

**GRADUATE HANDBOOK**

**ENTOMOLOGY AND NEMATOLOGY DEPARTMENT**

**UNIVERSITY OF FLORIDA**

Revised by

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## PREFACE

This handbook provides information for graduate students and faculty on policies and requirements specifically of the Entomology and Nematology Department and the College of Agricultural and Life Sciences (CALs), and to a lesser extent, of the Florida Board of Education, the University of Florida Board of Trustees, and the University of Florida. The Graduate School also publishes a Graduate Student Handbook each year that will provide you much useful information about University policies (<http://graduateschool.ufl.edu/student-life-and-support/student-handbook>).

The handbook does not replace the Graduate School Catalog (<http://graduateschool.ufl.edu/academics/graduate-catalog>), which contains the official information concerning rules, regulations, course descriptions, degree requirements, etc. Faculty and staff will assist the student in meeting all academic requirements that apply to his/her program, but **the student is ultimately responsible**.

This is the 23rd edition of the Graduate Handbook. Much of the information in previous editions was compiled and written by former Graduate Coordinators, especially by the late Dr. Stratton H. Kerr, Dr. John R. Strayer, Dr. Grover C. Smart, and Dr. Donald W. Hall.

We are indebted to the Graduate Committee for improving the handbook. Current members of the Graduate Committee are Drs. Marc Branham, Hugh Smith, Larry Duncan, Jennifer Gillett-Kaufman, Oscar Liburd, and Nathan Burkett-Cadena. In addition to suggesting improvements for the handbook, the Graduate Committee plays a prominent role in admitting students, formulating graduate policies, and awarding scholarships, awards, and other forms of recognition.

The first Graduate Coordinator in this department was Dr. Vernon G. Perry, who served (dates not known) under department chair Dr. W.G. Eden. Dr. Perry was followed by Dr. Thomas J. Walker (1975-1976), the late Dr. Stratton H. Kerr (1976-1988), Dr. John R. Strayer (1988-31 July 1993), the late Dr. Armen Charles Tarjan (1 August 1993-31 December 1996), Dr. Grover C. Smart, Jr. (1 January 1997-30 July 2003), and Dr. Donald W. Hall (1 August 2003-31 December 2008).

Heather J. McAuslane  
Graduate Coordinator  
August 2015

## **Graduate Student Rights and Responsibilities**

Graduate students on assistantship are responsible for assigned duties from either their research advisor or the Graduate Coordinator, depending on the source of financial support. This assigned work is in addition to work done on a student's own research. Students, including those on fellowships or with other sources of support, may have responsibilities for colony maintenance or other tasks with other students or technical support staff in their advisors' laboratories that are required for the mutual success of their and their advisors' research projects. Graduate study is a full-time job and may include evening and/or weekend obligations. Students are committed to classes, research, seminars and service for at least 40 hours per week (specific hours to be set by the students' advisors). Therefore, students must make arrangements with their faculty advisors for any changes to this requirement or any absences -- including those during University holidays. Please carefully read Appendix I in this handbook for information on University and Department of Entomology & Nematology leave policies.

Further helpful information, including grievance procedures, can be found at the Dean of Students' Office web site <http://www.dso.ufl.edu/sccr>

## **Plagiarism and Academic Honesty**

Plagiarism is a serious problem in academia today, especially with the ease of obtaining information from the web.

Plagiarism is defined as representing the words or ideas of another person as one's own, without attribution to the source. All words and ideas must be attributed to a source unless they are considered common knowledge (i.e., widely known by many people and found in many different sources). There are many kinds of plagiarism, as you will read on the Guide to Plagiarism website referenced below. One of the most common ones is "insufficient paraphrasing", even with correct citation (<http://www.uflib.ufl.edu/msl/07b/studentplagiarism.html#paraphrasing>).

Plagiarism is unethical, unacceptable in science, and prohibited by the UF Student Honor Code (appropriate sections of the Honor Code are appended to this handbook). The consequences for plagiarism while at the University of Florida range from receiving a grade of zero for the plagiarized assignment or a failing grade for the course, to, for repeated offenses, expulsion from the university. Plagiarism after graduate training calls into question one's scientific integrity and can lead to banning of publication in journals and the loss of jobs/careers.

In some countries, it is an acceptable practice to write in a way that faculty members at the University of Florida consider as plagiarism. Students studying at our university and with plans to publish their research in the English language need to know what plagiarism is and how to avoid it.

Students who plagiarize will be caught and consequences will be applied. Many faculty in our department check all written assignments using an anti-plagiarism software called Turnitin® (<https://lss.at.ufl.edu/help/Turnitin>).

**Please understand that our purpose in bringing to your attention the matter of plagiarism is to help train you to be ethical scientists, not to impugn your character.**

### Marston Science Library Plagiarism Guide for Science and Engineering Instructors and Students

Before you take your first class at the University of Florida, please go to the following website and work through each of the four tutorials. Topics of the four tutorials are: 1) Plagiarism, 2) UF Honor Code, 3) Citing, and 4) Tips.

<http://www.uflib.ufl.edu/msl/07b/students.html>

We encourage you to talk to your advisor after you have worked through the tutorials to let him/her know you are aware of what constitutes plagiarism and how to cite appropriately.

## Student Honor Code

(copied entirely from the Dean of Students Office website)

<http://www.dso.ufl.edu/scsr/process/student-conduct-honor-code/>

Preamble: In adopting this Honor Code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the University community. Students who enroll at the University commit to holding themselves and their peers to the high standard of honor required by the Honor Code. Any individual who becomes aware of a violation of the Honor Code is bound by honor to take corrective action. Student and faculty support are crucial to the success of the Honor Code. The quality of a University of Florida education is dependent upon the community acceptance and enforcement of the Honor Code.

### **The Honor Pledge:**

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code.

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "**On my honor, I have neither given nor received unauthorized aid in doing this assignment.**"

### **(3) VIOLATIONS OF THE STUDENT HONOR CODE.**

**(a) Plagiarism.** A student shall not represent as the student's own work all or any portion of the work of another. Plagiarism includes but is not limited to:

1. Quoting oral or written materials including but not limited to those found on the internet, whether published or unpublished, without proper attribution.
2. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student.

**(b) Unauthorized Use of Materials or Resources ("Cheating").** A student shall not use unauthorized materials or resources in an academic activity. Unauthorized materials or resources shall include:

1. Any paper or project authored by the student and presented by the student for the satisfaction of any academic requirement if the student previously submitted substantially the same paper or project to satisfy an academic requirement and did not receive express authorization to resubmit the paper or project.
2. Any materials or resources prepared by another student and used without the other student's express consent or without proper attribution to the other student.
3. Any materials or resources which the faculty member has notified the student or the class are prohibited.
4. Use of a cheat sheet when not authorized to do so or use of any other resources or materials during an examination, quiz, or other academic activity without the express permission of the faculty member, whether access to such resource or materials is through a cell phone, PDA, other electronic device, or any other means.

**(c) Prohibited Collaboration or Consultation.** A student shall not collaborate or consult with another person on any academic activity unless the student has the express authorization from the faculty member.

1. Prohibited collaboration or consultation shall include but is not limited to:
  - a. Collaborating when not authorized to do so on an examination, take-home test, writing project, assignment, or course work.
  - b. Collaborating or consulting in any other academic or co-curricular activity after receiving notice that such conduct is prohibited.
  - c. Looking at another student's examination or quiz during the time an examination or quiz is given. Communication by any means during that time, including but not limited to communication through text messaging, telephone, email, other writing or verbally, is prohibited unless expressly authorized.

2. It is the responsibility of the student to seek clarification on whether or not use of materials or collaboration or consultation with another person is authorized prior to engaging in any act of such use, collaboration or consultation. If a faculty member has authorized a student to use materials or to collaborate or consult with another person in limited circumstances, the student shall not exceed that authority. If the student wishes to use any materials or collaborate or consult with another person in circumstances to which the authority does not plainly extend, the student shall first ascertain with the faculty member whether the use of materials, collaboration or consultation is authorized.

**(d) False or Misleading Statement Relating to a Student Honor Code Violation.** In reporting an alleged Student Honor Code violation, a student shall not intentionally or in bad faith make a false or misleading statement. During the course of a Student Honor Code proceeding, or on final appeal following such a proceeding, a student shall not at any time make a false or misleading statement to any person charged with investigating or deciding the responsibility of the accused, reviewing a finding of responsibility, or determining or reviewing the appropriateness of the sanction or sanctions to be recommended or imposed.

**(e) False or Misleading Statement for the Purpose of Procuring an Academic Advantage.** A student shall not intentionally or in bad faith make a false or misleading statement for the purpose of procuring from the person to whom the statement is made an academic advantage for any student.

**(f) Use of Fabricated or Falsified Information.** A student shall not use or present invented or fabricated information, falsified research, or other finding if the student knows or in the exercise of ordinary care should be aware that the information, research, or other finding has been fabricated or falsified.

**(g) Interference with or Sabotage of Academic Activity.** A student shall not do any act or take any material for the purpose of interfering with or sabotaging an academic activity. Sabotage includes, but is not limited to:

1. Removing, concealing, damaging, destroying, or stealing materials or resources that are necessary to complete or to perform the academic activity.

2. Tampering with another student's work.

3. Stealing from another student materials or resources for the purpose of interfering with the other student's successful completion or performance of the academic activity or of enhancing the offending student's own completion or performance.

**(h) Unauthorized Taking or Receipt of Materials or Resources to Gain an Academic Advantage.** A student shall not without express authorization take or receive materials or resources from a faculty member for the purpose of gaining academic advantage.

**(i) Unauthorized Recordings.** A student shall not without express authorization from the faculty member and, if required by law, from other participants, make or receive any recording, including but not limited to audio and video recordings, of any class, co-curricular meeting, organizational meeting, or meeting with a faculty member.

**(j) Bribery.** A student shall not offer, give, receive, or solicit a bribe of money, materials, goods, services or anything of value for the purpose of procuring or providing an academic advantage.

**(k) Submission of Paper or Academic Work Purchased or Obtained from an Outside Source.** A student shall not submit as his or her own work a paper or other academic work in any form that was purchased or otherwise obtained from an outside source. An outside source includes but is not limited to a commercial vendor of research papers, a file of research papers or tests maintained by a student organization or other body or person, or any other source of papers or of academic work.

**(l) Conspiracy to Commit Academic Dishonesty.** A student shall not conspire with any other person to commit an act that violates the Student Honor Code.

**(2) Student Honor Code Sanctions.** For a violation or violations of the Honor Code, a student may receive any of the sanctions that can be imposed for Student Conduct Code violations, including but not limited to conduct probation, suspension and expulsion as well as any educational sanctions. In addition, students may receive the following:

**(a) Assignment grade penalty.** The student is assigned a grade penalty on an assignment including but not limited to a zero.

**(b) Course grade penalty.** The student is assigned a grade penalty in the entire course including but limited to an "E".

### **(3) Student Conduct Code Sanctions.**

- (a) Reprimand:** The student is given formal written notice and official recognition that the behavior has violated the Student Conduct Code.
- (b) Loss of University Privileges:** Loss of University privileges comprises the denial of specific University privileges including but not limited to attendance at athletic functions, unrestricted library use, parking privileges, university computer usage, and residence hall visitation for a designated period of time.
- (c) Conduct Probation:** The student is deemed not in good standing with the University. Students on conduct probation cannot represent the University on any athletic team other than intramurals, hold an office in any student organization registered with the University, represent the University in any extracurricular activity or official function or participate in any study abroad program. The duration of any probation period or any conditions or sanctions imposed for the violation shall be in proportion to the seriousness of the violation and imposed on an individual basis by the sanctioning authority. Individuals placed on conduct probation are subject to suspension or expulsion should they violate the conditions of probation or any University regulations or policies while on conduct probation.
- (d) Deferred Suspension:** The student will be officially suspended from the University, but the suspension will be deferred. The suspension will automatically be enforced for any subsequent violation of the Student Honor Code or Student Conduct Code, as applicable. The hearing authority will specify when issuing a deferred suspension which violations will automatically trigger the enforcement of the deferred suspension. If a student commits a violation of the Student Honor Code or Student Conduct Code, as applicable, while on deferred suspension and is found responsible, then, unless the Director of Student Conduct and Conflict Resolution determines otherwise in exceptional circumstances, the student is automatically suspended in addition to the other sanctions imposed for the subsequent violation. Suspensions can be deferred for a semester or indefinitely.
- (e) Suspension:** The student is required to leave the University for a given or indefinite period of time, the determination of which shall depend upon specified acts of the student's own volition related to mitigation of the offense committed. The student must comply with all conditions imposed prior to re-enrolling unless told otherwise by the hearing authority. Students who are suspended for more than one semester will need to apply for readmission.
- (f) Expulsion:** The student is permanently deprived of his or her opportunity to continue at the University in any status.
- (g) Restitution:** The student is required to pay for loss of or damages to University property, provided that such payment shall be limited to the actual cost of repair or replacement of such property.
- (h) Repair of Harm through Community/University Service Work Hours:** A student is required to complete a specified number of hours of service to the campus or general community.
- (i) Educational Requirements:** A student is required to complete a specified educational sanction related to the violation committed. Such educational requirements include completion of a seminar, report, paper, project, alcohol or drug consultation, counseling consultation or psychological evaluation.
- (j) Residence Hall Transfer or Removal:** A student is required to transfer residence halls or leave the residence halls for a specified or indefinite period of time.
- (k) No Contact Order:** A no contact order is a directive to refrain from any intentional contact, direct or indirect, with one or more designated persons or group(s) through any means, including personal contact, email, telephone, or third parties.

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## GRADUATE STUDENT CHECKLIST

### PLEASE READ CAREFULLY

**NOTE: The student is responsible for fulfilling all academic requirements and meeting all deadlines.**

Many of the forms you need are posted at [Entomology & Nematology, Student Services](#). Check here first before going to Room 1028.

Student Services in Room 1028 is staffed by Ruth Brumbaugh ([brumbaugh@ufl.edu](mailto:brumbaugh@ufl.edu), 352-273-3912).

<u>COMPLETION DATE</u>	<u>WHAT / WHEN / WHERE</u>
__ 1. Meet with Graduate Coordinator	Upon arrival - Student Services, Rm. 1028
__ 2. Check Schedule of Courses online	Upon arrival
__ 3. New Students: Attend Graduate School and departmental orientation sessions	You have been notified of date, time and place. Supplemental Graduate School sessions are now online.
__ 4. Complete payroll and appointment forms for assistantship, if appropriate	By appointment - Glinda Burnett <a href="mailto:gburnett@ufl.edu">gburnett@ufl.edu</a> or 273-3904
__ 5. Conditionally admitted students: check date and time for screening tests for language and writing programs	Upon arrival – Student Services, Rm. 1028
__ 6. Student ID card	Upon arrival - Reitz Union Welcome Center
__ 7. Parking permit	Upon arrival - Traffic and Parking Building
__ 8. Key to building/computer lab	Upon arrival - See Nancy Sanders, Rm. 1017
__ 9. Have picture taken for bulletin board display	Student Services, Rm. 1028 for an appointment
__ 10. Meet with major professor to determine courses to take the first semester	Upon arrival or earlier
__ 11. Register	Rm. 1028 (Late registration fee is \$100.00; Late payment fee is \$100.00)
__ 12 Think About It, Required by UF during your first semester	<a href="https://www.dso.ufl.edu/nsfp/first-year-experience/campus-clarity-think-about-it-module/">https://www.dso.ufl.edu/nsfp/first-year-experience/campus-clarity-think-about-it-module/</a>
__ 13. First committee meeting	Completed no later than end of second semester; file approved committee agreement form in Rm. 1028 (Appendix F or at <a href="#">Student Services</a> )
__ 14. Ph.D. students: request for possible transfer of up to 30 credits from M.S. degree	Must be done the first semester enrolled; official M.S. final transcript must be provided to Admissions Office
__ 15. Program of study	Meet with committee to complete no later than end of the second semester; file approved program of study in Rm. 1028 (Appendix G or at <a href="#">Student Services</a> )
__ 16. Oral and written research proposal	M.S. students by end of the second semester; Ph.D. students at least one full semester prior to qualifying exam; written proposal in PDF form must be submitted to supervisory committee and Student Services at least 10 days prior to oral presentation; see Rm. 1028, Student Services, for room reservation for oral presentation/Polycom

<u>COMPLETION DATE</u>	<u>WHAT / WHEN / WHERE</u>
__ 17. Letters of appointment (LOA) and evaluation (LOE)	Prior to the end of each semester; student and committee chair must sign and return forms: LOA to the business office, Rm. 1021; LOE to Rm. 1028 (Appendix H or at <a href="#">Student Services</a> )
__ 18. Ph.D. qualifying exam; written and oral	Should be taken the third semester and no later than fifth semester of graduate study beyond M.S.; arrange date and time with supervisory committee as early as possible; provide Student Services with title, date, and time at least 10 days prior to date using form at <a href="#">Student Services</a> ; reserve room with Student Services, Rm. 1028
__ 19. Admission to candidacy for Ph.D.	Form submitted to Graduate School upon satisfactory completion of oral qualifying exam
__ 20. Registration for Doctoral Research	<u>ENY 7980</u> or <u>NEM 7980</u> may be used only after qualifying exam has been passed
__ 21. Guide for Preparation of Thesis and Dissertation	On the web at: <a href="http://www.graduateschool.ufl.edu/files/etd-guide.pdf">http://www.graduateschool.ufl.edu/files/etd-guide.pdf</a>
__ 22. Application for Degree	Check degree application deadline; <u>must</u> apply for degree <u>each</u> term you expect to graduate
__ 23. M.S. department defense deadline	Check with Student Services for department deadline. Always 2 weeks before the Graduate School deadline for M.S. final exam.
__ 24. First submission of thesis or dissertation to the Graduate School	See “DEADLINES” for <u>each</u> submission of your thesis or dissertation; <a href="http://graduateschool.ufl.edu/graduation/deadlines">http://graduateschool.ufl.edu/graduation/deadlines</a>
__ 25. Dissertation defense and M.S. final exam	Arrange date with <u>all</u> committee members as early as possible; give the title, date and time to Student Service and have Student Services reserve room at least 10 days prior to defense
__ 26. Exit seminar: <u>Required</u> of all M.S. with thesis and PhD	Given the term of graduation one hour <b>prior</b> to final exam; reserve room with Student Services, Rm. 1028
__ 27. M.S. non-thesis oral and written exams	Contact Student Services for room assignment and preparation of written announcement; clear date with supervisory committee
__ 28. Final copy of thesis or dissertation	Provide Graduate Coordinator’s office with a final copy of thesis or dissertation prior to graduation
__ 29. Exit interview with department chairperson and exit survey	<a href="mailto:bseigfried1@ufl.edu">bseigfried1@ufl.edu</a> , 273-3905; form at <a href="#">Student Services</a>
__ 30. *Return all items checked out of stockroom	As soon as possible, to stockroom, Rm. 2326
__ 31. *Return all keys issued by the department	As soon as possible, to Nancy Sanders, Rm. 1017

**\*Return of Stockroom items and keys will be verified before departmental certification of degree**

## **ADMISSION**

The Entomology and Nematology Department encourages inquiries and applications from all qualified students. In order to access information about our department including the faculty, student body and courses taught, prospective students are encouraged to visit the department's web site at:

<http://entnemdept.ifas.ufl.edu/>

Prospective students must apply online, by visiting the University of Florida web site where information is available to guide the student through the application process. Prospective students are encouraged to correspond by email with the Graduate Coordinator ([gradc@ifas.ufl.edu](mailto:gradc@ifas.ufl.edu)) when they apply online. The \$30.00 application fee and residency form must be submitted before the department may review the application.

<http://www.admissions.ufl.edu/applygraduate.html>

To be admitted to the Graduate School, the student must have earned a bachelor's degree from an accredited college or university and have obtained at least a 3.0 GPA. The Entomology and Nematology Department does not require an undergraduate major in entomology, nematology, or biology as a condition of admission; however, if the bachelor's degree is in a non-science field, it should be supplemented with the following coursework:

- one year of general biology (2 semesters)
- at least one semester of general chemistry
- algebra and trigonometry
- at least one semester of physics (recommended)
- introductory statistics (recommended)

Applicants must provide the **Office of Admissions** with official transcripts of all previous college and/or university studies and official GRE and TOEFL or IELTS (if applicable) scores submitted directly from the educational testing service (University Code: 5812, Dept. Code: 0209). If the transcripts and diploma or degree certificate are not in English, certified copies of English translations must be included. Send documents to the Office of Admissions (201 Criser Hall, P.O. Box 114000, University of Florida, Gainesville, FL 32611-4000) -- **not to the Graduate School.**

Our department requires the following documents, which should be sent to the Graduate Coordinator, or included in your online application: (a) a Statement of Purpose written by the student, which should indicate previous training and experience, interests, and educational and career goals as an entomologist or nematologist; (b) three letters of recommendation from persons in a position to evaluate the student's academic potential; (c) copies of transcripts with degree statement (photocopies are satisfactory); and (d) a copy of your GRE general test score.

Also, we require that a prospective student find a faculty member who will be his/her major advisor and provide a research opportunity, which may include an assistantship. The Graduate Coordinator can help the prospective student find a faculty member. We do not review application documents for graduate study until students have a faculty advisor and until the source of funding is known. The faculty member must provide a letter to the Graduate Coordinator's Office stating that she/he will supervise the student and whether she/he also will provide funding.

Our Graduate Committee, chaired by the Graduate Coordinator, makes the admission decision, not the University. If a student is denied admission by our Graduate Committee and wishes to appeal the decision, the Department Chairperson and the Graduate Coordinator serve as an appeals committee. Their decision is final. For various reasons we may not be able to accept everyone who meets the minimum requirements. Alternatively, we may accept a prospective student who does not meet all of the minimum requirements if exceptional strength is shown in a particular area. For example, if the GRE score is below the minimum, and if strength is demonstrated in other areas of the application, we have the option, subject to approval by the Graduate School, of accepting a student on a conditional basis. Conditional admission usually requires that the student make no grade less than a "B" on each course in the first semester of registration, with no I, U or W grades.

Successful students (both domestic and international) usually have scores on the GRE exam of at least 297 (combined verbal and quantitative parts of the GRE) although admission decisions are not based solely on GRE scores. The University of Florida requires a minimum score of 140 on the verbal test. Also the Graduate School requires a GPA of at least 3.0 (on a 4.0 scale) (for domestic students) for the last two years of undergraduate study.

For international students whose language of academic instruction is not English, the Graduate School requires a minimum score of 550 on the paper-based TOEFL, 213 on the computer-based TOEFL, 80 on the internet-based TOEFL, or 6.0 on the IELTS. Additionally, international students must certify financial responsibility as stipulated in the documents obtained from the University of Florida International Center web site. Financial support may come from the student's government, a granting agency, personal funds, or from a faculty member. The Certification of Financial Responsibility form must be submitted to the International Center before an I-20 can be issued.

### **Direct Admission to the Ph.D. Program (without M.S. degree)**

Only the most academically talented students will be considered for acceptance into the Ph.D. program without first completing the M.S. degree. We believe that the M.S. degree is very good training for research and should not be skipped except in exceptional circumstances. The following requirements will apply:

- 1) Undergraduate GPA at least 3.5
- 2) Combined GRE Verbal and Quantitative scores of at least 314
- 3) Previous biological sciences research experience (e.g., undergraduate thesis, published paper[s], presentation or poster at scientific meeting)
- 4) Clear and focused statement of intent (professional goals and research area)
- 5) Strong letters of recommendation
- 6) Strong support from Department of Entomology and Nematology dissertation advisor for student to go straight into the Ph.D. program

Exceptions for students not meeting all of the above criteria would require a unanimous vote of the Graduate Committee.

## **FINANCIAL ASSISTANCE**

### **DOMESTIC STUDENTS**

#### **Gahan Assistantships**

The Gahan assistantships were established by the late Dr. James B. Gahan, USDA Entomologist, and his wife, Mrs. Margaret H. Gahan, to be awarded to outstanding M.S. or Ph.D. students in entomology according to personal goals, interests, and academic achievements. Students awarded these assistantships are given a stipend, tuition waivers and health insurance. Students awarded a Gahan assistantship will be assigned teaching duties by the Graduate Coordinator.

#### **Steinmetz Assistantships**

The Steinmetz assistantships were established by Mr. C.P. and Mrs. Lynn Steinmetz to be awarded to outstanding M.S. or Ph.D. students. Students awarded these assistantships are given a stipend, tuition waivers, and health insurance, and may be assigned teaching duties during part of their program.

#### **Departmental Assistantships**

The department has a few assistantships that can be awarded to outstanding M.S. or Ph.D. students. Current departmental assistantships are: 1) fiscal office, 2) teaching assistant for distance courses, and 3) entomology outreach and informal education. Students awarded these assistantships are given a stipend, tuition waivers, and health insurance. Teaching duties are assigned by the Graduate Coordinator. See Table 1 for the maximum number of semesters that the Gahan, Steinmetz, and departmental assistantships may be held.

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Table 1. Number of Semesters that Gahan, Steinmetz, and Departmental Assistantships may be held

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<u>Degree Sought</u>	<u>No. of Semesters*</u>
Masters (M.S. with thesis or M.S. non-thesis)	6
Ph.D. (M.S. earned elsewhere or not sought)	9
M.S. and Ph.D. at the University of Florida	15

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\* Summer semester “C” counts as a semester

### **Grant-Funded Assistantships**

Faculty members often award assistantships from grants. Students awarded these assistantships must perform work relevant to the grant stipulations. In many cases, the research conducted, or at least a part of it, may be used for the thesis or dissertation. Students on these assistantships are provided a stipend, tuition waivers, and health insurance. The faculty members holding the grants determine the length of time these assistantships may be held.

### **Work Requirements for Assistantship Holders**

Most assistantships are 1/4, 1/3 or 1/2 time. Recipients of 1/4 time assistantships are obligated to work 10 hours per week at whatever assignments their advisors designate. Recipients of 1/3 time assistantships are obligated to work 13 hours per week and recipients of 1/2 time assistantships are obligated to work 20 hours a week at whatever assignments their advisors designate. Students supported from a faculty research grant usually must perform work according to the grant stipulations. For Gahan, Steinmetz, and departmental assistantships, the Graduate Coordinator determines the work to be done, which usually is as a laboratory instructor.

### **Stipends and Benefits**

Stipends for Gahan, Steinmetz, and departmental assistantships are determined by the Graduate Coordinator. Stipends for assistantships funded from grants are determined by faculty members who hold the grants. Students on assistantships are provided a tuition waiver and individual health insurance

<http://hr.ufl.edu/benefits/health-insurance/gatorgradcare/>

### **Cancellation of Assistantships**

A Letter of Appointment, signed by the student and the advisor, is issued to the student each semester and becomes a contract. Neither the department nor a faculty member may cancel an assistantship prior to the end of the contract without cause. Cause is usually in the form of unsatisfactory progress in the degree program documented in the semester graduate student evaluation form (Appendix H). The student may cancel the contract prior to the end of the contract (a semester), but then becomes liable for tuition that was waived while on the assistantship. Until those financial obligations are settled, the student cannot register, cannot get a transcript, and cannot graduate.

### **Outside Employment for Students on Assistantships**

The department discourages students on assistantships from holding outside employment. Sometimes we recognize that additional employment may be necessary for financial reasons. If this becomes necessary, please obtain permission from your advisor before seeking other employment.

### **Fellowships**

There is one university-wide fellowship (UF Graduate School Fellowship) awarded on a highly competitive basis for students seeking a Ph.D. The Graduate Committee selects outstanding students for these fellowships. Applications must be completed by January 15 for the following Fall semester. Students awarded GS Fellowships must have been accepted by our department, but not yet enrolled. Fellowship-holders are considered to be 1/3-time graduate assistants and must register each semester for the number of credits that are required for 1/3-time graduate assistants (see Table 2).

### **Scholarships**

A number of scholarships, usually ranging from \$500 to \$2000, are awarded from endowment funds provided by families, clubs, professional societies, etc. Most of these, such as those awarded by the Agricultural Women's Club, are awarded on the basis of scholarship and service to the department and community. Students must apply for these scholarships, and usually a letter from the advisor must be included in the application packet. More information is available on the College of Agriculture and Life Sciences web site

<http://www.cals.ufl.edu/students/graduate-travel-awards.php>

Scholarships provided by the Entomology & Nematology Department include:

- Nan-Yao Su scholarship – awarded in fall semesters
- Mulrennan award – awarded in January for best dissertation and thesis
- Pauline Lawrence award in physiology – awarded in spring semesters for students conducting research in biochemistry, physiology, molecular biology or toxicology

## **Sources of Travel Funds for Entomology & Nematology Graduate Students**

Money to help defray the costs of attending a scientific meeting is offered by various sources. Some sources require a match of funds from your advisor or the department. Most sources require that the student be presenting their research at the conference. Always be sure to submit to the Entomology & Nematology Business Office the Travel Authorization form at least one month prior to travel and the Travel Reimbursement form as soon as possible after return from the meeting.

1. Entomology & Nematology Department
2. Entomology & Nematology Student Organization (ENSO)
3. College of Agriculture and Life Sciences
4. UF Research and Graduate Programs
5. UF Graduate Student Council
6. Scientific societies

- **Entomology & Nematology Department**

The department will match CALS or UF Research and Graduate Programs travel awards with required departmental matching, up to \$250 per year per student, if funds allow. Students should approach their advisors first for matching funds and then the department. At the time of the travel authorization request, students should indicate that they are receiving funding from a source that requires a match. Linda Pedersen will take care of the details once the travel reimbursement form has been turned in after the travel has been completed.

- **ENSO Student Travel Grant**

The Entomology and Nematology Student Organization (ENSO) Student Travel Grants are provided on a competitive basis to students. These reimbursement-based grants will be used to cover travel-related expenses for presenting research or participating in career development activities at a professional conference or meeting. Reimbursement will cover conference registration, transportation, and lodging, Reimbursement will not cover food, entertainment, or purchases made on department P-cards. One grant will be awarded each semester to qualifying ENSO members. The maximum grant is \$250.

All applicants must be a graduate student in the University of Florida Entomology and Nematology Department, and therefore a member of ENSO. The ENSO faculty advisors and officers will review all applications and select grantees. If an ENSO officer applies for the ENSO Student Travel Grant, he or she will not be eligible to review applications or select grantees. The same applies to ENSO faculty advisors that have a student(s) who apply for the ENSO Student Travel Grant. The following priorities will be considered when selecting grantees:

1. Students who are giving their first oral or poster presentation.
2. Students who are presenting just prior to graduation.
3. Students who are traveling internationally or to domestic locations greater than 500 miles away (as opposed to regional or national meetings held in Florida).
4. Students who are receiving less support.

- **College of Agriculture and Life Sciences Travel Funds**

See website for application details and deadlines <http://cals.ufl.edu/students/graduate-travel-awards.php>

1. IFAS/CALS Graduate Student Travel Grant

The IFAS/CALS Graduate Student Travel Grant Program provides matching funds up to \$200 to each graduate student applicant who is presenting a paper or poster on their original research at a regional, national, or international scientific meeting (one award per fiscal year). This travel grant must be matched 1:1 by funds provided through the student's department/program or advisor. The grants are reimbursed directly to the department, not the graduate student. **Check the application deadlines carefully.**

2. James Davidson Graduate Travel Scholarship

The purpose of these scholarships is to provide funding to help defray travel expenses for graduate students presenting a paper or poster at a national or international professional meeting or conference. These scholarships are named after Dr. James M. Davidson, former Vice President for Agriculture and Natural Resources, Institute of Food and Agricultural Sciences, University of Florida, who established the endowment to fund these scholarships. Applications are due in the Graduate Coordinator's office one week before the college deadline so that requests can be ranked before submission to the college.

- **UF Research and Graduate Programs Travel Grant**

Travel to conferences, symposia, and special research opportunities are essential for the professional development of advanced research students. The University also benefits by being represented at such events. The Office of Research and Graduate Programs (RGP) has therefore established a program to supplement student travel when other funding sources are insufficient. RGP guidelines for travel funding cap awards at \$400 per trip and require 1:1 matching funds from the department and/or college. These funds are primarily for assistance with the cost of travel, particularly airfare. These grants are one-time awards to Graduate Students. RGP cannot provide any retroactive reimbursements. Priority is given to PhD students who have passed their qualifying exam.

PDF application <http://cals.ufl.edu/docs/pdf/students/travel.pdf>

- **Graduate Student Council**

The Graduate Student Council will award up to \$350 with no requirement for a match from the department or your advisor. See web site for details and deadlines.

<http://ufgsc.org/grant-overview--application.html>

- **Florida Entomological Society**

The Florida Entomological Society (FES) offers travel grants to attend the FES annual meeting each year. Occasionally there are funds left over to fund travel to the Entomological Society of America meeting. No match is required but students must be members of the Florida Entomological Society and will receive notice of availability of funds from the chair of the FES Student Activities Committee.

### **Employment**

Some domestic graduate students support themselves by working part time or even full time, usually as technicians, in the many laboratories in Gainesville. If the funds paid to these student employees can be converted into assistantships by the employing agency, the students are given tuition waivers.

### **Grants**

Some of our graduate students fund their studies, at least in part, from grants that they obtain by writing grant proposals and having them funded. We encourage students to write grant proposals. Contact your research advisor for suggestions on granting agencies and take advantage of grant writing workshops and courses (e.g., ALS 6046, Grant Writing).

### **Office of Graduate Minority Programs**

The Office of Graduate Minority Programs administers several programs for under-represented students to increase diversity in the graduate program. The OGMP may be reached at 115 Grinter Hall, telephone 352-392-6444, or 800-753-9798; email address: [ogmp@ufl.edu](mailto:ogmp@ufl.edu) and on the web at <http://gradschool.ufl.edu/diversity/introduction.html>

- **The Florida Board of Education Summer Fellowship Program.** This program is held in Summer B semester and is designed for under-represented minority graduate students. Participants receive a stipend of \$1,500 and tuition for 4 credit hours. The student pays student activity fees. The student must enroll as a full-time graduate student the following academic year. Students must be U.S. citizens or permanent residents.
- **The FAMU Feeder Program.** This program is designed to increase the number of Florida A&M University graduate students. The University of Florida provides five fellowships annually and all graduate programs at UF may compete for them. The application deadline is February 15th each year. Students must be U.S. citizens or permanent residents.

- **McKnight Doctoral Fellowships.** These fellowships are awarded by the Florida Education Fund to African-American and Hispanic students newly admitted into selected doctoral programs. The stipend is for \$13,000 and tuition and fees are paid for a period up to three years (an additional two years of support are paid by the department). The application deadline is 15 January each year, and application must be made to the Florida Education Fund, 201 East Kennedy Blvd., Suite 1525, Tampa, FL 33602 or online at <http://www.fefonline.org/mdfapply/>. The telephone number is 813-272-2772.

### **Florida Residency**

The University of Florida **requires** all eligible non-Florida residents to apply for Florida residency status during their first year (international students can never obtain Florida residency). Instructions for application for Florida residency are found at the Registrar's web site - <http://www.admissions.ufl.edu/residency/definitions.html>. If you are a domestic student and are not eligible to apply for residency, then you must contact the Graduate Coordinator's Office for further guidance. Residency for tuition purposes is, unfortunately, not clearly defined, but here are some things that will increase your chances of being classified as in-state for tuition purposes (all of this must be done 12 months prior to applying for residency, so this needs to be done immediately upon arrival):

- Obtain a Florida driver's license
- If you own a car, register the car in Florida
- Register to vote in Florida
- Complete the declaration to domicile form – must be done in person at the Clerk of Courts

When you have accumulated the required documents to request residency reclassification, use this form <http://www.admissions.ufl.edu/pdf/residencyreclass.pdf> (also on the [Student Services](#) page)

### **INTERNATIONAL STUDENTS**

International students are funded by their institutions, governments, organizations such as US-AID (United States Agency for International Development), OAS (Organization of American States), or IAEA (International Atomic Energy Agency), or by faculty from grants.

International students on a faculty-sponsored assistantship will be provided a stipend, a tuition waiver and individual health insurance (<http://www.hr.ufl.edu/benefits/gatorgradcare/>). They must demonstrate financial resources of \$47,585 for the first year to be permitted to come to the United States as a student. An additional \$6,000 is required for your spouse and \$2,500 for each child. (These dollar amounts were current for 2014-2015 academic year but most likely will be increased in future years).

## DEGREE REQUIREMENTS

**NOTE: It is the responsibility of the student to observe all regulations and procedures required by the program he/she is pursuing. The Graduate Catalog is the ultimate authority on regulations and procedures (<http://graduateschool.ufl.edu/academics/graduate-catalog>). Ignorance of a rule does not constitute a basis for waiving that rule.**

### Completion of Degree Requirements

All students are expected to complete degree requirements and graduate within a reasonable time. An M.S. with thesis or M.S. non-thesis can be earned in two years (6 semesters), and a Ph.D. degree in three years (9 semesters) after the Master's degree. However, since research is not predictable, it often takes longer to complete the M.S. and Ph.D. degree requirements. See Table 1 for the number of semesters that a student may hold a Gahan, Steinmetz, or departmental assistantship.

### Registration

Students enrolled at the University of Florida must pre-register for the next semester during the regular registration period. You must be registered by 5:00 PM the day before classes, or, if classes start on a Monday, you must be registered by 5:00 the previous Friday. If you are not registered by this time, you will incur a late registration fee of \$100.00. If you do not pay your fees on time, the charge for late payment of fees is \$100.00. To avoid these charges, register on time and pay fees on time. You may register through ISIS (Integrated Student Information System), or through the Departmental Student Services Office, Room 1028.

Table 2. Minimum Number of Credits for Full-Time Registration

	Fall and Spring	Summer			
		A	&	B	or C
Full-time graduate students not on assistantship	12	4		4	8
Assistants on .01-.24	12	4		4	8
Assistants and fellows on .25-.74	9	3		3	6
Assistants on .75-.99	6	2		2	4
Full-time assistants:					
1.00 Fall and Spring	3				
1.00 Summer A		2		or	2
1.00 Summer B		2		or	2
1.00 Summer C		1	&	1	or 2
	3				
Part-time graduate students not on assistantship	3	1	&	1	or 2
Graduate students not on assistantship during final term		1	&	1	or 2

**Note:** Registration requirements listed here do not apply to eligibility for financial aid programs administered by the Office for Student Financial Affairs. Check with Student Financial Affairs in S-107 Criser Hall for financial aid registration requirements (<http://www.sfa.ufl.edu/>).

Students who do not register properly (according to Table 2) for each semester that they hold graduate assistantships will not be permitted to remain on assistantships. For students on assistantships for the full summer, minimum registration must total that specified for C term. Registration may be in any combination of A, B, or C terms. However, courses must be distributed so that the student is registered during each term that he/she is on appointment. Students on assistantships registering for any summer term must register before the beginning of A/C term.

### **Drop/Add**

During the drop/add period the student may drop and add courses with no penalty but must have prior approval of the advisor. After the regular drop/add period, the student will be held fee liable for any dropped course. **To be clear, you will be charged tuition and fees for the course(s) that you drop after the drop/add period. Reducing the number of credits within a section is considered by the Registrar's office to be the same thing as dropping a course (as the old section must be "dropped" and the new section "added"). It is the student's responsibility to make sure that their registration is correct before the end of the drop/add period.** Drop/Add forms must be initiated by the Graduate Coordinator's Office. If a student on assistantship drops to less than the minimum number of required credits per semester, he/she will lose the assistantship, and, in addition, must reimburse the University for fees waived and may be liable for the stipend paid that semester.

### **Satisfactory/Unsatisfactory (S/U) Grading**

In our department, grades of S and U are the only grades awarded for 6910 (Supervised Research), 6932 (Special Topics), 6940 (Supervised Teaching), 6971 (Master's Research), 7979 (Advanced Research), and 7980 (Doctoral Research).

### **Program of Study**

The Program of Study (Appendix G) lists the courses to be taken and the semesters in which the student plans to take them. To help the Supervisory Committee plan for completing the Program of Study, please provide each committee member a photocopy of B.S. (and M.S.) transcripts. Also, coordinate a time when you and all committee members can meet together to complete a mutually agreeable schedule of courses to fit your particular needs.

The student may take courses not listed on the Program of Study with their supervisor's permission. If, for any reason, the student fails to take a course listed on the Program of Study, his/her advisor must petition the Graduate Coordinator to have the course(s) deleted from the Program. Otherwise the student will be unable to graduate for failure to complete the Program of Study.

### **Letter of Appointment**

Each Gainesville student on an assistantship or fellowship, must have a Letter of Appointment each semester. This form, along with the Evaluation Form (Appendix H), is sent to the student's advisor before the end of each semester, and must be signed by the student and the advisor and returned to the business office.

## **Evaluation**

Each student in this department, regardless of their physical location (except true distance students), is required to have an evaluation of progress at the end of each semester (Appendix H). The evaluation must be made by the student's advisor (but could include input from the entire Supervisory Committee) and should name specific achievements for the past semester and goals for the coming semester. The evaluation form must be signed by the student and the advisor and returned to the Graduate Coordinator's office.

## **MINIMUM COURSE REQUIREMENTS**

### **Entomology Students**

**Master's Degree Students** shall take, or shall have taken, the following courses:

- A course in insect physiology
- A course in insect classification
- A graduate course in ecology (suggest Insect Ecology and lab)
- Entomology Seminar (ENY6934) (must register for at least one semester at UF). Must be graded.
- A course in biochemistry or molecular biology (see list below)
- A beginning course in statistics
- A pest management course (see list below)\*

**Doctoral Degree Students** shall take, or shall have taken, the following courses:

- A graduate course in insect physiology
- A graduate course in insect classification
- A graduate course in ecology (suggest Insect Ecology and lab)
- Entomology Seminar (ENY6934) (must register for at least two semesters at UF). Must be graded.
- A course in biochemistry or molecular biology (see list below)
- A 4000 level or higher course in statistics
- A pest management course (see list below)\*

### **\*Pest Management Courses - must take at least one**

- ENY 5226 Principles of Urban Pest Management
- ENY 5236 Insect/Pest/Vector Management
- ENY 5241 Biological Control
- ENY 5245 Agricultural Acarology
- ENY 5332 Urban Vertebrate Pest Management
- ENY 5405 Insect Vectors of Plant Pathogens
- ENY 5616 Turf and Ornamental Entomology
- ENY 6665 and ENY 6665L Advanced Medical and Veterinary Entomology
- ENY 6821 Insect Microbiology
- NEM 5707 Plant Nematology
- PMA 5205 Citrus Pest Management
- PMA 6228 Field Techniques in Integrated Pest Management

## Nematology Students

### **Master's Degree Students**

- A beginning course in nematology
- Nematode Morphology and Anatomy
- Nematode Taxonomy and Systematics
- A graduate course in ecology
- Nematology Seminar (must register for at least one semester at UF)
- A course in biochemistry or molecular biology (see list below)
- A beginning course in statistics
- A pest management course (see list below)\*

### **Doctoral Students**

- A beginning course in nematology
- Nematode Morphology and Anatomy
- Nematode Taxonomy and Systematics
- A graduate course in ecology
- Nematode Identification
- Nematology Seminar (must register for at least two semesters at UF)
- A course in biochemistry or molecular biology (see list below)
- A 4000 level or higher course in statistics (see Appendix D)
- A pest management course (see list below)\*

### **\*Pest Management Courses - must take at least one**

- ENY 5226 Principles of Urban Pest Management
- ENY 5236 Insect/Pest/Vector Management
- ENY 5241 Biological Control
- ENY 5245 Agricultural Acarology
- ENY 5332 Urban Vertebrate Pest Management
- ENY 5405 Insect Vectors of Plant Pathogens
- ENY 5616 Turf and Ornamental Entomology
- ENY 6665 and ENY 6665L Advanced Medical and Veterinary Entomology
- ENY 6821 Insect Microbiology
- NEM 5707 Plant Nematology
- PMA 5205 Citrus Pest Management
- PMA 6228 Field Techniques in Integrated Pest Management

## **Some Courses at the University of Florida which Satisfy Basic Requirements**

### **For biochemistry**

BCH 5045 Graduate Survey of Biochemistry (Agriculture General)

### **For molecular biology**

ENY 5820 Insect Molecular Genetics

ENY 6822 Molecular Biology Techniques with Invertebrates and Their Pathogens (Maruniak)

### **For statistics**

STA 6166 Statistical Methods in Research I (Statistics Department)

ALS 5932 Introduction to Applied Statistics

If students are not confident of their basic statistics, they may take:

- 1) STA 2023 Introduction to Statistics (Statistics Department) - beginning course in statistics that is required before taking STA 6166 or ALS 5932 (STA 2023 will not count towards the total credits required for an MS or PhD degree). OR
- 2) An online, free course in Statistical Reasoning offered by Carnegie Mellon University (<http://oli.cmu.edu/courses/free-open/statistics-course-details/>).

## **Master of Science with Thesis**

### **Role of the Committee Chair/Faculty Supervisor**

The chair of the graduate student's committee guides the student in their choice of elective classes, suggests members for their supervisory committee, encourages the student to meet all published departmental and university deadlines, completes an evaluation of the student's academic progress every semester, guides the student's research planning process, and oversees and facilitates completion of the research. The supervisor reviews the research proposal and thesis extensively before allowing the student to send them out for review by committee members. The supervisor chairs committee meetings and the final exam/defense. Given the department-specific knowledge required to effectively supervise graduate students in Entomology & Nematology, courtesy faculty members with Graduate Faculty status in Entomology & Nematology may serve as chairs but a salaried Entomology & Nematology faculty member must serve as co-chair. Courtesy faculty members are those employed by agencies other than the University of Florida.

### **Supervisory Committee**

The Supervisory Committee should be appointed as soon as possible but no later than the end of the second semester of study. If the Supervisory Committee is not appointed before the end of the second semester of study, the Graduate Coordinator will place a hold on the student's record preventing further registration. The department requires that the Supervisory Committee be comprised of at least two Graduate Faculty members and at least one member must be salaried Entomology & Nematology faculty. If the student declares a minor (not required), one

of the committee members must be from the minor department. The Supervisory Committee chair and one member must have been appointed to the Graduate Faculty. Special member status may be granted to PhD scientists who are not employed by the University of Florida but can contribute valuable expertise to the student's committee. A Special member may NOT serve as the committee chair and cannot be counted as one of the two required committee members.

### **Research Proposal**

Students are required to prepare a written research proposal to include a review of the literature, hypotheses, and a detailed description of their planned experimental design and statistical analysis and to give an oral presentation of it (see Appendix E and J for outline of expected format and evaluation form). The written proposal and announcement of the oral presentation must be emailed to Ruth Brumbaugh at least 10 days prior to the oral presentation so that she can distribute these to all departmental graduate faculty. The research proposal must be presented by the end of the second semester. The proposed date for the oral presentation should be cleared with the student's supervisory committee early in the "deadline semester" so they can all attend and so the student will have a target date to aim for. The student's advisor should invite several specific faculty members external to the student's committee but in the same general subject area (Behavior/Ecology/ Systematics, Biological Control/IPM, Med./Vet./Urban, Nematology, or Physiology/Biochemistry/Genetics) to review the written proposal and attend the oral presentation. All committee members will complete the Research Proposal Assessment (Appendix J) and return it to the Student Services office.

### **Program of Study**

The student must meet with his/her major professor to complete a preliminary Program of Study during the first semester. As soon as the Advisory Committee is formed, and by the end of the second semester, the committee should approve the Program of Study and the final Program of Study with signatures of committee members should be filed in the Graduate Coordinator's office at that time.

### **Number of Credits Required**

A minimum of 30 credit hours is required. Total registration for 6971 (Research for Master's Thesis) is unlimited, but only 6 credits will count toward the 30 required. The student must register for a minimum of 3 credits of 6971 in the term of graduation (2 if graduating in the summer semester), regardless of the number of previous credits taken. Students on assistantships during the term of graduation must register for at least 9 credits for the fall or spring semester and 6 credits for the summer semester. Students on fellowships (other than the UF Graduate School Fellowships which are treated like assistantships for registration purposes) must register for 12 credits for the fall or spring semester and 8 credits for the summer semester.

Twelve of the 30 credits must be courses in the major, numbered 5000 or above, and letter-graded (no S/U). A minimum GPA of 3.0 is required in the major, the minor (if chosen), and overall, in order to graduate. If a minor is chosen, the minor representative will determine the requirement for his/her department. For work outside the major, six credits in courses numbered 3000 and 4000 may count for graduate credit provided they are listed on the Program of Study. Unless otherwise approved in writing by the Graduate School, minor work must be in a department other than the major.

### **Transfer of Credit**

A maximum of 9 credit hours of graduate courses with grades of A, A-, B+, or B, may be transferred into an M.S. program from other institutions, if approved by the Graduate School. A maximum of 15 credit hours of graduate courses with grades of A, A-, B+, or B, taken as post-baccalaureate or non-degree seeking student at the University of Florida may be transferred to the M.S. program. Petitions for transfer of credit must be made during the first semester of enrollment in the graduate program.

### **Electronic Submission of the Thesis**

All students must submit their theses electronically. The thesis must be approved by all members of the Supervisory Committee, the Associate Dean, CALS, and the Dean of the Graduate School. Information on format of the thesis may be obtained from the web at <http://helpdesk.ufl.edu/application-support-center/>. The Entomology & Nematology Department requires a paper copy of the complete thesis that must be submitted to the Office of the Graduate Coordinator for binding and deposit in the departmental library. Usually, the Supervisory Committee chairperson will want a paper copy of the dissertation, as may other members of the committee. Usually the student pays for these copies, although the chairperson may offer to do so, at their discretion. The Entomology & Nematology Department will pay for the copy that will be kept in our departmental library. For each additional copy that a student would like, he must give one paper copy and a check (made out to the University of Florida) for \$15 to Ruth Brumbaugh.

### **Exit Seminar and Final Examination**

The student must give an exit seminar and pass a final examination administered by the supervisory committee. Students must give their committee members a supervisor-approved version of their thesis at least two weeks before the exam date. The examination will be oral, and cannot be taken earlier than the term before the degree is to be awarded. Before taking the final examination, the student's thesis should be in final form. The Final Exam form, Publishing Agreement form, and Official ETD Signature page must be prepared by the Graduate Coordinator's office. The forms must be requested 10 working days in advance of the Exit seminar and Defense date. The exit seminar is usually given immediately before the final examination. All committee members must evaluate the student's performance in the final exam using the M.S. Final Exam Assessment (Appendix J). The written thesis and its oral defense will be evaluated by all members of the committee using the Written Thesis/Dissertation and Oral Defense assessment (Appendix J). Completed assessments are to be turned in to the Student Services office.

### **Publication of the Thesis**

If a student is not making good progress toward publishing the thesis one year after graduation, the student's major advisor has the option of publishing it. The student will be the first author. "Making good progress" will be defined as at least a first draft of one or more manuscripts having been received by the advisor.

### **Exit Interview with Department Chairperson**

All students should try to meet with the Department Chairperson to discuss the quality of her/his experience as a student in the Department and inform the chair of their plans for the immediate future regarding employment (Academic or Industry) or continued education. An Exit Interview PDF form will be emailed to the student during their anticipated graduation semester to be filled out and returned to the Graduate Coordinator's office, copied to the Department Chairperson. Students at RECs or other distant sites may call (352-273-3905) or email the Chairperson ([bseigfried1@ufl.edu](mailto:bseigfried1@ufl.edu)) if they can't meet with him in person.

### **Master of Science Non-Thesis**

#### **Supervisory Committee**

The Supervisory Committee should be appointed as soon as possible but no later than the end of the second semester of study. If the Supervisory Committee is not appointed before the end of the second semester of study, the Graduate Coordinator will place a hold on the student's record preventing further registration. The department requires that the Supervisory Committee be comprised of at least two Graduate Faculty members and at least one member must be salaried Entomology & Nematology faculty. If the student declares a minor (not required), one of the committee members must be from the minor department. The Supervisory Committee chair and one member must have been appointed to the Graduate Faculty. Special member status may be granted to PhD scientists who are not employed by the University of Florida but can contribute valuable expertise to the student's committee. A Special member may not serve as the committee chair and cannot be counted as one of the two required committee members.

#### **Program of Study**

The student must meet with his/her major professor to complete a preliminary Program of Study during the first semester. As soon as the Advisory Committee is formed, and by the end of the second semester, the committee should approve the Program of Study and the final Program of Study with signatures of committee members should be filed in the Graduate Coordinator's office at that time.

#### **Number of Credits Required**

Minimum requirements are 30 credit hours. Six of these 30 credits may be S/U graded. At least 15 of the 30 credits must be graded courses in the major at the 5000 level. No grade below a C will count towards a student's degree. One or two minors of at least 6 credits each may be chosen [minor(s) not required]. Six credits outside the major may be courses numbered 3000 and 4000. A minimum GPA of 3.0 is required in the major, the minor, and to graduate.

### **Change from a Thesis to Non-Thesis Option**

Students who wish to change from a thesis to a non-thesis option must obtain the permission of the Supervisory Committee and Graduate Coordinator. The request to change to the non-thesis option must be made to the Graduate Coordinator before the midpoint of the anticipated semester of graduation. The student must meet all requirements of the non-thesis option. At the discretion of the Supervisory Committee, and with the approval of the Graduate School, 3 retroactive semester credits of 6971 (Master's Research) may be converted to 6905 (Special Problems) or 6934 (Selected Studies) with a letter grade of B or above. To do so, a petition written by the Chairperson of the Supervisory Committee must certify that the 6971 work was productive in and of itself and warrants credit as a Special Problem or Selected Study. The petition must be addressed to the Dean of the Graduate School and approved by the Graduate Coordinator and the Associate Dean, CALS. The petition is sent through the Graduate Coordinator's office.

### **Final Examination**

The final examination, given during the final semester, must be both written and oral with written questions from all Supervisory Committee members. All committee members must be present with the candidate for the oral examination (electronic presence by Polycom or Skype is acceptable for a committee member, however the student and the chair must be in the same room). All committee members must evaluate the student's performance in the final exam using the M.S. Final Exam Assessment (Appendix J). Assessments are turned into the Student Services office.

### **Exit Interview with Department Chairperson**

All students should try to meet with the Department Chairperson to discuss the quality of her/his experience as a student in the Department and inform the chair of their plans for the immediate future regarding employment (Academic or Industry) or continued education. An Exit Interview PDF form will be emailed to the student during their anticipated graduation semester to be filled out and returned to the Graduate Coordinator's office, copied to the Department Chairperson. Students at RECs or other distant sites may call (352-273-3905) or email the Chairperson ([bseigfried1@ufl.edu](mailto:bseigfried1@ufl.edu)) if they can't meet with him in person.

### **Distance Master of Science Non-Thesis**

Students completing the M.S. non-thesis by distance are held to the same requirements as campus-based non-thesis students except for one. Students may be allowed to waive the seminar course requirement if arrangements cannot be made to participate in campus seminars by Polycom or attend seminars organized at University of Florida Research and Education Centers. A separate graduate handbook is available for distance students.

## **Graduate Certificates**

Graduate students may complete the coursework necessary for a 15-credit hour certificate to add to the credentials documented on their University of Florida transcript. Graduate certificates, essentially concentrations, are available in urban pest management, landscape pest management, and medical entomology. Students should apply for admission to a certificate program at <http://www.admissions.ufl.edu/start.html>. Choose Certificate and “I am a currently enrolled UF student” if you wish to add a certificate to your current graduate program. A pre-completion final exam is required to assess achievement of the student learning objectives for each certificate. The final exam will be administered in the semester in which the last course in the certificate is taken and can be arranged with Ruth Brumbaugh.

### Courses

#### **Certificate in Urban Pest Management** (choose 15 credits from this list of courses)

##### Required

ENY 5006 Graduate Survey of Entomology (2)  
ENY 5006L Graduate Survey of Entomology Laboratory (1)  
ENY 5223C Biology and Identification of Urban Pests (3)  
ENY 5226C Principles of Urban Pest Management (3)

##### Elective

ENY 5332 Graduate Survey of Urban Vertebrate Pest Management (2)  
ENY 6166 Insect Classification (3)  
ENY 5572 Advanced Apiculture (3)  
ENY 6665 Advanced Medical and Veterinary Entomology (3)  
ENY 6665L Advanced Medical and Veterinary Entomology Laboratory (1)  
ENY 5236 Insect Pest and Vector Management (3)

#### **Certificate in Landscape Pest Management** (choose 15 credits from this list of courses)

##### Required

ENY 5006 Graduate Survey of Entomology (2)  
ENY 5006L Graduate Survey of Entomology Laboratory (1)  
ENY 5516 Turf and Ornamental Entomology (3)  
ENY 6166 Insect Classification (3)

##### Elective

ENY 5236 Insect Pest and Vector Management (3)  
ENY 6905 Fundamentals of Pest Management  
IPM 5305 Principles of Pesticides (3)  
NEM 5004C Graduate Survey of Nematology (3)

#### **Certificate in Medical Entomology** (choose 15 credits from this list of courses)

##### Required

ENY 5006 Graduate Survey of Entomology (2)  
ENY 5006L Graduate Survey of Entomology Laboratory (1)  
ENY 6665 Advanced Medical and Veterinary Entomology (3)  
ENY 6665L Advanced Medical and Veterinary Entomology Lab (1)  
ENY 6591C Advanced Mosquito Identification (3)  
ENY 6593 Advanced Mosquito Biology (3)

### Elective

ALS 6166 Exotic Species and Biosecurity (3)  
ENY 5226C Principles of Urban Pest Management (3)  
ENY 5566 Tropical Entomology (3)  
ENY 5212 Insects and Wildlife (3)  
ENY 5236 Insect Pest and Vector Management (3)  
ENY 6203 Insect Ecology (3)  
ENY 6203L Insect Ecology Laboratory (1)  
ENY 6651 Insect Toxicology (3)  
ENY 6905 Blood Feeding Insects (1)  
ENY 6905 Mosquito Management (1)

### **Doctor of Philosophy in Entomology and Nematology**

Admission to the Ph.D. program after completing an M.S. program at UF is not automatically granted. The student must write a letter to the Graduate Coordinator requesting continuation and containing a new Statement of Purpose. Also, the student's former advisor must write a letter to the Graduate Coordinator evaluating the academic ability of the student to complete the Ph.D. program successfully. The new advisor must write a letter stating that he/she will supervise the student and whether he/she also will provide funding. One additional letter of recommendation is required (3 letters in total). These letters, along with the original application documents for the M.S. degree, will be circulated to the Graduate Committee for a vote on acceptance. (If the former and new advisors are the same, all information may be in one letter but two additional letters will be required). All application documents must be received by the Graduate Coordinator's Office prior to mid-semester of the graduation term.

### **Role of the Committee Chair/Faculty Supervisor**

The chair of the graduate student's committee guides the student in their choice of elective classes, suggests members for their supervisory committee, encourages the student to meet all published departmental and university deadlines, completes an evaluation of the student's academic progress every semester, guides the student's research planning process, and oversees and facilitates completion of the research. The supervisor reviews the research proposal and dissertation extensively before allowing the student to send them out for review by committee members. The supervisor chairs committee meetings, the qualifying exam, and the final exam/defense. Given the department-specific knowledge required to effectively supervise graduate students in Entomology & Nematology, courtesy faculty members with Graduate Faculty status in Entomology & Nematology may serve as chairs but a salaried Entomology & Nematology faculty member must serve as co-chair. Courtesy faculty members are those employed by agencies other than the University of Florida.

## **Supervisory Committee**

The Graduate School and the Entomology and Nematology Department require that all Ph.D. Supervisory Committees be comprised of at least four faculty members, all with Graduate Faculty status. At least two members must be salaried Entomology & Nematology faculty and one must be from a different department within the University (the “external” member). Special member status may be granted to non-University of Florida PhD scientists who can contribute significant expertise to the student’s committee but a Special member cannot count as one of the four required members. If the student declares a minor (not required), at least one committee member must be from the minor department. The Supervisory Committee must approve the dissertation topic and the plans for carrying out the research. In addition, the committee should meet with the student at about the mid-point of the research to review procedures, progress, and expected results, and to make suggestions for completion of the program. Students are encouraged to meet with individual committee members for advice outside of regular committee meetings.

### **Graduate School Policy on Ph.D. Supervisory Committees:**

#### **Roles and Responsibilities of the Doctoral Supervisory Committee**

Supervisory committees for graduate degree programs are nominated by the respective academic units, approved by the college dean, and appointed by the Dean of the Graduate School. Staff entering supervisory committee data into GIMS (Graduate Information Management System <http://gradschool.ufl.edu/gimsportal/gatorlink/portal.asp>), do so with the approval of the student’s committee chair, the chair/director of the academic unit, and the college dean.

At least four members of the Graduate faculty are required for all doctoral supervisory committees. A Special member will not count as one of four required committee members, but must be an additional member. More members may be added by agreement of the chair and candidate. It is acceptable for departments to require more than four members on supervisory committees. All members must participate in the examinations but electronic presence (Skype, Polycom, phone) is allowed. The student and the chair must be physically in the same room during exams.

#### 1. Chair

- a. Must have graduate faculty status in the student's department/major.
- b. Cannot be a Special Appointment.
- c. Serves as the candidate’s mentor.
- d. Assists the candidate with all committee appointments and has primary responsibility for the conduct of all examinations.
- e. Must escort the candidate at commencement or find an appropriate substitute.

## 2. Co-chair

- a. Is not required to have Graduate faculty status in the student's department/major.
- b. May substitute for the chair at any examination, but only if the co-chair is in the same department/major as the student.

## 3. Members

- a. Must include at least one other member from the student's degree program, in addition to the chair.
- b. Other members can be from the program recommending the degree or from a different educational discipline.
- c. Serve to assist the student and chair with the research/scholarship of the dissertation and all examinations.

## 4. External Member

- a. Must be outside the student's major.
- b. Has the primary responsibility to represent the interests of the student, and the policies and practices established by the Graduate School.
- c. Must verify that the student successfully defends the dissertation, that all members are present in person or via electronic technologies including teleconferencing, videoconferences, computer interfaces, etc, and that the defense is conducted properly.
- d. Cannot be a Special Appointment.
- e. May represent minor areas of study as long as they do not have Graduate Faculty status in the student's major.

### **Responsibilities of Off-campus Chair and Campus Co-chair**

Graduate students whose faculty supervisor (i.e., chair of their graduate committee) is off-campus should select a Gainesville faculty member as a co-chair if they plan to spend any or all of their time on the Gainesville campus. Typically the co-chair will provide supervision of and assistance to the student while on campus. For those students who will perform their research off-campus, the co-chair should guide the student in choosing classes and should provide feedback during the development of the research proposal in collaboration with the chair. For those students who will conduct their research on campus (a less common situation), the co-chair may help with research planning and implementation by providing the student laboratory space, supplies and equipment necessary to perform his/her research. In this situation, because the co-chair may be more familiar with the research done by the student in his/her lab, the co-chair will also take substantial responsibility for assisting the student in the process of writing the thesis/dissertation and manuscripts. Whether the student conducts his/her research on-campus or off, the co-chair and chair will communicate regularly about the student's progress. Co-chair and chair should both assume responsibility for the success of the student's graduate experience.

## **Research Proposal**

Students are required to prepare a written research proposal to include a review of the literature, hypotheses, and a detailed description of their planned experimental design and statistical analysis and to give an oral presentation of it (see Appendix G for outline and evaluation form). The written proposal and announcement of the oral presentation must be emailed to Ruth Brumbaugh at least 10 days prior to the oral presentation so that she can distribute these to all departmental graduate faculty. The research proposal must be presented and approved by the supervisory committee (with minor changes as necessary) at least by the semester immediately preceding the semester in which the Qualifying Examination is taken (third to fifth semester). The proposed date for the oral presentation should be cleared with the student's supervisory committee early in the "deadline semester" (second to fourth semester) so they can all attend and so the student will have a target date to aim for. The student's advisor should invite several specific faculty members external to the student's committee but in the same general subject area (Behavior/Ecology/ Systematics, Biological Control/IPM, Med./Vet./Urban, Nematology, or Physiology/Biochemistry/Genetics) to review the written proposal and attend the oral presentation. All committee members will complete the Research Proposal Assessment (Appendix J) and return it to the Student Services office.

## **Program of Study**

The student must meet with his/her major professor to complete a preliminary Program of Study during the first semester. As soon as the Advisory Committee is formed, and by the end of the second semester, the committee should approve the Program of Study and the final Program of Study with signatures of committee members should be filed in the Graduate Coordinator's office at that time.

## **Number of Credits Required**

A minimum of 90 credit hours beyond the bachelor's degree is required. A maximum of 30 credits with a grade of B or better may be transferred into the Ph.D. program from an M.S. degree from other colleges or universities approved by the Graduate School. All credits earned in an M.S. program at the University of Florida are carried on to the Ph.D. program.

A minimum GPA of 3.0 is required in the major, the minor (if chosen), and to graduate. If a minor is taken, at least 12 credits in the minor subject are required. If two minors are taken, at least 8 credits in each are required. Students must register for a minimum of 3 credits (fall or spring) or 2 credits (summer) of ENY 7980 or NEM 7980 Research for Doctoral Research during the term of graduation. Students on assistantships during the semester of graduation must take 9 credits in the fall or spring semester and 6 in the summer semester. Fellowship holders (other than UF Graduate School Fellows) must register for 12 credits in the fall or spring semester and 8 credits in the summer semester.

## **Ph.D. Qualifying Examination**

The Ph.D. qualifying examination is comprehensive in scope with questions on details as well as principles and generalities. The student should prepare by restudying all courses in one's major and closely allied subjects as if preparing to take a final examination in each subject. This requires a few months of review for most students. The student **MUST** know his/her specific research area and organism(s) including its taxonomy (from highest taxon to the lowest), life cycle, host range, and geographic range.

The Qualifying Examination may be taken during the third semester after enrolling in the doctoral program, but must be taken by the fifth semester (including summers). It may be taken prior to completion of all courses. Students failing to meet this deadline must appear before the Department Graduate Committee to request permission to register. The student must be registered for the semester in which the Qualifying Examination is taken. Our department recommends that the Qualifying Examination be taken during the third semester of study for the Ph.D. By that time, the student should have taken most, if not all, of the required courses and be ready to devote most of his/her time to the dissertation research. The examination is both written and oral. Our department requires written examinations from at least four members of the Supervisory Committee. Many Supervisory Committees administer the written examinations one per day on consecutive days one or two weeks before the oral examination. The committee member should grade the examination and return a copy to the student so that he/she will have time to review any weak areas before the oral examination. All members of the Supervisory Committee must be together with the student for the oral portion of the Qualifying Examination (or attend electronically – Polycom, Skype, phone, etc...). Competence in the minor area (if chosen) may be demonstrated through a written examination conducted by the minor department or through the oral qualifying examination. All committee members must evaluate the student's performance using the PhD Qualifying Exam assessment (Appendix J). Completed assessments are to be turned in to the Student Services office.

Between the oral portion of the Qualifying Examination and graduation, at least two full semesters must elapse for full-time students and one calendar year for part-time students. The semester in which the Qualifying Examination is taken counts as one semester if the examination is taken before the mid-point of the semester.

If a student fails the Qualifying Examination, the Graduate School must be notified. A re-examination may be requested, but it must be recommended by the Supervisory Committee and approved by the Graduate School. If the request is approved, at least one semester of additional preparation is considered essential before re-examination.

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## **Admission to Candidacy**

A student is not a candidate for the Ph.D. degree until granted formal Admission to Candidacy. This requires approval of the Supervisory Committee, the Graduate Coordinator, the Associate Dean of CALS, and the Dean of the Graduate School. Approval is based on the student's academic record, overall fitness for candidacy as judged by the Supervisory Committee and the Graduate Coordinator, an approved dissertation topic, and passing a Qualifying Examination. Students may not register for ENY 7980 or NEM 7980, Doctoral Research, until admitted to candidacy.

### **Exit Seminar and Final Examination**

The Final Examination may be taken no earlier than the semester preceding the semester in which the degree is conferred. Students must give their committee members a supervisor-approved version of their dissertation at least two weeks prior to the exam date. The Final Examination usually is oral and constitutes a defense of the dissertation. However, it may be oral, or written and oral at the discretion of the Supervisory Committee, and may be used to re-examine the student on any areas in which he/she was weak in the Qualifying Examination. All Supervisory Committee members must be present (in person or electronically) with the student for the Final Examination. The written dissertation and its oral defense will be evaluated by all members of the committee using the Written Thesis/Dissertation and Oral Defense assessment (Appendix J). Completed assessments are to be turned in to the Student Services office.

The student must present an exit seminar based on the dissertation. The exit seminar should be given immediately preceding the Final Examination and the date, time, and room to be used should be scheduled in the Student Services Office with two weeks' notice.

### **Electronic Submission of the Dissertation**

All students must submit their dissertations electronically. Information on format may be obtained from the web at <http://helpdesk.ufl.edu/application-support-center/>

The Entomology and Nematology Department requires a paper copy of the complete dissertation that must be submitted to the Office of the Graduate Coordinator for binding and deposit in the Reading Room. Usually, the Supervisory Committee chairperson will want a paper copy of the dissertation, as may other members of the committee. The Entomology & Nematology Department will pay for the copy that will be kept in our departmental library. For each additional copy that a student would like, he must give one paper copy and a check (made out to the University of Florida) for \$15 to Ruth Brumbaugh.

The dissertation must be approved unanimously, and signed by all members of the Supervisory Committee (at the defense), the Associate Dean, CALS, and the Dean of the Graduate School.

### **Publication of the Dissertation by Proquest**

Since all dissertations may be published by ProQuest/UMI, it is necessary that the work is of publishable quality and that it be in a form suitable for publication. The dissertation must contain an abstract and be accompanied by all doctoral forms and a letter of transmittal from the Supervisory Committee chairperson.

Candidates for the Ph.D. degree can pay \$65 to University Financial Services, S113 Criser Hall for processing, and may sign an agreement authorizing publication by Proquest/UMI. If a student chooses not to have his dissertation distributed by ProQuest/UMI, he may complete the appropriate form and submit it to the University of Florida Editorial Office.

### **Publication of the Dissertation in Scientific Journals**

If a student is not making good progress toward publishing the dissertation results one year after graduation, the student's major advisor has the option of publishing it. The student will be the first author. "Making good progress" will be defined as at least a first draft of one or more manuscripts having been received by the advisor. We encourage doctoral students to publish at least one paper from their research before graduation.

### **Exit Interview with Department Chairperson**

All students should try to meet with the Department Chairperson to discuss the quality of her/his experience as a student in the Department and inform the chair of their plans for the immediate future regarding employment (Academic or Industry) or continued education. An Exit Interview PDF form will be emailed to the student during their anticipated graduation semester to be filled out and returned to the Graduate Coordinator's office, copied to the Department Chairperson. Students at RECs or other distant sites may call (352-273-3905) or email the Chairperson ([bsiegfried1@ufl.edu](mailto:bsiegfried1@ufl.edu)) if they can't meet with him in person.

### **Time Limitations**

All work for the doctorate must be completed within 5 calendar years after the Qualifying Examination, or this examination must be repeated. Course work is valid for 7 years.

### **Certification**

Doctoral candidates who have completed all requirements for the degree may request certification to that effect prior to receipt of the degree. Certification request form (available on the web at: <http://graduateschool.ufl.edu/files/verification-letter.pdf>) should be filled out by the candidate, signed by the Supervisory Committee Chair, the Associate Dean, CALS, and returned to the Graduate School for verification and processing. Certification forms will not be processed one week before or one week after graduation.

### **Laboratory Teaching Assistants**

Graduate students, whether or not on assistantships, are encouraged to serve as Teaching Assistants in the various courses taught in the department, especially ENY3005L/ENY5006L. Graduate students on Gahan assistantships are required to serve as Teaching Assistants each semester as part of their duties for holding the assistantship, and those on Steinmetz assistantships may be required to do so. Students on UF Graduate School Fellowships and those funded with matching funds from the CALS Dean or departmental endowment funds will also have teaching responsibilities. The Graduate Coordinator will arrange the time when these students will serve as Teaching Assistants.

The Teaching Assistants are in charge of their laboratory section but are usually supervised by the course instructor or a senior Teaching Assistant. Duties includes arranging for supplies, equipment, class materials, demonstrating use of equipment, explaining laboratory procedures, straightening up the lab afterward, storing equipment, conducting field trips, creating, administering, and grading laboratory examinations, and grading the insect collections.

Students are encouraged to enroll in ENY or NEM 6940, Supervised Teaching, and be evaluated by the students, when serving as Teaching Assistants.

## SERVICES

### Libraries

Scientific literature is housed in the George A. Smathers Libraries (Marston Science Library and the Health Sciences Library) (<http://www.uflib.ufl.edu/>) and the Division of Plant Industry (DPI) library located in the Doyle Conner Building on the University of Florida campus. Much of the holdings of the Smathers Libraries can be accessed from off-campus by any student with a Gatorlink account using the UF VPN Service (<http://www.uflib.ufl.edu/ufproxy.html>). The DPI library emphasizes systematic and taxonomic works. The Entomology and Nematology Department Reading Room (Room 2106) contains a small collection of journals, texts, reference books, trade magazines, etc., and houses the theses and dissertations written by former students in the department. No books or journals can leave the departmental reading room but there is a photocopier in room 2106 that can be used to copy portions of bound journals or books.

### Bibliographic Searches

Finding relevant literature is vastly aided by computer searches of electronic databases (<http://web.uflib.ufl.edu/databases.html>). The databases include those used to compile Biological Abstracts, Helminthological Abstracts, Bibliography of Agriculture, and Review of Applied Entomology. Librarians in the Marston Science Library teach courses that will help students devise a search program and provide advice on the use of databases.

### Computer Laboratory

The department has an excellent computer laboratory in Room 1012. State-of-the-art hardware provides access to word processing, databases, spreadsheets, graphics, and statistical analysis software. Through this lab students are provided access to electronic mail and library services. All students are required to obtain a Gatorlink email account as soon as possible after arrival on campus (<http://www.gatorlink.ufl.edu/>).

### Statistical Consultation

Statistical services are available to our students. The student should consult a statistician for help in designing experiments in order to make sure that the experimental results can be analyzed properly. The consulting team provides assistance with experimental design and data analysis for faculty, and their graduate students, with an active CRIS project (REEport numbered project). Use the web-based system for requesting statistical consulting services. The link to this system is:

<http://researchtools.ifas.ufl.edu/statisticsConsulting/>

### Copying

Students may purchase copying cards from Nick Hostettler, Room 3226, to use the copier in the Reading Room (2106). Libraries on campus are equipped with copiers that anyone may use for a charge. Entomology & Nematology graduate students (and undergraduate majors) may use the copy machines in the department copy room in the administrative wing of the building but cannot take items from room 2106 to photocopy in the administrative wing copy room.

## **Graphics and Scientific Posters**

The department has a Graphics Specialist, Jane Medley, available for consultation and assistance with various types of graphics and presentations. You may print scientific posters in Room 1023 at no charge if you are enrolled in courses in our department. Arrangements for using the facility must be coordinated with the Graphics Specialist.

## **Bulletin Boards**

Bulletin boards displaying various bits of information are located throughout the building. A mobile board in the administrative wing of the building is for posting current seminars and other current events. Other boards are assigned to ENSO for posting its activities. Three bulletin boards display photographs of all graduate students, on-campus faculty members, and support staff. There are numerous boards in the hallways that contain scientific posters describing research conducted by various laboratories.

## **Student Mailboxes**

Each graduate student in the Entomology and Nematology department is assigned a mailbox, located in room 1025, in which to receive regular business mail as well as departmental announcements and special notices. Please check your mailbox regularly. Each student is responsible for giving Nancy Sanders (Program Assistant) her/his forwarding address. Please do not use your departmental address for delivery of personal mail.

## **Stockroom**

The department maintains a well-equipped stockroom (Room 3226) containing various items, especially those needed for classes. A few microscopes and projectors are available. Students (and faculty) may check out items needed for special projects. If you need a microscope or projector, please check with the stockroom attendant.

**Never take microscopes, microscopes light, projectors, or TVs from the teaching laboratories!**

## ORGANIZATIONS

### **Entomology-Nematology Student Organization (ENSO)**

The Entomology and Nematology Student Organization (ENSO) and the Urban Entomology Society (UES) are the department's university-registered student organizations. ENSO is concerned with all areas of student involvement in the department, the university, and the community. For example, ENSO: (a) sponsors the departmental seminar series; (b) conducts community outreach programs to schools, etc.; (c) assists incoming students with orientation to Gainesville and the university; (d) keeps members informed of special campus events; (e) conveys student concerns and opinions to faculty and administrators; and (f) organizes social events. All graduate and undergraduate students upon enrollment in the department are members of ENSO.

Facebook page - <https://www.facebook.com/groups/123585671074036/>

### **Urban Entomology Society**

The Urban Entomology Society (UES) was begun by students in the urban entomology program to unite and support students with an interest in urban entomology. Membership is offered to all graduate and undergraduate students in the department. UES is involved in many of the same activities as ENSO. Some of the activities are: (a) outreach programs to local schools using insects as teaching tools; (b) constructing insect teaching collections for sale to the pest control industry; (c) sponsoring competitive student research presentations in the department; (d) exhibiting UF/IFAS programs, publications, and software at industry trade shows; and (e) sponsoring social events that allow industry representatives to interact with urban entomology students.

### **Florida Entomological Society**

The Florida Entomological Society is a strong force in entomology in Florida, and its journal, the *Florida Entomologist*, has national and international distribution. At the society's annual meetings, awards are given for the best student presentations. The greatly reduced annual dues for student membership include a subscription to the *Florida Entomologist*. Membership application forms are available online at <http://www.flaentsoc.org/>.

### **Entomological Society of America**

Membership in the Entomological Society of America (ESA) is recommended for all entomologists. Student membership dues include a subscription to the *American Entomologist* and the online ESA newsletter. Subscriptions to the society's other journals are additional if one chooses to subscribe to them. The most recent journals are available on the web for subscribers. Membership application forms are available on the web at <http://www.entsoc.org>. Some awards sponsored by the ESA (such as the John Henry Comstock Award) are available only to members.

### **Florida Nematology Forum**

Students in nematology should attend the annual meetings of the Florida Nematology Forum (FNF). Its meetings are held jointly with the Soil and Crop Science Society of Florida (SCSSF) at various locations in Florida. The FNF has no dues and no publications, but plans an annual program and business meeting. Students who have completed sufficient research should participate in the Best Student Paper competition of the joint SCSSF/FNF meetings. Monetary awards are given for the first three places in the “soils” division and in the “crops” division. Nematology students have won several of these awards.

### **Society of Nematologists**

All nematology graduate students should become members of the Society of Nematologists (SON - <http://www.nematologists.org/>), a national organization. Students may apply for associate membership at a reduced rate. Membership forms are available on the society’s web site. Membership includes a subscription to the society’s official publications, *The Journal of Nematology*, *Annals of Applied Nematology*, and *Nematology Newsletter*. The SON provides monetary awards for the first three places in the Best Student Paper competition held annually. DowElanco, through SON, provides needs-based travel grants for a limited number of students to attend the SON annual meetings. Ask nematology faculty how to apply for these awards.

**APPENDIX A**  
**FACULTY OF THE ENTOMOLOGY AND NEMATOLOGY DEPARTMENT**

Abbreviations

IFAS:	Institute of Food and Agricultural Sciences, University of Florida. Includes the College of Agricultural and Life Sciences, Experiment Station, and Extension Service.
REC:	Research and Education Center. A branch research and education unit of IFAS.
FDACS/DPI:	Florida Department of Agriculture and Consumer Services, Division of Plant Industry.
CMAVE/USDA:	Center for Medical, Agricultural, and Veterinary Entomology, United States Department of Agriculture.
R:	Retired, not accepting students.
E:	Emeritus (retired), not accepting students.

Numbers

1. Affiliate faculty. University of Florida faculty in units outside the Entomology and Nematology Department who have joint appointments in the department.
2. Courtesy faculty. Entomologists and nematologists in administrative units outside the University of Florida who are appointed to the Entomology and Nematology Department.
3. Graduate Faculty. Faculty who have appointments to serve on the Supervisory Committees of graduate students and teach graduate courses.

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| 2,3 | Alborn, Hans T. Ph.D., Goteborg University, Sweden, 1988. USDA/ARS/CMAVE, PO Box 110970, Gainesville, FL 32611-0970. Chemical ecology, biology. Email: <a href="mailto:hans.alborn@usda.ars.gov">hans.alborn@usda.ars.gov</a>  |
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- 3 Scheffrahn, Rudolf H. Ph.D., University of California-Riverside, 1984. UF/IFAS, Ft. Lauderdale REC, 3205 SW College Avenue, Ft. Lauderdale, FL 33314-7799. Biology and control of termites. Email: [rhsc@ufl.edu](mailto:rhsc@ufl.edu)
- R Schuster, David J. Ph.D., Oklahoma State University, 1973. Gulf Coast REC, 14625 CR 672, Wimauma, FL 33598. Pest management; host plant resistance to arthropods. Email: [dschust@ufl.edu](mailto:dschust@ufl.edu)
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- 2,3 Robert Shatters Ph.D., USDA, ARS, US. Hort.Res. Lab, 2001 South Rock Rd., Ft. Pierce, FL 34945 [Robert.shatters@ars.usda.gov](mailto:Robert.shatters@ars.usda.gov)
- 2,3 Shirk, Paul D. Ph.D., Texas A&M University, 1978. USDA/ARS/CMAVE, PO Box 110970, Gainesville, FL 32611-0970. Insect endocrinology and molecular biology. Email: [paul.shirk@ars.usda.gov](mailto:paul.shirk@ars.usda.gov)
- 2,3 Shoemaker, David D. Ph.D., University of Georgia, 1995.USDA/ARS/CMAVE, PO Box 110970, Gainesville, FL 32611-0970. Imported fire ant and household insects. Email: [dewayne.shoemaker@ars.usda.gov](mailto:dewayne.shoemaker@ars.usda.gov)
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- 3 Smith, Hugh A. Ph.D., University of Florida, 1999. Gulf Coast REC, 14625 CR 672, Wimauma, FL 33598. Pest management and biological control in tomatoes. Email: [hughasmith@ufl.edu](mailto:hughasmith@ufl.edu)
- 2,3 Smith, Trevor, PhD University of Florida, FDACS/DPI, PO Box 110980, Gainesville, FL 32611-0980, Email: [trevor.smith@freshfromflorida.com](mailto:trevor.smith@freshfromflorida.com)
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- 1,3 Stevens, Bruce R. Ph.D., Illinois State University, 1977. UF, College of Medicine, Dept. of Physiology and Functional Genomics, PO Box 100274, Gainesville, FL 32611-0274. Physiology and molecular biology. Email: [stevens@phys.med.ufl.edu](mailto:stevens@phys.med.ufl.edu)
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- R Tumlinson, James H., III. Ph.D., Mississippi State University, 1969. Pennsylvania State University, 111 Chemical Ecology Lab, University Park, PA 16802. Chemicals that affect insect behavior. Email: [jht2@psu.edu](mailto:jht2@psu.edu)
- 2 Valles, Steven M. Ph.D., University of Florida, 1995. USDA/ARS/CMAVE, PO Box 11970, Gainesville, FL 32611-0970. Insecticide resistance. Email: [steven.valles@ars.usda.gov](mailto:steven.valles@ars.usda.gov)
- 2,3 Vander Meer, Robert K. Ph.D., Pennsylvania State University, 1972. USDA/ARS/CMAVE, PO Box 110970, Gainesville, FL 32611-0970. Chemical ecology. Email: [bob.vandermeer@ars.usda.gov](mailto:bob.vandermeer@ars.usda.gov)

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- E Walker, Thomas PhD, Ohio State Universtiy, 1957. UF/IFAS, Entomology and Nematology Dept., PO Box 110620, Gainesville, FL 32611-0620. Insect Behavior. [twj@ufl.edu](mailto:twj@ufl.edu)
- 3 Weeks, Emma, PhD, London School of Hygiene and Tropical Medicine, 2011, UF/IFAS, Entomology and Nematology Dept., PO Box 110620, Gainesville, FL 32611-0620, Pest management, Email: [eniweeks@ufl.edu](mailto:eniweeks@ufl.edu)
- 3 Webb, Susan E. Ph.D., Cornell University, 1988. UF/IFAS, Entomology and Nematology Dept., PO Box 110620, Gainesville, FL 32611-0620. Vectors of plant pathogens; pests of grapes; cucurbits. Email: [sewe@ufl.edu](mailto:sewe@ufl.edu)
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- 1,3 Wilmott, Keith R. Ph.D., University of Florida, 1999. UF/IFAS, McGuire Center for Lepidoptera Research, PO Box 117800, Gainesville, FL 32611-8525. Systematics and biology of Lepidoptera. Email: [kwillmott@flmnh.ufl.edu](mailto:kwillmott@flmnh.ufl.edu)
- E Yu, Simon S.J. Ph.D., McGill University, 1968. UF/IFAS, Entomology and Nematology Dept., PO Box 110620, Gainesville, FL 32611-0620. Insect toxicology. Email: [sju@ufl.edu](mailto:sju@ufl.edu)

**APPENDIX B**  
**ENTOMOLOGY, NEMATOLOGY, AGRICULTURAL LIFE SCIENCES,**  
**AND PEST MANAGEMENT UNDERGRADUATE COURSES**

Courses may be cancelled and/or scheduled at the discretion of the instructor:

Day and time subject to change.

Check Registrar's Schedule of Courses for up-to-date course offerings. <http://www.registrar.ufl.edu/soc/>

<b>COURSE #</b>	<b>TITLE</b>	<b>METHOD</b>	<b>CREDIT</b>	<b>TERM</b>	<b>LECTURE</b>	<b>LAB</b>	<b>INSTRUCTOR</b>
ALS 2931	Thermal Biology (Honors)	Lec	3	TBA	TBA		Hahn (not for majors)
ALS 3153	Agricultural Ecology	Web	3	F			J. Weeks
ALS 3203	PC Use in Agriculture	Web	3	F, S, SS A			J. Weeks
ALS 4161	Exotic Species & Biosecurity Issues	Web	3	F			Hodges
ALS 4162	Conseq. Biol. Invasions	Lec Web	3	S	T R 3-4		Cuda
ALS 4163	Plant Res. Protection	Polycom	3	F	8-9		Hodges
ENY 1001	Bugs and People	Lec	3	F, S, SS B	T R 2		Baldwin (not for majors)
ENY 2040	The Insects	Web	3	F, SS B			Lucky (not for majors)
ENY 3005	Principles of Entomology	Lec Web	2	F, S F, S, SS C	T R 3		C. Miller Baldwin
ENY 3005L	Princ of Entomology Laboratory	Lab Web	1	F, S, SS C F, S, SS C		TBA	C. Miller/TA Baldwin
ENY 3007C	Life Science	Web	3	S, SS A			J. Weeks (not for majors)
ENY 3163	Invertebrate Field Biol	Lec	3	SS B	TBA		Kawahara
ENY 3222C	Biology and ID of Urban Pests	Web	3	SS C odd F			Koehler
ENY 3225C	Principles of Urban Pest Management	Web	3	SS C even S			Koehler
ENY 3228	Urban Vertebr Pest Mgt	Web	2	S	Ft. Laud		Kern
ENY3451C	Insect Behavior	Web	2	S			Taylor
ENY 3510C	Turf & Ornamental Entomology	Web	3	TBA			Staff
ENY 3563	Tropical Entomology	Lec	3	SS A (odd)	TBA		Cave
ENY 3564L	Tropical Entomology Field Laboratory	Lab	2	SS B (odd)	TBA		Cave
ENY 4161	Insect Classification	Lec Web	3	F, S F, SS C	TBA		Lucky/Branham Lucky
ENY 4210	Insects & Wildlife	Web	3	TBA			Capinera
ENY 4221	Termite Biol and Contr	Lec/Lab	2	TBA	Ft. Laud	TBA	Kern/Scheffrahn/Su
ENY 4230	Pesticide Application		VAR	F, S, SS	TBA	TBA	Koehler
ENY 4453	Behavioral Ecology and Systematics	Lec	3	S	W 5-6, F 5		Branham

ENY 4455C	Social Insects	Lec	3	F	M 6-8	W F 6	G. Hall
ENY 4573	Beekeeping	Web	3	SS C, S			Ellis
ENY 4590C	Mosquito Identification	Lec	3	S	TBA		Connelly
ENY 4592	Mosquito Biology	Web	3	F	TBA		Alto/Smartt
ENY 4660	Medical and Veterinary Entomology	Lec	2	F	M W 2	F 2-4	Kaufman
		Web		F, S, SS C			Koehler
ENY 4660L	Medical and Veterinary Entomology Laboratory	Lab	1	F			Kaufman
		Web		F, S, SS C			Koehler
ENY 4701	Forensic Entomology	Lec	3	S	TBA	TBA	Kaufman
ENY 4905	Problems in Entomol.		1-5	F, S, SS	TB		Staff
ENY 4905	Insect, Pest, Vector Management	Web	3	TBA			Capinera
ENY 4915	Honors Project			F, S, SS	TBA		Staff
IPM 3022	Fundamentals of Pest Management	Web	3	S	R9-E1		Cave
IPM 4254	Landscape Pest Management	Web	3	SS B	TBA		Gillett-Kaufman
MCB 4503	General Virology	Lec	3	S	MWF 2		Maruniak
NEM 3004	Principles of Nematology	Web	3	S			Giblin-Davis
PMA 4570C	Field Techniques in IPM	Lec	2	SS B	T R 2-3		Liburd

**APPENDIX C  
GRADUATE COURSES**

Courses may be cancelled and/or scheduled at the discretion of the instructor:

Day and time subject to change

Check Registrar's Schedule of Courses for up-to-date course offerings. <http://www.registrar.ufl.edu/soc/>

For descriptions of courses, see the University of Florida Graduate Catalog which is available online

<http://gradcatalog.ufl.edu/index.php>

<b>COURSE #</b>	<b>TITLE</b>	<b>METHOD</b>	<b>CREDIT</b>	<b>TERM</b>	<b>LECTURE</b>	<b>LAB</b>	<b>PROFESSOR</b>
ALS 5156	Agricultural Ecology	Web	3	F			J. Weeks
ALS 6046	Grant Writing	Lec	2	S	M 6-7		Daniels, Gillett-Kaufman
ALS 6166	Exotic Species & Biosecurity	Web	3	F			Hodges
ALS 6935	Topics in Biol. Invasions	Lec Web	3	S	T R 3-4		Cuda
ALS 6942	Risk Assess. & Manag.	Polycom	3	F	8-9		Staff
ENY 5006	Graduate Survey of Entomology	Lec Web	2 2	F, S F, S, SS C	T R 3		C. Miller Baldwin
ENY 5006L	Graduate Survey of Entomology Laboratory	Lab Web	1 1	F, S, SS C F, S, SS C		TBA	Staff Baldwin
ENY 5151C	Techniques in Insect Systematics	Lec	2	F (even)	T R 6-9		Branham
ENY 5160C	Survey of Science with Insects	Web	3	S, SS A			J. Weeks (not for majors)
ENY 5164	Invertebr Field Biology	Lec	3	SS B	TBA		Kawahara
ENY 5212	Insects & Wildlife	Web	3	TBA			Capinera
ENY 5223C	Biology and ID of Urban Pests	Web	3	SS C odd F			Koehler
ENY 5226C	Princ Urban Pest Mgt	Web	3	SS C even S			Koehler
ENY 5236	Insect Pest and Vector Mgt	Web	3	TBA			Capinera
ENY 5241	Biological Control	Lec	4	S (even)			Cave
ENY5332C	Urban Vert Pest Management	Web	2	S	Ft. Laud		Kern
ENY 5405	Insect Vect Plant Path	Web	3	F			Gillett-Kaufman,
ENY 5516	Turf & Ornamental Entomology	Web	3	TBA			Staff
ENY 5566	Tropical Entomology	Lec	3	SS A (odd)	TBA		Cave
ENY 5567	Tropical Entomology Field Lab	Lab	2	SS B (odd)	TBA		Cave
ENY 5572	Advanced Apiculture	Web	3	S, SS C			Ellis
ENY 5611	Immature Insects	Lec	4	SS C (odd)	M W 4-6		Branham
ENY 5820	Insect Molec Genetics	Lec / Web	3	TBA	TBA		Hoy
ENY 6166	Insect Classification	Lec Web	3	F S F, SS C	T 2	T R 3-4	Lucky/Branham Lucky

ENY 6203	Insect Ecology	Lec / Web	3	F	M W F 3		McAuslane
ENY 6203L	Insect Ecology Lab	Lec / Web	1	F		W 6-7	McAuslane
ENY 6248	Termite Biol and Contr	Lec / Lab	2	TBA	Ft. Laud	TBA	Kern/Scheffrahn/ Su
ENY 6401	Insect Physiology	Lec Web	3	S	M W F 4		Hahn
ENY 6401L	Insect Physiology Lab	Lab	1				Hahn
ENY 6454	Behavioral Ecology and Systematics	Lec	3	S	W 5-6 F 5		Branham
ENY 6591C	Adv. Mosquito Iden.	Lec	3	S			Connelly
ENY 6593	Adv. Mosquito Biol.	Web	3	F			Alto/Smartt
ENY 6651C	Insect Toxicology	Lec CD	3	S F	M W 3 TBA	M 6-8	Bloomquist Yu
ENY 6665	Adv Medical and Veterinary Entomology	Lec Web	3	F F,S,SS C	M W 2		Kaufman Koehler
ENY 6665L	Adv Med and Vet Ent Laboratory	Lec Web	1	F F,S, SS C		F 2-4	Kaufman Koehler
ENY 6706	Adv. Forensic Entomol	Lec/Lab	3	S	M W-7		Kaufman
ENY 6821	Insect Microbiology	Web	3	S			Pelz-Stelinski
ENY 6822C	Molecular Biology Techniques	Lec/Lab	4	SS A (even)	M T W R F	2-5	Maruniak
ENY 6905	Problems in Entomology		1-4; max 12	F, S, SS	TBA		Staff
ENY 6910	Supervised Research		1-5; max 5	F, S, SS	TBA		Staff
ENY 6932	Special Topics in Entomology		1-2; max 4	F, S, SS			Staff
ENY 6934	Selected Studies in Entomology		1-4; max 8	F, S, SS	TBA		Staff
ENY 6940	Supervised Teaching		1-5; max 5	F, S, SS	TBA		Staff
ENY 6942	Insect Diagnostics	Lec / Lab	2	F	R 5-7		L. Buss
ENY 6943	Entomology Internship		1-3; max 6	F, S, SS	TBA		Staff (not for majors)
ENY 6944	Entomology Extension Internship		1-3; max 6	F, S, SS	TBA		Staff (not for majors)
ENY 6971	Masters Research		1-9; max 15	F, S, SS	TBA		Staff
ENY 7979	Advanced Research		1-9; max 12	F, S, SS	TBA		Staff
ENY 7980	Doctoral Research		1-9; max 15	F, S, SS	TBA		Staff
NEM 5004C	Grad Survey Nematol.	Web	3	S			Giblin-Davis
NEM 5707C	Plant Nematology	Lec Web	3	F (even) Spring	M W 2	W 6-8	Dickson Mengistu
NEM 6101C	Nematode Morphology and Anatomy	Lec	2	F (even)	TBA		Mengistu

NEM 6102C	Nematode Taxonomy and Systematics	Lec	3	S (odd)	TBA		Mengistu
NEM 6104L	Insect Parasitic Nematodes Laboratory	Lab	1	F	TBA		Mengistu
NEM 6201	Nematode Ecology	Lec	3	F (odd)	M W F 7		Staff
NEM 6708	Field Plant Nematology	Lec	2; max 4	S	TBA		Staff
NEM 6905	Problems in Nematology		1-4; max 8	F, S, SS	TBA		Staff
NEM 6905	Nematode ID	Lab	1-3; max 3	F, S, SS	TBA		Staff
NEM 6910	Supervised Research		1-5; max 5	F, S, SS	TBA		Staff
NEM 6931	Nematology Seminar		1; max 6	S	M 8-9		Staff
NEM 6932	Special Topics in Nematology		1-4; max 4	F, S, SS			Staff
NEM 6934	Selected Studies		1-4; max 4	F, S, SS	TBA		Staff
NEM 6940	Supervised Teaching		1-5; max 5	F, S, SS	TBA		Mengistu
NEM 6942	Nematode Diagnostics	Lec / Lab	2	F, S	TBA		Mengistu
NEM 6943	Nematode Internship		1-3; max 6	F, S, SS	TBA		Staff (not for majors)
NEM 6944	Nematode Extension Internship		1-3; max 6	F, S, SS	TBA		Staff (not for majors)
NEM 6971	Masters Research		1-9; max 15	F, S, SS	TBA		Staff
NEM 7979	Advanced Research		1-9; max 12	F, S, SS	TBA		Staff
NEM 7980	Doctoral Research		1-9; max 15	F, S, SS	TBA		Staff
MCB 5505	General Virology	Lec	3	S	MWF 2		Maruniak
PMA 5205	Citrus Pest Mgmt.	Lec	3	S (odd)	Lake Alfred		Duncan (and Polycom)
PMA 6228	Field Tech. in IPM	Lec	2	SS B	TR 2-3		Liburd

## APPENDIX D

### TENTATIVE TOPICS FOR GRADUATE STUDENT SEMINAR TOPICS FOR CALENDAR YEARS 2015-2018

(Other topics may come available and the ones listed may not necessarily be offered. Please check with the professor named a semester or two before you plan to take the seminar to make sure it is still being offered).

#### Fall 2015

Webb – Insect Vectors of Plant Pathogens

Miller – Animal Weapons: Shape, Function, and Evolution

#### Spring 2016

Kaufman and Oi – Topics in Medical and Veterinary Entomology (every 3 years)

Dickson – Nematology

Bloomquist – Insect Neuroethology (every 2 years)

#### Summer 2016

Lucky - Topics in Social Insect Biology (every 2 years)

#### Fall 2016

Taylor – Insect Learning

Ellis and Daniels - Insect Pollination Ecology

Duncan – Entomopathogenic Nematodes

#### Spring 2017

McAuslane – Insect Chemical Ecology (every 2 years)

Mengistu – Nematology

#### Summer 2017

Seal - Adventive Insect Species and Their Fate

#### Fall 2017

Webb – Insect Vectors of Plant Pathogens

Hulcr – Insect Symbioses

#### Spring 2018

Crow - Nematology

#### Summer 2018

??

**APPENDIX E**  
**ENTOMOLOGY AND NEMATOLOGY DEPARTMENT**  
**PH.D. AND M.S. GRADUATE STUDENT RESEARCH PROPOSAL EVALUATION FORM**

Student's Name \_\_\_\_\_ Major Professor \_\_\_\_\_

Semester:    Fall    Spring    Summer (Circle One)    Date \_\_\_\_\_

Evaluator's Name \_\_\_\_\_ Signature \_\_\_\_\_

<b>Proposal</b>	Introduction:	Review of relevant literature, importance of proposed research, clear hypotheses and research objectives?
	Research Design:	Clearly explained, variables measured (and how), experiments replicated, appropriate statistical methods indicated?
	Expected Results:	Preliminary data presented (if available)? Will proposed research lead to new insights, tools, or approaches for research topic?
	Potential Problems:	Problem areas identified and alternative strategies considered.
	Research Schedule:	Timetable for experiments, qualifying exam and draft of dissertation presented.
	Funding:	Resources provided by advisor adequate and/or student has identified other potential funding sources to support the research.
	Collaborations:	Other collaborating faculty in the Department, University, industry, government or foreign scientists acknowledged.
<b>Presentation</b>		
<b>Organization</b>	Sequence:	Proposal elements presented in logical and efficient manner.
	Time:	Allotted time used effectively.
<b>Visual Aids</b>	Content:	Suitable for subject matter.
	Readability:	Appropriate font size and amount of text per slide.
<b>Delivery</b>	Physical:	Good eye contact, vocal clarity, and expression.
	Verbal:	Proper grammar, clear explanation of proposal information.
	Preparation:	Relevant answers to questions and responds to constructive criticism.

**Comments: (Continue on back of page)**



**APPENDIX G  
PROGRAM OF STUDY**

NAME: \_\_\_\_\_

UFID: \_\_\_\_\_

DEGREE: \_\_\_\_\_

**MAJOR COURSEWORK (ENY-NEM ONLY):**

Course #	Course Title	Hours	Grade	Term (To Be) Completed	Institution

**FOUNDATION AND SUPPORTING (ALS-BCH-STA-Etc...)**

Course #	Course Title	Hours	Grade	Term (To Be) Completed	Institution

We recommend the above program be approved:

\_\_\_\_\_  
Graduate Student

\_\_\_\_\_  
Graduate Coordinator

Student's Supervisory Committee Signatures and Date:

\_\_\_\_\_  
Committee Chair

\_\_\_\_\_  
Committee Member

\_\_\_\_\_  
Committee Member

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Committee Member

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Committee Member

**Appendix H**  
**GRADUATE STUDENT EVALUATION**  
**ENTOMOLOGY AND NEMATOLOGY DEPARTMENT**

**Semester:**

**SUPERVISORY COMMITTEE CHAIR:**

**GRADUATE STUDENT:**

**DUTIES:**

	<b>Poor Needs improvement</b>	<b>Average Meets expectation</b>	<b>Excellent Exceeds expectation</b>	N/A
Making progress with required and elective courses				
Shows initiative in exploring appropriate literature				
Making expected progress in research				
Performs teaching responsibilities timely and competently				
Completes other assigned responsibilities on time				
Complies with work schedule established by student and supervisor				
On-track? Dept and UF requirements (e.g. Committee Formation, Plan of Study, Proposal, Qualifying Exams)				
Works collegially and cooperatively with others in the lab				
Respects common use departmental space and equipment				
Respects departmental staff, policies, and procedures				
Service to the discipline (department/REC, university, state, regional or national societies)				
Service to the community (outreach, school tours, extension)				
Exhibits ethical behavior at all times				

- Most students are likely to be **average** in many categories – you are pleased with their progress and they are on par with your previous and current students.
- Some students will be **excellent** in many categories – going above and beyond what you have come to expect from graduate students. Perhaps they are in the top 10% of students you have mentored.
- Some students will have **poor** evaluations in several categories. These students have specific deficiencies that you have catalogued and will need to show some improvement over the next semester. Perhaps they fall in the lowest 10% of students you have mentored.

**Graduate Student Self-evaluation (Mandatory):**

Has your Supervisory Committee been appointed? \_\_\_\_\_ (Y/N)

Date: \_\_\_\_\_

Has your Program of Study (Form 2) been approved? \_\_\_\_\_(Y/N)

Date: \_\_\_\_\_

Has the Committee approved your thesis/dissertation research proposal and have you presented it? \_\_\_\_\_  
(Y/N)

Date: \_\_\_\_\_

Have you completed your teaching responsibilities? \_\_\_\_\_(Y/N)

Term: \_\_\_\_\_

List courses and grades for this term.

What assistantship duties did you perform this term?

What teaching or outreach/extension/service activities did you perform this term?

What scientific meetings did you attend and did you present a talk or poster?

What thesis/dissertation work did you do this term?

**Comments by Supervisory Committee Chair (Mandatory)** to include evaluation of current progress and plan of action for the next semester, including any specific goals to achieve or issues to improve upon:

## APPENDIX I

### University and Departmental Leave Policies

Excerpted from the Agreement between the University of Florida Board of Trustees and Graduate Assistants United 2011-2014 <http://hr.ufl.edu/benefits/leave/graduate-student-leaves-of-absence/>

[http://hr.ufl.edu/wp-content/uploads/docs/Final\\_copy\\_GAU\\_Contract.pdf](http://hr.ufl.edu/wp-content/uploads/docs/Final_copy_GAU_Contract.pdf)

#### Article 10

##### LEAVES OF ABSENCE

10.1 An employee shall not be required to perform assigned duties when:

- (a) disabled or otherwise unable to perform them because of injury, illness (physical or mental), jury duty, required U.S. military service, or when unable to so perform because the employee's presence is required elsewhere because of injury, illness, or death in the immediate family. Immediate family shall consist of mother, father, spouse, sister, brother, child, a person in a legal dependent relationship with the employee, or other relative living in the employee's household. The employee shall notify the supervisor of the inability to serve as soon as possible.
- (b) The university is closed for a state holiday or a declared emergency, unless the special conditions of the appointment require the employee to perform duties at these times. These days shall not be held against the employee with regard to permitted days of leave pursuant to Section 10.2.
- (c) Taking examinations for professional licensing related to the degree or qualifying examinations are required by the university. These days shall not be held against the employee with regard to permitted days of leave pursuant to Section 10.2.
- (d) Traveling to conferences or other events for professional development. UFBOT and the UFF-GAU encourage supervisors to facilitate professional development and approval of attendance at such events shall not be unreasonably denied. These days shall not be held against the employee with regard to permitted days of leave pursuant to Section 10.2.

10.2 Personal time under this Article shall be with pay for up to five (5) days per semester appointment. Each employee shall be credited with such five (5) days at the beginning of each semester and shall use leave in increments of not less than one (1) day. For example, an employee scheduled to work six (6) hours on Monday and three (3) hours on Tuesday, who is unable to perform assigned duties on these days for any of the reasons described above, would be charged with two (2) days of personal time, regardless of FTE appointment, or number of work hours scheduled. The personal time provided under this article shall not be cumulative.

#### Departmental Leave Policy (adopted October 13, 2010)

A graduate assistant unable to fulfill the duties of his/her appointment because of illness or injury shall notify his/her major professor and the administrator of his/her appointing unit as soon as circumstances permit. Similarly, a graduate assistant unable to fulfill the duties of her appointment because of pregnancy shall notify her major professor and the administrator of her major unit as soon as circumstances permit. Ideally, a student will communicate early in her pregnancy with her supervisor and develop a plan of work for the time remaining before the leave period begins. A written plan will be signed by both parties and placed in the graduate student's folder in the graduate programs office.

During the illness, injury, or pregnancy, the appointing unit shall adjust (reduce, waive, or reschedule) the graduate assistant's duties as those duties and the assistant's physical circumstances reasonably dictate.

If total absence from duties becomes necessary and the graduate assistant is still enrolled, the appointing unit (i.e., the individual who signs the semester letter of appointment) shall maintain the stipend of the appointment provided for a period of six weeks.

## **APPENDIX J**

### **Assessments**

To be filled out by all committee members, discussed with the student, and returned to the Student Services office.

Research Proposal Assessment

PhD Qualifying Exam Assessment

M.S. Final Exam Assessment

M.S. Final Defense and Written Thesis Assessment

PhD Final Defense and Dissertation Assessment

## Entomology and Nematology Research Proposal Presentation (Oral and Written)

Student \_\_\_\_\_ Date \_\_\_\_\_ Committee member \_\_\_\_\_

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 3</b>  Written skills <sup>1</sup>  (max. 20 points, min. 5 points)	<b>Context and purpose</b>	<input type="checkbox"/> Demonstrates a thorough understanding of context, audience, and purpose that focuses all elements of the work.	<input type="checkbox"/> Demonstrates adequate consideration of context, audience and purpose, and a clear focus of the work.	<input type="checkbox"/> Demonstrates awareness of context, audience, and purpose of the work.	<input type="checkbox"/> Does not demonstrate attention to context, audience, and purpose of the work.
	<b>Content development</b>	<input type="checkbox"/> Consistently uses appropriate, relevant and compelling content to illustrate mastery of the subject, conveying the writer's understanding.	<input type="checkbox"/> Consistently uses appropriate, relevant, and compelling content to explore ideas within the subject.	<input type="checkbox"/> Use appropriate and relevant content to develop and explore ideas throughout most of the work.	<input type="checkbox"/> Does not use appropriate and relevant content to develop simple ideas in some parts of the work.
	<b>Conventions</b>	<input type="checkbox"/> Detailed attention to and successful execution of all conventions specific to the discipline (organization, content, presentation, formatting, style)	<input type="checkbox"/> Consistent use of important conventions specific to the discipline.	<input type="checkbox"/> Follows expectations appropriate for specific discipline for organization, content and presentation.	<input type="checkbox"/> Does not use a consistent system for basic organization and presentation.
	<b>Sources and evidence</b>	<input type="checkbox"/> Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate.	<input type="checkbox"/> Demonstrates consistent use of credible, relevant sources to support ideas.	<input type="checkbox"/> Demonstrates an attempt to use credible and/or relevant sources to support ideas.	<input type="checkbox"/> Does not use sources to support ideas.
	<b>Syntax and mechanics</b>	<input type="checkbox"/> Uses language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	<input type="checkbox"/> Uses straightforward language that generally conveys meaning to readers and has few errors.	<input type="checkbox"/> Uses language that generally conveys meaning to readers with clarity but may include errors.	<input type="checkbox"/> Uses language that sometimes impedes meaning because of errors in usage.

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 3</b> Oral presentation skills <sup>2</sup> (max. 20 points, min. 5 points)	<b>Organization</b> (specific introduction and conclusion, sequence of material in body, and transitions)	<input type="checkbox"/> Organizational pattern is clearly and consistently observable, is skillful, and makes the content of the presentation cohesive	<input type="checkbox"/> Organizational pattern is clearly and consistently observable	<input type="checkbox"/> Organizational pattern is intermittently observable	<input type="checkbox"/> No organizational pattern observable
	<b>Language</b>	<input type="checkbox"/> Language choices enhance the effectiveness of the presentation and are appropriate for the audience.	<input type="checkbox"/> Language choices generally support the effectiveness of the presentation and are appropriate for the audience.	<input type="checkbox"/> Language choices partially support the effectiveness of the presentation and are appropriate for the audience.	<input type="checkbox"/> Language choices are unclear and minimally support the effectiveness of the presentation and are not appropriate for the audience.
	<b>Delivery</b> (posture, use of pointer, eye contact, vocal expressiveness)	<input type="checkbox"/> Delivery techniques make the presentation compelling, and speaker appears polished and confident.	<input type="checkbox"/> Delivery techniques make the presentation interesting and speaker appears comfortable.	<input type="checkbox"/> Delivery techniques make the presentation understandable, and speaker appears tentative.	<input type="checkbox"/> Delivery techniques detract from the understandability of the presentation and speaker appears uncomfortable.
	<b>Supporting material</b> (explanations, examples, illustrations, figures, photos, diagrams, statistics)	<input type="checkbox"/> A variety of supporting materials makes appropriate reference to information or analysis that significantly supports the presentation.	<input type="checkbox"/> Supporting materials make appropriate reference to information or analysis that generally supports the presentation.	<input type="checkbox"/> Supporting materials make appropriate reference to information or analysis that partially supports the presentation.	<input type="checkbox"/> Insufficient supporting materials make reference to information or analysis that minimally supports the presentation.
	<b>Central message</b>	<input type="checkbox"/> Central message is compelling (strongly stated, appropriately repeated, memorable and strongly supported).	<input type="checkbox"/> Central message is clear and consistent with the supporting material.	<input type="checkbox"/> Central message is basically understandable but is not often repeated or is not memorable.	<input type="checkbox"/> Central message can be deduced, but is not explicitly stated in the presentation.

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 4 –M.S. SLO 5 – PhD</b>  Critical thinking and application of inquiry and analysis <sup>3</sup>  (max. 20 points, min. 5 points)	Has stated the research problem clearly, providing motivation for undertaking the research	<input type="checkbox"/> Clear statement of the research problem with well stated associated rationale	<input type="checkbox"/> Statement of research problem with associated rationale	<input type="checkbox"/> Unclear statement of research problem OR rationale for undertaking the research is not well developed	<input type="checkbox"/> Unclear statement of research problem AND rationale for undertaking the research is not well developed
	Demonstrated the potential value of solution to the research problem in advancing knowledge within the area of study	<input type="checkbox"/> Clearly states the value of the proposed research	<input type="checkbox"/> States the value of proposed research	<input type="checkbox"/> Recognizes the value of the research but didn't state explicitly	<input type="checkbox"/> Doesn't recognize the potential value of the proposed research
	Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem	<input type="checkbox"/> Synthesizes in-depth information from relevant sources representing various points of view/approaches	<input type="checkbox"/> Presents in-depth information from relevant sources presenting various points of view/approaches	<input type="checkbox"/> Presents information from relevant sources representing limited points of view/approaches	<input type="checkbox"/> Presents information from irrelevant sources representing limited points of view/approaches
	Planned research is creative and original with well-defined hypotheses or objectives	<input type="checkbox"/> Highly creative and original with well-defined hypotheses or objectives	<input type="checkbox"/> Somewhat creative and original with well-defined hypotheses or objectives	<input type="checkbox"/> Research not very creative and original OR hypotheses or objectives not well-defined	<input type="checkbox"/> Research neither creative nor original AND hypotheses or objectives not well-defined

	Has proposed sound state-of-the field research methods/tools to solve the defined problem and has described the methods/tools effectively	<input type="checkbox"/> All elements of the methodology are skillfully developed. Appropriate methodology may be synthesized from across disciplines or from relevant sub-disciplines	<input type="checkbox"/> Critical elements of the methodology are appropriately developed, however, more subtle elements are ignored or unaccounted for	<input type="checkbox"/> Critical elements of the methodology are missing, incorrectly developed, or unfocused	<input type="checkbox"/> Design of experiments demonstrates a misunderstanding of the methodology
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### SLO Achievement

These scores do not determine whether the student passes or fails the research proposal presentation. They are for the student and supervisor's information to determine areas of strength and weakness that can be remedied before the conduct of the research and completion of the thesis or dissertation. All committee members should fill out a form and copies should be delivered to the Graduate Coordinator's office for deposit in the student's file. Supervisory committee chair - please share the results of this evaluation with your student, either summarizing their strengths/weaknesses or showing the individual score sheets.

SLO 3 (written communication skills)

= \_\_\_\_\_ (maximum 20, minimum 5)

SLO 3 (oral communication skills)

= \_\_\_\_\_ (maximum 20, minimum 5)

SLO 4 (M.S.) or 5 (PhD) (critical thinking ability)

= \_\_\_\_\_ (maximum 20, minimum 5)

Additional comments

## Entomology and Nematology PhD Qualifying Exam

Student \_\_\_\_\_ Date \_\_\_\_\_ Committee member \_\_\_\_\_

		<b>Exemplary (4)</b>	<b>Proficient (3)</b>	<b>Marginal (2)</b>	<b>Unacceptable (1)</b>
<b>SLO 1</b> Identify insects, other arthropods and/or nematodes, and describe their relationship with the environment and humans (Max. points 48, min. 12)	General knowledge in biology	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content
	General knowledge in entomology or nematology	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content

	In-depth knowledge in area of research specialization	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content
<b>SLO 2</b> Discuss appropriate research methodology, including aspects of statistical design and analysis, in the execution of arthropod research  (Max. points 8, min. 2)	General knowledge in statistics and experimental method	<input type="checkbox"/> Answers all statistical questions correctly, in detail and logically	<input type="checkbox"/> Answers all statistical questions in some detail	<input type="checkbox"/> Attempts all statistical questions but has errors in answers	<input type="checkbox"/> Does not attempt to answer all statistical questions and/or has many errors
		<input type="checkbox"/> Answers all experimental methodology questions correctly, in detail and logically	<input type="checkbox"/> Answers all experimental methodology questions in some detail	<input type="checkbox"/> Attempts all experimental methodology questions but has errors in answers	<input type="checkbox"/> Does not attempt to answer all experimental methodology questions and/or has many errors

<b>SLO 3</b> Clearly and confidently communicate science in <b>oral</b> exam  (Max. points 12, min. 3)	Clarity	<input type="checkbox"/> Provides logically developed, thoughtful answers consistently	<input type="checkbox"/> Provides logical answers most of the time	<input type="checkbox"/> Answers may not be logical all the time	<input type="checkbox"/> Answers are confusing, illogical
		<input type="checkbox"/> Language is eloquent	<input type="checkbox"/> Language is straightforward	<input type="checkbox"/> Language is awkward	<input type="checkbox"/> Language is poor
	Confidence	<input type="checkbox"/> Confident in verbal communication skills	<input type="checkbox"/> Usually confident in verbal communication skills	<input type="checkbox"/> Somewhat confident in verbal communication skills	<input type="checkbox"/> Rarely confident in verbal communication skills
<b>SLO 3</b> Clearly communicate science in <b>written</b> exam ( <i>if written exam is given</i> )  (Max. points 12, min. 3)	Content and organization	<input type="checkbox"/> Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding of the questions	<input type="checkbox"/> Uses appropriate, relevant, and compelling content to explore ideas within the context of the questions	<input type="checkbox"/> Uses appropriate and relevant content to develop and explore ideas throughout most of the exam	<input type="checkbox"/> Does not use appropriate and relevant content to develop simple ideas
	Syntax and mechanics	<input type="checkbox"/> Uses language that skillfully communicates meaning to readers with clarity and fluency	<input type="checkbox"/> Uses straightforward language that generally conveys meaning to readers	<input type="checkbox"/> Uses language that generally conveys meaning to reader with clarity	<input type="checkbox"/> Uses language that sometimes impedes meaning
		<input type="checkbox"/> Writing is virtually error-free	<input type="checkbox"/> Writing has few errors	<input type="checkbox"/> Writing may include many errors	<input type="checkbox"/> Writing has many errors

<b>SLO 5</b> Critical thinking ability – ability to synthesize and extrapolate (Max. points 24, min. 6)		<input type="checkbox"/> Valid judgments based on evidence	<input type="checkbox"/> Nearly all judgments are valid and based on evidence	<input type="checkbox"/> Judgments are occasionally invalid	<input type="checkbox"/> Invalid judgments based on evidence provided
		<input type="checkbox"/> Analysis of material is insightful and conclusions are fully defensible	<input type="checkbox"/> Analysis of material is accurate and conclusions are defensible	<input type="checkbox"/> Analysis of material is inaccurate and conclusions are rarely defensible	<input type="checkbox"/> Indefensible conclusions
		<input type="checkbox"/> Synthesis of content is clearly evident	<input type="checkbox"/> Content synthesized well for the most part	<input type="checkbox"/> Merely recalls information, lists and defines but rarely synthesizes content	<input type="checkbox"/> No synthesis evident
		<input type="checkbox"/> Response is deeply reflective and evaluative	<input type="checkbox"/> Response is reflective and evaluative	<input type="checkbox"/> Responses are rarely evaluative	<input type="checkbox"/> Response is not reflective or evaluative
		<input type="checkbox"/> Exhibits advanced thinking and conceptualization	<input type="checkbox"/> Exhibits clear thinking and conceptualization	<input type="checkbox"/> Little ability to detect patterns or conceptualize	<input type="checkbox"/> No advanced thinking or conceptualization
		<input type="checkbox"/> Logical flow of ideas	<input type="checkbox"/> Ideas tend to flow logically	<input type="checkbox"/> Flow of ideas is rarely logical	<input type="checkbox"/> Illogical flow of ideas

### SLO Achievement

These scores do not determine whether the student passes or fails the PhD qualifying exam. You can use the scores in your decision but there is no cut-off score below which the student fails the exam. All committee members should fill out a form and copies should be delivered to the Graduate Coordinator's office for deposit in the student's file. Supervisory committee chair - please share the results of this evaluation with your student, either summarizing their strengths/weaknesses or showing the individual score sheets.

SLO 1 (knowledge of discipline)	= _____ (maximum 48, minimum 12)
SLO 2 (knowledge of statistical and research methodology)	= _____ (maximum 8, minimum 2)
SLO 3 (oral communication skills)	= _____ (maximum 12, minimum 3)
SLO 3 (written communication skills)	= _____ (maximum 12, minimum 3)
SLO 5 (critical thinking ability)	= _____ (maximum 24, minimum 6)

Additional comments

### Entomology and Nematology M.S. Final Exam

Student \_\_\_\_\_ Date \_\_\_\_\_ Committee member \_\_\_\_\_

		<b>Exemplary (4)</b>	<b>Proficient (3)</b>	<b>Marginal (2)</b>	<b>Unacceptable (1)</b>
<b>SLO 1</b> Identify insects, other arthropods and/or nematodes, and describe their relationship with the environment and humans (Max. points 48, min. 12)	General knowledge in biology	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content
	General knowledge in entomology or nematology	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content

	In-depth knowledge in area of research specialization	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content
<b>SLO 2</b>  Discuss appropriate research methodology, including aspects of statistical design and analysis, in the execution of arthropod research  (Max. points 8, min. 2)	General knowledge in statistics and experimental method	<input type="checkbox"/> Answers all statistical questions correctly, in detail and logically	<input type="checkbox"/> Answers all statistical questions in some detail	<input type="checkbox"/> Attempts all statistical questions but has errors in answers	<input type="checkbox"/> Does not attempt to answer all statistical questions and/or has many errors
		<input type="checkbox"/> Answers all experimental methodology questions correctly, in detail and logically	<input type="checkbox"/> Answers all experimental methodology questions in some detail	<input type="checkbox"/> Attempts all experimental methodology questions but has errors in answers	<input type="checkbox"/> Does not attempt to answer all experimental methodology questions and/or has many errors

<b>SLO 3</b> Clearly and confidently communicate science in <b>oral</b> exam (Max. points 12, min. 3)	Clarity	<input type="checkbox"/> Provides logically developed, thoughtful answers consistently	<input type="checkbox"/> Provides logical answers most of the time	<input type="checkbox"/> Answers may not be logical all the time	<input type="checkbox"/> Answers are confusing, illogical
		<input type="checkbox"/> Language is eloquent	<input type="checkbox"/> Language is straightforward	<input type="checkbox"/> Language is awkward	<input type="checkbox"/> Language is poor
	Confidence	<input type="checkbox"/> Confident in verbal communication skills	<input type="checkbox"/> Usually confident in verbal communication skills	<input type="checkbox"/> Somewhat confident in verbal communication skills	<input type="checkbox"/> Rarely confident in verbal communication skills
<b>SLO 3</b> Clearly communicate science in <b>written</b> exam ( <i>if written exam is given</i> ) (Max. points 12, min. 3)	Content and organization	<input type="checkbox"/> Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding of the questions	<input type="checkbox"/> Uses appropriate, relevant, and compelling content to explore ideas within the context of the questions	<input type="checkbox"/> Uses appropriate and relevant content to develop and explore ideas throughout most of the exam	<input type="checkbox"/> Does not use appropriate and relevant content to develop simple ideas
	Syntax and mechanics	<input type="checkbox"/> Uses language that skillfully communicates meaning to readers with clarity and fluency	<input type="checkbox"/> Uses straightforward language that generally conveys meaning to readers	<input type="checkbox"/> Uses language that generally conveys meaning to reader with clarity	<input type="checkbox"/> Uses language that sometimes impedes meaning
		<input type="checkbox"/> Writing is virtually error-free	<input type="checkbox"/> Writing has few errors	<input type="checkbox"/> Writing may include many errors	<input type="checkbox"/> Writing has many errors

<p><b>SLO 4</b> Critical thinking ability – ability to synthesize and extrapolate  (Max. points 24, min. 6)</p>	<input type="checkbox"/> Valid judgments based on evidence	<input type="checkbox"/> Nearly all judgments are valid and based on evidence	<input type="checkbox"/> Judgments are occasionally invalid	<input type="checkbox"/> Invalid judgments based on evidence provided
	<input type="checkbox"/> Analysis of material is insightful and conclusions are fully defensible	<input type="checkbox"/> Analysis of material is accurate and conclusions are defensible	<input type="checkbox"/> Analysis of material is inaccurate and conclusions are rarely defensible	<input type="checkbox"/> Indefensible conclusions
	<input type="checkbox"/> Synthesis of content is clearly evident	<input type="checkbox"/> Content synthesized well for the most part	<input type="checkbox"/> Merely recalls information, lists and defines but rarely synthesizes content	<input type="checkbox"/> No synthesis evident
	<input type="checkbox"/> Response is deeply reflective and evaluative	<input type="checkbox"/> Response is reflective and evaluative	<input type="checkbox"/> Responses are rarely evaluative	<input type="checkbox"/> Response is not reflective or evaluative
	<input type="checkbox"/> Exhibits advanced thinking and conceptualization	<input type="checkbox"/> Exhibits clear thinking and conceptualization	<input type="checkbox"/> Little ability to detect patterns or conceptualize	<input type="checkbox"/> No advanced thinking or conceptualization
	<input type="checkbox"/> Logical flow of ideas	<input type="checkbox"/> Ideas tend to flow logically	<input type="checkbox"/> Flow of ideas is rarely logical	<input type="checkbox"/> Illogical flow of ideas

### SLO Achievement

These scores do not determine whether the student passes or fails the M.S. final exam. You can use the scores in your decision but there is no cut-off score below which the student fails the exam. All committee members should fill out a form and copies should be delivered to the Graduate Coordinator's office for deposit in the student's file. Supervisory committee chair - please share the results of this evaluation with your student, either summarizing their strengths/weaknesses or showing the individual score sheets.

SLO 1 (knowledge of discipline)	= _____ (maximum 48, minimum 12)
SLO 2 (knowledge of statistical and research methodology)	= _____ (maximum 8, minimum 2)
SLO 3 (oral communication skills)	= _____ (maximum 12, minimum 3)
SLO 3 (written communication skills)	= _____ (maximum 12, minimum 3)
SLO 4 (critical thinking ability)	= _____ (maximum 24, minimum 6)

Additional comments

### Written Thesis and Oral Defense (MS thesis)

Student \_\_\_\_\_

Date \_\_\_\_\_

Committee member \_\_\_\_\_

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 3</b>  Written skills <sup>1</sup>  Max. 20 points, min. 5 points	<b>Context and purpose</b>	Demonstrates a thorough understanding of context, audience, and purpose that focuses all elements of the work.	Demonstrates adequate consideration of context, audience and purpose, and a clear focus of the work.	Demonstrates awareness of context, audience, and purpose of the work.	Does not demonstrate attention to context, audience, and purpose of the work.
	<b>Content development</b>	Consistently uses appropriate, relevant and compelling content to illustrate mastery of the subject, conveying the writer's understanding.	Consistently uses appropriate, relevant, and compelling content to explore ideas within the subject.	Use appropriate and relevant content to develop and explore ideas throughout most of the work.	Does not use appropriate and relevant content to develop simple ideas.
	<b>Conventions</b>	Detailed attention to and successful execution of all conventions specific to the discipline (organization, content, presentation, formatting, style)	Consistent use of important conventions specific to the discipline.	Follows expectations appropriate for specific discipline for organization, content and presentation.	Does not use a consistent system for basic organization and presentation.
	<b>Sources and evidence</b>	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate.	Demonstrates consistent use of credible, relevant sources to support ideas.	Demonstrates an attempt to use credible and/or relevant sources to support ideas.	Does not use sources to support ideas.
	<b>Syntax and mechanics</b>	Uses language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers and has few errors.	Uses language that generally conveys meaning to readers with clarity but may include errors.	Uses language that sometimes impedes meaning because of errors in usage.

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 3</b> Oral presentation skills <sup>2</sup> Max. 20 points, min. 5 points	<b>Organization</b> (specific introduction and conclusion, sequence of material in body, and transitions)	Organizational pattern is clearly and consistently observable, is skillful, and makes the content of the presentation cohesive	Organizational pattern is clearly and consistently observable	Organizational pattern is intermittently observable	Organizational pattern is not observable
	<b>Language</b>	Language choices enhance the effectiveness of the presentation and are appropriate for the audience.	Language choices generally support the effectiveness of the presentation and are appropriate for the audience.	Language choices partially support the effectiveness of the presentation and are appropriate for the audience.	Language choices are unclear and minimally support the effectiveness of the presentation and are not appropriate for the audience.
	<b>Delivery</b> (posture, use of pointer, eye contact, vocal expressiveness)	Delivery techniques make the presentation compelling, and speaker appears polished and confident.	Delivery techniques make the presentation interesting and speaker appears comfortable.	Delivery techniques make the presentation understandable, and speaker appears tentative.	Delivery techniques detract from the understandability of the presentation and speaker appears uncomfortable.
	<b>Supporting material</b> (explanations, examples, illustrations, figures, photos, diagrams, statistics)	A variety of supporting materials makes appropriate reference to information or analysis that significantly supports the presentation.	Supporting materials make appropriate reference to information or analysis that generally supports the presentation.	Supporting materials make appropriate reference to information or analysis that partially supports the presentation.	Insufficient supporting materials make reference to information or analysis that minimally supports the presentation.
	<b>Central message</b>	Central message is compelling (strongly stated, appropriately repeated, memorable and strongly supported).	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated or is not memorable.	Central message can be deduced, but is not explicitly stated in the presentation.

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 4 –M.S.</b>  Critical thinking and application of inquiry and analysis <sup>3</sup>  Max. 36 points, min. 9 points	Has stated the research problem clearly, providing motivation for undertaking the research	Clear statement of the research problem with well stated associated rationale	Statement of research problem with associated rationale	Unclear statement of research problem OR rationale for undertaking the research is not well developed	Unclear statement of research problem AND rationale for undertaking the research is not well developed
	Demonstrated the potential value of solution to the research problem in advancing knowledge within the area of study	Clearly states the value of the proposed research	States the value of proposed research	Recognizes the value of the research but didn't state explicitly	Doesn't recognize the potential value of the proposed research
	Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem	Synthesizes in-depth information from relevant sources representing various points of view/approaches	Presents in-depth information from relevant sources presenting various points of view/approaches	Presents information from relevant sources representing limited points of view/approaches	Presents information from irrelevant sources representing limited points of view/approaches
	Research is creative and original with well-defined hypotheses or objectives	Highly creative and original with well-defined hypotheses or objectives	Somewhat creative and original with well-defined hypotheses or objectives	Research not very creative and original OR hypotheses or objectives not well-defined	Research neither creative nor original AND hypotheses or objectives not well-defined

	Has applied sound state-of-the-field research methods/tools to solve the defined problem and has described the methods/tools effectively	All elements of the methodology are skillfully developed. Appropriate methodology may be synthesized from across disciplines or from relevant subdisciplines	Critical elements of the methodology are appropriately developed, however, more subtle elements are ignored or unaccounted for	Critical elements of the methodology are missing, incorrectly developed, or unfocused	Design of experiments demonstrates a misunderstanding of the methodology
	Analyzed and interpreted research results/data effectively	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus	Organizes evidence to reveal important patterns, differences, or similarities related to focus	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities	Lists evidence, but it is not organized and/or is unrelated to focus
	Conclusions	Conclusions are logical extrapolations from the research findings	Conclusions focused solely on research findings.	Conclusions are so general that they apply beyond the scope of the research findings	Conclusions are ambiguous, illogical, or unsupported from inquiry findings
	Demonstrated awareness of broader implications and limitations of the concluded research	Insightfully discusses in detail relevant and supported limitations and implications	Discusses relevant and supported limitations and implications	Presents relevant and supported limitations and implications	Presents limitations and implications but they are possibly irrelevant and unsupported
	Has demonstrated capability for independent research in the area of study and expertise in the area, appropriate to the degree	Research was conceived and conducted independently and candidate has demonstrated a high level of expertise in the area	Research was conceived and conducted with minimal supervision. Candidate is confident in the area of research	Research topic and methodology was conceived with much supervision. Candidate shows some competence in the area	Research topic and methodology was provided to the student and candidate shows little expertise in the area

## SLO Achievement

These scores do not determine whether the student passes or fails the oral defense or the written thesis/dissertation. They are for the committee to consider when deciding on whether the student passes or not. All committee members should fill out a form and copies should be delivered to the Graduate Coordinator's office for deposit in the student's file.

Supervisory committee chair - please share the results of this evaluation with your student, either summarizing their strengths/weaknesses or showing the individual score sheets.

SLO 3 (oral communication skills) = \_\_\_\_\_ (maximum 20, minimum 5)

SLO 3 (written communication skills) = \_\_\_\_\_ (maximum 20, minimum 5)

SLO 4 (critical thinking ability) = \_\_\_\_\_ (maximum 36, minimum 9)

Additional comments (strengths/weaknesses):

<sup>1</sup> Taken from Written Communication VALUE Rubric – Association of American Colleges and Universities

<sup>2</sup> Taken from Oral Communication VALUE Rubric - Association of American Colleges and Universities

<sup>3</sup> Modified from Inquiry and Analysis VALUE Rubric - Association of American Colleges and Universities

**Written Dissertation and Oral Defense (PhD) and re-examination of content knowledge**

Student \_\_\_\_\_

Date \_\_\_\_\_

Committee member \_\_\_\_\_

<b>Student Learning Outcome</b>		<b>4 - Exemplary</b>	<b>3 - Proficient</b>	<b>2- Marginal</b>	<b>1 - Unacceptable</b>
<b>SLO 1</b> Identify insects, other arthropods and/or nematodes, and describe their relationship with the environment and humans (Max. points 48, min. 12)	<b>General knowledge in biology</b>	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content
	<b>General knowledge in entomology or nematology</b>	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content

	<b>In-depth knowledge in area of research specialization</b>	<input type="checkbox"/> All information presented is both accurate and relevant	<input type="checkbox"/> Nearly all information presented is accurate and relevant	<input type="checkbox"/> Many inaccuracies and some misinterpretation of content and largely irrelevant	<input type="checkbox"/> Inaccurate or misinterpreted content and almost entirely irrelevant
		<input type="checkbox"/> Question is answered fully	<input type="checkbox"/> Question is essentially answered	<input type="checkbox"/> Multiple aspects of question unanswered	<input type="checkbox"/> Question not answered
		<input type="checkbox"/> Proper use of terminology and citations	<input type="checkbox"/> Mostly proper use of terminology and citations	<input type="checkbox"/> Improper use of terminology and citations	<input type="checkbox"/> Misuse of terminology and citations
		<input type="checkbox"/> Insightful interpretation of the content	<input type="checkbox"/> Demonstrates clear understanding of the content without misinterpretation	<input type="checkbox"/> Misinterpretation of content	<input type="checkbox"/> Gross misinterpretation of content
<b>SLO 2</b> Discuss appropriate research methodology, including aspects of statistical design and analysis, in the execution of arthropod research  (Max. points 8, min. 2)	<b>General knowledge in statistics and experimental method</b>	<input type="checkbox"/> Answers all statistical questions correctly, in detail and logically	<input type="checkbox"/> Answers all statistical questions in some detail	<input type="checkbox"/> Attempts all statistical questions but has errors in answers	<input type="checkbox"/> Does not attempt to answer all statistical questions and/or has many errors
		<input type="checkbox"/> Answers all experimental methodology questions correctly, in detail and logically	<input type="checkbox"/> Answers all experimental methodology questions in some detail	<input type="checkbox"/> Attempts all experimental methodology questions but has errors in answers	<input type="checkbox"/> Does not attempt to answer all experimental methodology questions and/or has many errors

<b>SLO 3</b>  Written skills <sup>1</sup>  Max. 20 points, min. 5 points	<b>Context and purpose</b>	Demonstrates a thorough understanding of context, audience, and purpose that focuses all elements of the work.	Demonstrates adequate consideration of context, audience and purpose, and a clear focus of the work.	Demonstrates awareness of context, audience, and purpose of the work.	Does not demonstrate attention to context, audience, and purpose of the work.
	<b>Content development</b>	Consistently uses appropriate, relevant and compelling content to illustrate mastery of the subject, conveying the writer’s understanding.	Consistently uses appropriate, relevant, and compelling content to explore ideas within the subject.	Use appropriate and relevant content to develop and explore ideas throughout most of the work.	Does not use appropriate and relevant content to develop simple ideas.
	<b>Conventions</b>	Detailed attention to and successful execution of all conventions specific to the discipline (organization, content, presentation, formatting, style)	Consistent use of important conventions specific to the discipline.	Follows expectations appropriate for specific discipline for organization, content and presentation.	Does not use a consistent system for basic organization and presentation.
	<b>Sources and evidence</b>	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate.	Demonstrates consistent use of credible, relevant sources to support ideas.	Demonstrates an attempt to use credible and/or relevant sources to support ideas.	Does not use sources to support ideas.
	<b>Syntax and mechanics</b>	Uses language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers and has few errors.	Uses language that generally conveys meaning to readers with clarity but may include errors.	Uses language that sometimes impedes meaning because of errors in usage.

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 3</b> Oral presentation skills <sup>2</sup>  Max. 20 points, min. 5 points	<b>Organization</b> (specific introduction and conclusion, sequence of material in body, and transitions)	Organizational pattern is clearly and consistently observable, is skillful, and makes the content of the presentation cohesive	Organizational pattern is clearly and consistently observable	Organizational pattern is intermittently observable	Organizational pattern is not observable
	<b>Language</b>	Language choices enhance the effectiveness of the presentation and are appropriate for the audience.	Language choices generally support the effectiveness of the presentation and are appropriate for the audience.	Language choices partially support the effectiveness of the presentation and are appropriate for the audience.	Language choices are unclear and minimally support the effectiveness of the presentation and are not appropriate for the audience.
	<b>Delivery</b> (posture, use of pointer, eye contact, vocal expressiveness)	Delivery techniques make the presentation compelling, and speaker appears polished and confident.	Delivery techniques make the presentation interesting and speaker appears comfortable.	Delivery techniques make the presentation understandable, and speaker appears tentative.	Delivery techniques detract from the understandability of the presentation and speaker appears uncomfortable.
	<b>Supporting material</b> (explanations, examples, illustrations, figures, photos, diagrams, statistics)	A variety of supporting materials makes appropriate reference to information or analysis that significantly supports the presentation.	Supporting materials make appropriate reference to information or analysis that generally supports the presentation.	Supporting materials make appropriate reference to information or analysis that partially supports the presentation.	Insufficient supporting materials make reference to information or analysis that minimally supports the presentation.
	<b>Central message</b>	Central message is compelling (strongly stated, appropriately repeated, memorable and strongly supported).	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated or is not memorable.	Central message can be deduced, but is not explicitly stated in the presentation.

Student Learning Outcome		4 - Exemplary	3 - Proficient	2- Marginal	1 - Unacceptable
<b>SLO 5 – PhD</b>  Critical thinking and application of inquiry and analysis <sup>3</sup>  Max. 36 points, min. 9 points	Has stated the research problem clearly, providing motivation for undertaking the research	Clear statement of the research problem with well stated associated rationale	Statement of research problem with associated rationale	Unclear statement of research problem OR rationale for undertaking the research is not well developed	Unclear statement of research problem AND rationale for undertaking the research is not well developed
	Demonstrated the potential value of solution to the research problem in advancing knowledge within the area of study	Clearly states the value of the proposed research	States the value of proposed research	Recognizes the value of the research but didn't state explicitly	Doesn't recognize the potential value of the proposed research
	Demonstrates sound knowledge of literature in the area, and of prior work on the specific research problem	Synthesizes in-depth information from relevant sources representing various points of view/approaches	Presents in-depth information from relevant sources presenting various points of view/approaches	Presents information from relevant sources representing limited points of view/approaches	Presents information from irrelevant sources representing limited points of view/approaches
	Research is creative and original with well-defined hypotheses or objectives	Highly creative and original with well-defined hypotheses or objectives	Somewhat creative and original with well-defined hypotheses or objectives	Research not very creative and original OR hypotheses or objectives not well-defined	Research neither creative nor original AND hypotheses or objectives not well-defined
	Has applied sound state-of-the field research methods/tools to solve the defined problem and has described the methods/tools effectively	All elements of the methodology are skillfully developed. Appropriate methodology may be synthesized from across disciplines or from relevant subdisciplines	Critical elements of the methodology are appropriately developed, however, more subtle elements are ignored or unaccounted for	Critical elements of the methodology are missing, incorrectly developed, or unfocused	Design of experiments demonstrates a misunderstanding of the methodology

	Analyzed and interpreted research results/data effectively	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus	Organizes evidence to reveal important patterns, differences, or similarities related to focus	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities	Lists evidence, but it is not organized and/or is unrelated to focus
	Conclusions	Conclusions are logical extrapolations from the research findings	Conclusions focused solely on research findings.	Conclusions are so general that they apply beyond the scope of the research findings	Conclusions are ambiguous, illogical, or unsupported from inquiry findings
	Demonstrated awareness of broader implications and limitations of the concluded research	Insightfully discusses in detail relevant and supported limitations and implications	Discusses relevant and supported limitations and implications	Presents relevant and supported limitations and implications	Presents limitations and implications but they are possibly irrelevant and unsupported
	Has demonstrated capability for independent research in the area of study and expertise in the area, appropriate to the degree	Research was conceived and conducted independently and candidate has demonstrated a high level of expertise in the area	Research was conceived and conducted with minimal supervision. Candidate is confident in the area of research	Research topic and methodology was conceived with much supervision. Candidate shows some competence in the area	Research topic and methodology was provided to the student and candidate shows little expertise in the area

## SLO Achievement

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Supervisory committee chair - please share the results of this evaluation with your student, either summarizing their strengths/weaknesses or showing the individual score sheets.

SLO 1 (knowledge of discipline) = \_\_\_\_\_ (maximum 48, minimum 12)

SLO 2 (knowledge of statistical and research methodology) = \_\_\_\_\_ (maximum 8, minimum 2)

SLO 3 (oral communication skills) = \_\_\_\_\_ (maximum 20, minimum 5)

SLO 3 (written communication skills) = \_\_\_\_\_ (maximum 20, minimum 5)

SLO 5 (critical thinking ability) = \_\_\_\_\_ (maximum 36, minimum 9)

Additional comments (strengths/weaknesses):

<sup>1</sup> Taken from Written Communication VALUE Rubric – Association of American Colleges and Universities

<sup>2</sup> Taken from Oral Communication VALUE Rubric - Association of American Colleges and Universities

<sup>3</sup> Modified from Inquiry and Analysis VALUE Rubric - Association of American Colleges and Universities