committee must be present. This examination will review the dissertation or thesis and the candidate's knowledge of relevant subjects. You are required to give a formal seminar presentation of your research to the entomology faculty and students and other members of the Iowa State academic community (ENT600) some time prior to the final defense.

After the dissertation or thesis has been completed and all the other requirements have been met, you should fill out and submit to the Graduate College a “Request for Final Oral Examination”. When the Graduate College receives this request they will send a “Report of Final Examination” for reporting the examination result to your departmental secretary. The departmental secretary will provide the form to your major professor.

By midterm of the semester proceeding the semester of graduation, you must submit to the Graduate College a diploma slip which shows the expected date of graduation, exact thesis or dissertation title and other data. If you do not graduate at the expected time, a new diploma slip must be submitted at a later time. Diploma slips are available by going Graduate College forms page: http://www.grad-college.iastate.edu/common/forms/student_forms.php

GRADUATION – LETTERS OF RECOMMENDATION

When you get to the point of needing letters of recommendation, make sure to give the faculty from whom you are requesting the letter: 1) plenty of advance warning, 2) a copy of the job/ad description, and 3) a copy of your C.V.

ON GRADUATION

If you have completed an M.S. in entomology and wish to continue on to the Ph.D. program, you will need to re-apply to the department program. If you would like to continue taking classes at ISU, you will need to apply for admission to another major, or apply for admission to a non-degree program through the Graduate College.

EXIT INTERVIEWS

When you receive the “Graduate Student Approval Slip for Graduation” form from the Graduate College, schedule at least a 15 minute exit interview with the entomology chair. You will need the signature of the entomology chair/DOGE on the Graduate Student Approval Slip.

FINANCIAL MATTERS

Almost all students in entomology receive some form of financial support. The source of the support, however, and the responsibilities associated with it, vary. Students entering entomology usually receive a research assistantship (RA) funded by grant funding obtained by their major professor. The responsibilities associated with your stipends depend on whether you have an RA or a teaching assistantship (TA). Information about these forms of support is available in the Graduate College Handbook. The stipend for Ph.D. students in entomology increases on successful completion of the preliminary examination.

All graduate students on assistantships have signed a Graduate Assistantship Letter of Intent that lists the terms and conditions of their appointment. Generally, graduate assistantship appointments are on a "one-half time" basis. Appointments may be terminated by mutual consent or for cause as described in the Graduate College Handbook. If you have any questions regarding your appointment, see Kelly Kyle (kakyle@iastate.edu).

Payday at the University is the last working day of each month. Your paycheck will be deposited directly into a bank of your choice. You will need to complete an authorization form available at the Human Resources Office for this. If applicable, deductions are made for Federal and State income taxes.

It is expected that MS students will complete their degrees within a period of 3 years, and PhD students within a period of 5 years. The major professor (not the student) is responsible for negotiating any extension of departmental funding beyond these time limits. Extension of a research assistantship under these circumstances is not guaranteed.

STUDENT AWARDS AND SCHOLARSHIPS

ISU Entomology: <http://www.ent.iastate.edu/scholarships>

ISU Graduate and Professional Student Senate: <https://www-gpss.sws.iastate.edu/>

ESA: <http://www.entsoc.org/awards/index.htm>

NCB ESA awards: <http://entsoc.org/northcentral>

BENEFITS

A health fee is paid by each student but is not an insurance plan; it complements a student's individual insurance coverage. A Group Health Insurance plan is available. Health insurance information and enrollment can be found here: http://www.grad-college.iastate.edu/prospective/campus_services/health_insurance.php. Information about student insurance should be mailed to you through campus mail as soon as you are entered on the payroll system. The program information details open enrollment schedule, options, dental insurance and has links to online forms. Students enroll for Health Insurance by using AccessPlus <https://accessplus.iastate.edu/frontdoor/login.jsp>, click on the Student Tab, click on the health Insurance, and then follow the instructions provided for registration.

Newly employed personnel should not drop any other insurance they may have until they know the beginning date of the ISU insurance. For details and enrollment cutoff dates on the ISU Student and Scholar Health Insurance Program, please check the online site for Student & Scholar Insurance Program: <http://www.hrs.iastate.edu/hrs/sship>. Medical and dental insurance for students with and without assistantships: <http://www.hrs.iastate.edu/hrs/SSHIP-Graduates>

All international students, whether on assistantship or not, are required to carry the ISU Student Health Insurance or to be covered by another health insurance policy. For more information, contact the International Education Services (IES) in 252 Memorial Union (294-1120).

HEALTH SERVICE

As a student, you are eligible to use the ISU Student Health Service (<http://www.cyclonehealth.org/>). The health fee pays for some services offered at the Student Health Center. Thielen Student Health Center is a complete outpatient medical clinic located west of Beyer Hall. The health fee covers consultations with medical staff and subsidizes charges for services, such as laboratory tests, immunizations, x-rays, and pharmaceuticals. A range of services is offered, including medical exams (physicals), women's health care, sports medicine, physical therapy, STD testing and treatment, travel immunizations, and a full-service pharmacy.

For students enrolled for under five credits, the health fee is optional. The Thielen Student Health Center is located across from State Gym at Sheldon and Union Drive on the northwest side of campus.

VACATION AND SICK LEAVE

Research assistants with half-time appointments (C base) earn vacation at a rate of eight hours per month. Because you are half-time, this is equivalent to two calendar days. You can take vacation with the approval of your academic advisor and by notifying department support staff. Accumulated vacation time is forfeited upon completion of your appointment. (See your Graduate College Handbook for detailed information.)

To obtain approval for vacation time you need to fill out an Absence Request card. Students on assistantships are employees of ISU and therefore are allowed off on university holidays with subsequent absences to be taken as vacation.

Teaching assistants are subject to the academic calendar and do not accumulate vacation time. However, they are not required by the University to work when classes are not in session. Graduate assistants on teaching assistantships should, nevertheless, get permission from their major professor before taking a vacation from their research responsibilities.

Graduate assistants of any type on half-time appointments accumulate six hours of sick leave per month. Since you are on a half-time appointment, this is equivalent to one-and-a-half calendar days. If you will be absent because of an illness, you should call your advisor or major professor as soon as possible on the day you are sick and must be absent. On your return, you will need to fill out an Absence Request form for sick leave. You should also use the form in advance when you have a planned absence for medical reasons. Maternity/Paternity leave can be taken as sick leave and/ or vacation. Accumulated sick leave is forfeited upon completion of your appointment.

INJURIES AND INJURY REPORTS

All accidents and injuries occurring at work or in the course of employment must be reported to the employee's supervisor as quickly as possible, even if no medical attention is required. The supervisor and/or employee are responsible for completing a First Report of Injury (FROI) form and submitting this electronically via AccessPlus within 24 hours of the incident reporting. Log into [AccessPlus](#), then go to the Employee tab, select Work Injury and the select Continue to view the FROI home page in order to fill out the FROI form. Employees can complete FROI's but supervisors must review, approve and electronically submit the form to University Human Resources: <http://www.hrs.iastate.edu/hrs/workerscomp>

DISMISSAL CRITERIA

Continuing registration as a graduate student at Iowa State University is contingent on maintaining good standing in a graduate major. Entomology expects that students will complete their degrees in a satisfactory and timely manner. However, there are several situations that may require dismissal of a student.

1. Failure to progress satisfactorily in his/her degree program. This may be evidenced by a lack of research progress, a lack of aptitude for entomology, or a failure to maintain a satisfactory academic standing, as defined by the Iowa State University Graduate College Handbook.
2. Lack of a major professor. Because graduate degrees in entomology at Iowa State are centered about a mentored research project, it is impossible to complete a degree without a research mentor [major professor]. To maintain good standing and earn a degree in entomology, a student must have an entomology faculty member serving as his or her major professor. Occasionally, faculty who have previously agreed to serve as a major professor become unable or unwilling to serve. Faculty desiring to terminate their service as major professor may do so by notifying the student and the entomology chair in writing. A student who has lost his or her major professor has up to three months after the date the entomology chair is notified to identify another Entomology faculty member willing to serve. The entomology chair will help the student search for a new major professor, if the student desires.
3. Academic dishonesty. The proper conduct of science requires the highest standards of personal integrity. Because of this, dishonesty in the classroom or in the conduct of research is considered a serious offense by entomology and by the University. Students accused of academic dishonesty will be dealt with according to the procedures outlined in the University Catalog, Faculty Handbook, and the Graduate College Handbook. Possible punishments can include dismissal from the program and expulsion from the University, depending on the severity of the offense.

DISMISSAL PROCEDURES

Procedures for dismissal are as described in the ISU Graduate College Handbook. A student's POS committee, or if the student has no POS committee, the student's major professor, can recommend the dismissal of a student for any of the reasons listed above. Recommendations for dismissal are made to the entomology chair. Before a dismissal is decided, the entomology chair must give the student a written justification for why dismissal is being considered. The entomology chair must also discuss the situation with the student, as well as his or her POS committee, and major professor, in an attempt to find a satisfactory resolution. This discussion constitutes the "informal conference" as described in the Graduate College Handbook. If a satisfactory resolution cannot be reached and the chair decides to dismiss the student, either party may bring the issue to the attention of the Associate Dean of the Graduate College for a decision. The student may appeal the decision of the Associate Dean, as described in the Graduate College Handbook: http://www.grad-college.iastate.edu/common/handbook/Grad_College_Handbook_April_2014.pdf.

RESPONSIBILITIES OF ENTOMOLOGY AND THE MAJOR PROFESSOR

It is the responsibility of entomology to counsel students who are having academic difficulties, or if students are unable to overcome these difficulties, to help the students identify and apply to other appropriate degree programs. It is the responsibility of the major professor and his/her department to seek funds for a student's assistantship and for the conduct of research.

STATUS IN ENTOMOLOGY AND TERMINATION OF FINANCIAL SUPPORT

Although students in entomology are normally supported on graduate assistantships, this is not a requirement for continued participation in entomology. Students not on assistantship will continue to have regular status in the major so long as they remain in good standing and are registered. However, because assistantship support at Iowa State requires that a student be a member of a graduate program, dismissal from entomology requires that assistantship support be terminated. Students with any doubt about their assistantship status should discuss their situation with their major professor, and the entomology chair. For further information on termination of assistantship appointments, see the Graduate College Handbook.

APPEAL PROCESS

The University has established appeal processes for student grievances. These vary depending on the nature of the grievance, and are described in the Graduate Handbook. Generally, these procedures begin with the department chair. It is usually best for all parties if a satisfactory resolution can be reached without initiating a formal appeal process. The Associate Dean of the Graduate College is available to informally consult with students and faculty.

APPENDIX I: ENTOMOLOGY GRADUATE STUDENT ORGANIZATION (EGSO)

The members of the EGSO would like to cordially invite you to join our organization. Learn more about us here: <http://www.ent.iastate.edu/egso/> This is an organization formed and governed by graduate students in the department of entomology. The purpose of this organization is: 1) to formally voice the interests and concerns of the graduate students in the department of entomology, 2) to promote the professional development and educational enhancement of graduate students in the department through formal and informal seminars, meetings, discussions, and dissemination of literature, and 3) to serve as a peer group for information for incoming and currently enrolled graduate students with respect to academic and non-academic requirements.

In addition to these three objectives, the EGSO also functions as a vehicle for social interactions between students and faculty. The EGSO sponsors events such as spring and fall picnics, bowling tournaments, and intramural sports teams. We also do fundraising to support these activities and for charitable work such as assembling and donating insect reference collections for local schools, supporting a spring speaker, and volunteering with the insect zoo.

Another important function of the EGSO is to mentor new students. When you arrive at ISU you should be assigned a mentor by the EGSO vice-president. If you are not, please bring this to the attention of one of the EGSO officers or the departmental secretary, Kelly Kyle, and a mentor will be assigned to you immediately. Check the entomology student handbook for a check list of items that your mentor should go through with you.

EGSO meetings are typically held on the first Friday of every month at 4:00 PM in room 5 of the Insectary building. However, the meeting time is subject to change depending on the schedules of the current members. Therefore, contact one of the following officers to check on the next scheduled meeting and feel free to ask them any questions you have about the EGSO.

Please feel free to come to a meeting or two and see what the organization is all about. If you think it will benefit you and would like to officially join, dues are \$5 per year. We hope you will join and help keep the EGSO a great student run organization!

APPENDIX II: EGSO Mentor Check List

The Entomology Graduate Student Organization (EGSO) mentor should cover the following items within the first few weeks that the student arrives and be available for the student at any point during their tenure to answer questions and give advice.

1. Take the student on a tour of the entomology buildings (4th floor Science II, Insectary, and Genetics Laboratory). Introduce them to any professors or students that are present. Show the student around the Union (e.g., bookstore, food, post office, etc.) and off-campus bookstore options.
2. Make sure the student knows where to go or is aware of:
 - Payroll (Human Resource Services – 1031 Wallace Rd Office Building, Room 100)
 - How to register for classes using AccessPlus, phone, or in person at the Registrar's Office at 214 Alumni Hall
 - University ID (0530 Beardshear Hall – 8:00 AM – 4:30 PM) make sure the student has a photo ID with them)
 - Email registration (Solution Center, 195 Durham Center)
 - Keys (Janice Berhow Room 339 Science II) and copy machine (get copy code from Kelly)
 - Health care enrollment form (Thielen Student Health Center, Sheldon and Union Drive)
 - Pay bills (on-line via AccessPlus or Treasurer's Office, 122 Beardshear Hall)
 - Orientation day
 - EGSO, and take them to at least one meeting
 - Parking options – Commuter parking at Iowa State Center and Lot 29 and bus system
 - The Lied Recreation Center Group fitness card – must acquire this card at 2220 State Gym each year if you want to participate in group fitness activities
 - Resources in the department like: student laptop and projector, coffee room computers, and the 433 teaching lab computer
 - Other campus organizations, like Graduate and Professional Student Senate (GPSS)
 - Library resources
 - The Entomological Society of America (www.entsoc.org) and other societies
 - How to make long distance calls (see Kelly if you have questions)
 - How to sign up for research credits with their professor's research credit code (see Kelly for appropriate code)
 - Reimbursements for travel, food and supplies through AccessPlus
 - Talk to the student about course requirements, especially 590s (they can be confusing)
 - Answer any additional questions the mentee may have about the department, the university, or the community at large.

APPENDIX III: VOUCHER SPECIMEN POLICY

Graduate students should be aware of their responsibility to deposit in the Iowa State University Insect Museum (or another institution) voucher specimens of the insects they research (Yoshimoto, C.M. 1978. Voucher specimens for entomology in North America. *ESA Bulletin* 24(2):141-2).

Individuals embarking on studies that call for voucher specimens should plan carefully before the work is initiated. Such planning should involve direct consultation with entomologists knowledgeable in collection, identification, preservation, and storage of such specimens. When in doubt if vouchers are needed, individuals should check with the Curator of the ISU Insect Collection.

For each species studied a short series of specimens, perhaps 10 of each sex; is preferable to a single specimen or to hundreds of duplicate specimens which take up valuable space in a collection. Each specimen must be correctly prepared and bear a special voucher label (available from the Curator, ISU Insect Collection) clearly linking it to a specific research project, as well as an identification label and all the standard collection data (country and locality, date, collector or researcher, and such information as the host, etc.).

Once a year persons maintaining laboratory cultures used for research must preserve a few vouchers of all cultures in the NCSU Insect Collection.

Theses and research manuscripts for publication must indicate where vouchers have been deposited and the names of specialists who have identified material. Referees and Graduate Advisory Committees should insist that authors include such statements in their works, except in the case of very well-known species which are unlikely to be misidentified. Even in the latter case, however, voucher specimens must be preserved so that future entomologists can substantiate results.

APPENDIX IV: COMPUTING AND INFORMATION TECHNOLOGY RESOURCES

The Department of Entomology is committed to supporting the work of graduate students by providing them with a computing environment that is stable and secure. You should work with your major professor if you need to get access to a computer for your own use (i.e., on your desk) during your stay at Iowa State. John VanDyk has a limited number of older computers that may be available if your project is unable to supply you with a computer.

Department-supplied computers are kept up-to-date with security patches and virus protection, and include backup software which encrypts and backs up data to departmental servers. Supported operating systems in the department are Mac OS X and Windows 7 or 8.

There are three resources that are of particular interest to graduate students:

1. *The entomology network.* After you have received an Iowa State net ID (i.e., an ISU e-mail address), please contact John VanDyk (entit@iastate.edu) in 411 Science II for access to departmental computing resources.
2. *Entomology computing facilities.* These include hardware and software as follows:
 - a. ***Student Computer Laboratory***, 418 Science II. This room has 100 base T ("fast") ethernet service. As of July 2014, this facility includes two Windows computers and one Mac OS X computer. Hardware and software are as follows:
 - i. *Mac Mini with 2.3GHz i7 processor and 16 gigabytes of RAM*; hooked up to flatbed scanner Microsoft Office; Adobe Creative Cloud suite (Photoshop, Illustrator, InDesign, etc.); Adobe Acrobat Professional; EndNote; PAUP; TNT; and Unix tools (MacPorts, BioPerl).
 - j. *Dell OptiPlex 9010 with 3.4GHz and 16 gigabytes of RAM*; Burns CDs/DVDs; Microsoft Office; Adobe Creative Cloud suite (Photoshop, Illustrator, InDesign, etc.); Adobe Acrobat Professional; EndNote; SAS; and SigmaPlot.
 - b. ***Entomology Teaching Laboratory***, 433 Science II. This room has 100 base T ("fast") ethernet service. Video input from the microscope feeds into the computer as digital video. Video from the computer screen is mirrored to the video projector attached to ceiling. Hardware and software are as follows: Macintosh iMac with 3.1GHz i7 processor and 16GB RAM; VMWare Fusion running Windows 7; Microsoft Office; and Nikon software for video capture.
 - c. ***Laptops, portable video projectors, and Canon digital video cameras*** are available for checkout from John VanDyk, 411 Science II.
3. *The eDropBox* is a shared space on the departmental network. Any computer within the departmental network can place files into and retrieve files from the eDropBox. The eDropBox is meant as a waystation for files on their way from one computer to another. The data on the eDropBox is backed up.