Entomology Graduate Programs
GRADUATE STUDENT REQUIREMENTS
# CLEMSON UNIVERSITY

## Entomology Graduate Programs

### GRADUATE STUDENT REQUIREMENTS

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INTRODUCTION

Overview of the Handbook

These Graduate Student Requirements are provided to assist you in accomplishing your academic and career objectives and to help you comply with general requirements and expectations for all Entomology graduate students. The Requirements constitute an Entomology Graduate Program supplement to those rules and requirements described in The Graduate School Announcements, which you can find at www.registrar.clemson.edu/html/catalogGrad.htm or through the Graduate School office in Martin Hall E-108. Although the Requirements do not always provide absolute rules and procedures, you should understand that they do provide a statement of the Program's normal resources, requirements, and expectations; therefore, you should familiarize yourself with them completely. Your Major Advisor, the Entomology Graduate Coordinator, and other Entomology faculty members are available to help you understand the various aspects of the Requirements, but it is your responsibility to make best use of the resources and to comply with the Graduate School and Entomology Graduate Program requirements and expectations discussed here.

Contact Information

Program Coordinator: Dr. Michael Caterino
   Email: mcateri@clemson.edu
   Office: E254 Poole Ag Center

The Program Coordinator promotes the program and makes recommendations regarding graduate admissions offers. The Program Coordinator also oversees the regulations and procedures of the program, coordinates curriculum updates, and interacts with the Graduate School on matters such as student status, assistantships, and fellowships. After your Major Advisor, the Program Coordinator is your first contact should any issue arise regarding your academic progress or the program curriculum.

Program Admin. Assistant: Mrs. Tammy Morton
   Email: tmrtn@clemson.edu
   Office: 171 Poole Agricultural Center
   Phone: 864-656-4964

For a complete listing and description of faculty and staff, see Appendix 3. For available physical resources and materiel, see Appendix 4.

Program Mission

The mission of the Entomology Graduate Program at Clemson University is to support and encourage the graduate students, and to provide them with state of the art learning, research, and outreach experiences that will prepare them to become scientific pioneers and leaders in Entomology.

Note on Rules and Checklist

All items on the on-line checklist/progress report (see page 34) must be current to be eligible for awards supported by entomology endowments, scholarships, and fellowships; to receive Entomology Graduate Program support for nominations for College or University fellowships; or to receive Program support for any award nominations.

A checklist attached to this document (Appendix 1) summarizes the primary deadlines you will need to meet.
A. Admission to the Entomology Graduate Program

1. Inquiries about the Entomology Graduate Program are welcome and encouraged; these may be directed to the Entomology Graduate Program Coordinator or other Entomology faculty members (http://www.clemson.edu/cafsls/departments/aes/). Admission to the Entomology Graduate Program is accomplished under the regulations of the Clemson University Graduate School. All application materials (http://www.clemson.edu/graduate/admissions/apply/application.html) must be submitted to the Graduate School for processing.

2. All applications are reviewed by the members of the Entomology Graduate Program Admissions Subcommittee. This Subcommittee's recommendation concerning admission (Form PES/ED-1) is approved by the Entomology Graduate Coordinator and by the Graduate School, which has final authority on admissions.

3. The Entomology Graduate Program considers applications for M.S. and Ph.D. degree-seeking and non-degree seeking students. In special cases, the Entomology Graduate Program provides an option for a Master's en route to the Ph.D., once the student has been accepted into the M.S. degree program (see Section W below).

4. The following credentials and criteria are those that have been met or exceeded in most of the recently accepted applications for the Entomology Graduate Program:
   
a. Strong letters of recommendation from at least two referees familiar with the applicant's academic history;
   
b. A Grade Point Ratio (GPR) of at least 3.00 (on a 4.00 scale) or its equivalent in undergraduate coursework during the last two (2) years of continuous enrollment or the last 60 credit hours of discontinuous enrollment (M.S. degree candidates), or a GPR of at least 3.00 or its equivalent in graduate coursework;
   
c. A Graduate Record Examination (GRE) score of at least 160 for verbal and 150 for quantitative components, plus a score of 4.0 on the analytical writing portion;
   
d. For students from countries where English is not the official language, a score on the Test of English as a Foreign Language (TOEFL) of at least 90 on the internet-based, or 213 on the computer-based, or 550 on the paper-based examination (Sections 1, 2, and 3 combined). Graduate students or visiting scholars have been accepted with scores of 61-79 on the internet-based, or 173-212 on the computer-based, or 500-549 on the paper-based examination if other evidence of proficiency, such as strong letters from English language teachers, was available;
   
e. Ordinarily, a Master's Degree with a thesis requirement is expected of students admitted into the Ph.D. program. Students who wish to transit directly to a Ph.D. degree Program from a B.S. or B.A. must demonstrate competence in independent research and outstanding academic ability.
   
f. Other factors have predicted the ability of a student to benefit from graduate study in the Entomology Graduate Program and have influenced the Entomology Graduate Admissions Subcommittee to recommend provisional acceptance (M.S. degree applicants only) or full acceptance when some of the credentials and criteria above have been less than met. Examples of such factors have included high-quality publications or other evidence of scholarly work; strong recommendations by one or more Entomology Graduate Program faculty with whom the student would work; and compatibility of the applicant's career goals with the strengths of the Entomology Graduate Program.
   
g. To help the applicant and the Program discover important features about each other, the applicant is strongly urged to visit Clemson University and meet the Entomology Graduate Program's faculty, staff, and students.

5. Applicants whose applications have been accepted by the Graduate School are assigned (by the Entomology Graduate Program Coordinator) an Entomology Graduate Program Sponsor, who will serve as an advisor, advocate, and liaison for the student until he/she selects a Major Advisor.
or elects not to enroll in the Clemson University Graduate School.

6. International students:
   a. International students must certify access to a minimum of one year’s estimated expenses. See http://www.clemson.edu/campus-life/campus-services/international/for more details, or contact the International Affairs Office (E-303 Martin Hall, 001+(864)-656-3614).
   b. You are responsible for maintaining legal status with the US Department of Homeland Security during your studies. Form DS-2019 (J-1 exchange visitor visa certificate) is usually issued to students who are funded by their home government or by an international organization. If no organizational sponsor is involved, an I-20 (F-1 student visa certificate) will be issued. When your application to the Graduate School has been accepted and your language and financial abilities are certified, Campus Immigration Services will issue you an I-20 or DS-2019. Take this document to the nearest US Consulate to apply for a nonimmigrant student visa. For more information and details about applying for your visa, see the Campus Immigration Services website at http://www.clemson.edu/campus-life/campus-services/international/ or contact them at (864) 656-3614.
   c. If you are an international student receiving an assistantship, you must have your offer letter with you upon arrival. You should then go to the Social Security Administration in Anderson, South Carolina, for a Social Security Number, or meet with the Social Security Administration representative in Martin Hall on Clemson University’s campus on the dates indicated by the Graduate School. You should then see the Entomology Program Administrative Assistant. There you will be provided with the paperwork that you must take with your signed Social Security card to the Foreign National Payments Coordinator in E-303 Martin, who will complete the necessary paperwork to assist you with getting on the payroll. Be sure to bring the following:
      - U.S. Visa
      - Unexpired foreign passport
      - I94
      - IAP-66/I-20
   d. You must call for an appointment before going to the Foreign National Payments Coordinator’s office. The telephone number is (864) 656-5589.
   e. All new international graduate students must attend the Graduate School’s International Student orientation before the start of classes in the fall. Date, time, and location will be provided by the Graduate School and/or Entomology Program Coordinator.

7. Financial Information:
   a. For current tuition and fees, see http://www.clemson.edu/graduate/finance-tuition/index.html. Graduate assistants may choose to defer tuition and fees. This is accomplished easily on the day of registration. Persons in the fee assessment area will have a list of all graduate assistants. Anyone listed may sign a note to defer these costs, and these costs will be deducted from the first six full paychecks of the semester. For more information about academic costs, financial aid and making payments, contact the Office of Student Financial Aid (G-01 Sikes Hall, (864) 656-2280) or the Bursar’s Office (G-08 Sikes Hall, (864) 656-2321).
   b. Assistantships are awarded on a competitive basis to qualified students, both domestic and international. (See Section X: Entomology Graduate Program Financial Support for Graduate Students, below, for more detailed information.) Tuition and fees for students receiving support are a reduced flat fee. To receive the reduced tuition and fees for a particular semester, a qualified student must be on the department payroll by the end of the second week of that semester.
   c. If you have been awarded an assistantship, you must report to the Administrative Assistant handling Human Resources for the School at the beginning of your assistantship and
complete the following forms: information sheet, tax forms (federal and state), and I-9 Form. You will need to provide proof of nationality, Social Security number, age, etc. (usually by way of a passport, driver's license, birth certificate, or Social Security card [required]).

8. All graduate students are required to attend the Graduate School orientation held on the Sunday before classes start in the fall. The Entomology Graduate Program also provides an orientation at the start of each fall semester, which you must attend. The date, time, and location of the orientations will be provided to you shortly after you receive your admissions acceptance packet.

9. CU Student ID, Username, and TigerOne Card:
   a. Accepted graduate students will be issued a unique student identification number as part of the admissions acceptance packet. This Clemson University student identification number (CUID) will be used on official university documentation, including graduate school related forms.
   b. Accepted students will receive a unique 4-8 character identifier referred to as the ‘username’ or ‘USERID’ which will be used to access the Clemson University computer network. The USERID provides the Clemson email handle and access to systems including email, MyCLE/Blackboard, the Student Information System (SISWeb), and Graduate Program-specific networks, software, and files.
   c. Accepted students should procure a TigerOne Card as soon as possible following arrival. This card provides photo identification, and serves as a library card, access card for recreation (including athletic events and Fike Recreation Center), and other purposes. The card may be obtained from the TigerOne Card office in 111 Hendrix Student Center.

10. A university is a community of scholars dedicated to the inquiry into knowledge. It follows as a basic tenet that students will conduct themselves with integrity in academic pursuits. In instances where the academic standards may have been compromised, Clemson University has a responsibility to protect this process and to respond appropriately and expeditiously to charges of academic misconduct. As such, students should be familiar with the Graduate School's policy on academic integrity. Violations of integrity include, but are not limited to, cheating, fabricating/falsifying data, facilitating violations of academic integrity, failing to cite contributors, plagiarizing, and thwarting others’ progress. Violations of academic integrity will be dealt with through the Graduate Academic Integrity Committee (GAIC).

B. Graduate Student Advisors and Administrators

1. The Major Advisor
   a. The Major Advisor is chosen by the student, with the consent of the respective faculty member and the Entomology Graduate Coordinator (Form PES/ED-2).
   b. The Major Advisor, with concurrence of the Advisory Committee, advises a graduate student on the selection of courses, supervises and directs a M.S. or Ph.D. degree-seeking graduate student's thesis/dissertation research, and chairs all faculty committees that evaluate a degree-seeking student's academic progress.
   c. If a Major Advisor has not been determined at the time of enrollment, the Entomology Graduate Coordinator will appoint a temporary Advisor, usually the student's Sponsor. Students in this category should consult with members of the faculty and, by mutual agreement, select a Major Advisor by the end of the first semester of enrollment.
   d. An Entomology Graduate Program faculty member who is stationed far from campus may serve as Co-Major Advisor for a graduate student provided that a Co-Major Advisor is stationed on the Clemson University main campus. Whenever there is more than one Major Advisor, one Co-Major Advisor will be designated the Principal Co-Major Advisor to chair Advisory Committee meetings and to function in other official ways as Major Advisor.

   Whenever a student is stationed substantially at a location far from his or her Major Advisor, a Co-Major Advisor must be designated who is stationed at the same place as the student.
e. Clemson University has ruled that no Emeritus faculty member may serve as a sole primary
advisor to a degree-seeking student. Therefore, any student whose Major Advisor holds
emeritus status must also establish a Co-Major Advisor. The latter will serve as Principal Co-
Major Advisor, with regard to official paperwork and signatory authority.

2. The Graduate Advisory Committee
   a. A degree-seeking student’s Advisory Committee is chaired by the Major Advisor and consists
      of at least two (2) additional faculty members for the M.S. degree and at least three (3)
      additional faculty members for the Ph.D. degree. At least one (1) of these members (for both
      M.S. and Ph.D. degree Advisory Committees) must be chosen from outside the Entomology
      Graduate Program. At least two (2) members of the Advisory Committee must be voting
      faculty of the Entomology Graduate Program, as defined by the School bylaws. The Advisory
      Committee shall be selected by the student in consultation with the Major Advisor and
      approved by the Entomology Graduate Program Coordinator (Form PES/ED-2).
   b. The purpose of the Advisory Committee is to advise the student concerning academic and
      research matters, evaluate the student’s progress, administer examinations, and evaluate the
      student’s thesis research.
   c. This Committee should meet with the student as soon as feasible to discuss his/her proposed
      curriculum and tentative research program. The meeting should occur before the second
      semester of enrollment, usually at the occasion of the Assessment Examination.
   d. A change in the membership of the Advisory Committee can be requested by the student or a
      Committee member, but must meet the approval of all concerned. In the event of a conflict,
      the person requesting the change will prepare a written petition for the Major Advisor and
      Graduate Coordinator, justifying the desired change in membership. The Entomology
      Academic Program Committee will attempt to find a mutually acceptable compromise and, if
      unsuccessful, will appoint an arbitration committee to advise the student. The decision of the
      Academic Program Committee will be final.

3. The Entomology Graduate Program Coordinator (Graduate Coordinator)
   a. The Graduate Coordinator is Chairperson of the Academic Programs Committee (B.4.,
      below).
   b. The Graduate Coordinator is responsible for administration of the admissions procedures for
      graduate students (from the time a completed application and application fee are received
      until a Sponsor or Major Advisor is selected) and administration of the Requirements policies
      (including supervision of graduate student compliance with the Requirements). The Graduate
      Coordinator approves recommendations for admissions to the Graduate School.
   c. The Coordinator approves (acts as signatory authority) the graduate student Plan of Study
      (Form GS-2).
   d. The Graduate Coordinator endorses the results of graduate student Assessment
      Examinations (Section C, below; Form PES/ED-2).
   e. The Coordinator acts as a final reviewer on all Annual Graduate Student Progress Reports
      (Form PES/ED-4).
   f. The Coordinator conducts exit interviews with outgoing Entomology students, except in cases
      where students request the interview to be conducted by another administrator of the
      Department of Agricultural and Environmental Sciences (e.g., due to perceived conflict of
      interest).
   g. The Graduate Coordinator represents the Entomology Graduate Program to the Graduate
      School and campus.
   h. The Coordinator may call for meetings to discuss strategic planning of the Entomology
      Graduate Program.
i. The Coordinator is responsible for development and submission of outside reviews (e.g., annual SACS review) of the Program, and for disseminating findings to the Program faculty.

4. The Academic Programs Committee

a. The Academic Programs Committee interprets the policies of these Requirements, grants waivers of these Requirements in special cases, and recommends to the Entomology Graduate Program Faculty changes to these Requirements. Students or faculty with requests for interpretation, waivers, or changes of the Requirements should make them to the Graduate Coordinator.

b. The Graduate Admissions subcommittee reviews applications to the Entomology Graduate Program and recommends acceptance or rejection to the Graduate School (Form PES/ED-1).

C. Assessment Examination (Form PES/ED-2)

1. All incoming graduate students will be required to take an Assessment Examination that covers basic science and general knowledge and the student's comprehension of the scientific method.

2. The examination will be administered by the student's Advisory Committee. The exam will be given prior to the beginning of the second regular (fall or spring) semester of enrollment.

3. The examination will test the following aspects:
   a. It will test the student's general knowledge.
   b. It will test the student's understanding of the scientific method and general scientific concepts and the student's ability to generalize and synthesize from different scientific disciplines, and his/her understanding of entomological subjects.

4. The report of the examination (Form PES/ED-2) is to be entered into the student's Entomology Graduate Program file. It is signed by the Major Advisor and the Advisory Committee members, and is to be endorsed by the Graduate Program Coordinator. A report must be filed for each examination.

D. Program Planning Review

1. Immediately following the Assessment Examination, a Program Planning Review will be administered by the student's Advisory Committee, whether or not the graduate student received previous degrees from Clemson University.

2. The purposes of the Review will be as follows:
   a. It will assist the Major Advisor and Advisory Committee to formulate a plan to overcome deficiencies identified in the Assessment Examination and relevant to the student's career objectives.
   b. It will assist the Major Advisor and Advisory Committee to outline a Plan of Study (Form GS-2) and a research program consistent with the student's career objectives.
   c. It will serve as a basis in the final and/or comprehensive examinations for assessment of student progress in knowledge, skills, and attitudes attributable to the graduate program.
   d. This meeting will serve as an annual committee meeting and be so indicated on Form PES/ED-2.

3. At least one week prior to the Assessment Examination and Program Planning Review, the student will provide his/her Major Advisor and each member of his/her Advisory Committee the following materials:
   a. A brief statement of the student's career objectives.
   b. A list of science and mathematics courses (and any other courses especially relevant to their stated career objectives) that were taken previously in college or graduate school and the
grade received for each.

c. A list of courses the student anticipates undertaking in his/her proposed graduate degree program.

d. A preliminary general research plan. (This is not yet expected to be a fully developed Research Plan—see Section I., below; Form PES/ED-3.)

E. Plan of Study (Form GS-2)

1. The Plan of Study (Form GS-2) is a listing of the courses that a student plans to complete and apply toward the minimum credits required for the particular degree program (Sections E.3., F, G, and H, below). It should list at least six (6) credits of thesis research (ENT 8910) in the case of M.S. students, or at least eighteen (18) credits of doctoral research (ENT 9910) for Ph.D. students. For M.S. students, one-half or more of the remaining credits should be courses with 800-level or higher course numbers.

2. The graduate student's Plan of Study should be developed as completely as possible in conjunction with the Program Planning Review; a Preliminary Plan of Study is sufficient, and should be filed as so (with Preliminary noted on the GS-2 form). This plan should be completed, approved by the Advisory Committee and the Entomology Graduate Coordinator, and Dean of the College of Agriculture, Forestry, and Life Sciences, and forwarded to the Graduate School before the beginning of the student's second regular semester. As part of the planning process, a schedule of anticipated milestones will be recorded on the student's CHECKLIST/PROGRESS REPORT.

3. In addition to the minimum credits listed below, all students must satisfy coursework recommended by the Advisory Committee and any Core Courses (Sections E, F, and G) required for the particular degree program.

a. M.S. - A minimum of twenty-seven (27) semester hours of graduate credit (exclusive of thesis research) and six (6) semester hours of thesis research (ENT 8910) are required. At least one-half of the total graduate credit hours (exclusive of research credits) required by the advisory committee must be selected from courses numbered at the 8000 level or above.

b. Ph.D. – The Graduate School requires that Ph.D. students receive ≥30 hours of coursework beyond the M.S. degree (if previously awarded), or ≥ 60 hours beyond that of the B.S./B.A., if the student has not previously obtained an M.S. Doctoral degree advisory committees are encouraged to require courses other than those that directly support the dissertation research. Eighteen (18) or more hours of doctoral research (ENT 9910) are required, along with Entomology Graduate Program Core Courses and any other requirements established by the student's Advisory Committee.

F. M.S. Degree Core Curriculum

1. Prerequisites: The M.S. Degree Program in Entomology is designed for students who have completed satisfactorily a B.S. or B.A. degree at an accredited 4-year baccalaureate-granting institution and who have been admitted to the Graduate School. Prerequisite courses, such as a general entomology course, peculiar to the needs and goals of the student, as identified by the student and his/her Advisory Committee, also may be required. These courses may be undertaken while the student is enrolled in the M.S. Degree Program in Entomology.

2. Objective: The M.S. Degree Program in Entomology is designed to produce well-rounded entomologists knowledgeable in the fundamentals of insect diversity, structure, and function and in the broad spectrum of modern entomological science and scientific research.

3. Courses: To accomplish this objective, a minimum core of courses is to be undertaken by each M.S. Degree candidate in Entomology. These are as follows:
<table>
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<tr>
<th>Level</th>
<th>6000</th>
<th>8000</th>
<th>Minimum Total</th>
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<tr>
<td>ENT 6000 Insect Morphology</td>
<td>4</td>
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<tr>
<td>ENT 8700 Insect Physiology &amp; Molecular Biology&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>Insect Systematics/Biochemistry&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3</td>
<td>3</td>
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<tr>
<td>ENT 8090 Seminar in Entomology&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3</td>
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<tr>
<td>ENT 8100 Special Topics (Discussion)&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3</td>
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<tr>
<td>STAT 8010 Statistical Methods</td>
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<tr>
<td>Electives&lt;sup&gt;e&lt;/sup&gt;</td>
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<td>3</td>
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<tr>
<td><strong>Minimum Subtotal</strong></td>
<td>7</td>
<td>20</td>
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<tr>
<td><strong>ENT 8910 Master’s Thesis Research</strong></td>
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<tr>
<td><strong>MINIMUM TOTAL&lt;sup&gt;f&lt;/sup&gt;</strong></td>
<td>7</td>
<td>26</td>
<td>33</td>
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<sup>a</sup>A course or proficiency in genetics and at least one of the following additional areas are deemed helpful: molecular biology, cell biology, developmental biology, or biochemistry.

<sup>b</sup>To satisfy the requirements for Insect Systematics/Biochemistry, two courses must be selected from the following, at least one of which must be either ENT 6150 or ENT 8080:

- ENT 6150 Insect Taxonomy,
- ENT 6690 Aquatic Insects,
- ENT 6950 Insect Biotechnology,
- ENT 8080 Taxonomy of Immature Insects,
- ENT 8530 Applied Systematics,
- BIOCH 6230 Principles of Biochemistry, or
- BIOSC 6610 Cell Biology.

<sup>c</sup>Seminar is to be taken each semester for Pass/Fail credit (ENT 8090 Seminar in Entomology). That is, more than three (3) credits of ENT 8090 may be taken, depending on the number of semesters that a student is in residence. If the student has a scheduled, weekly extenuating circumstance that prevents participation in the seminar, the student may substitute, with the Advisory Committee’s documented permission, another seminar program (e.g., Biological Sciences) for the semester.

<sup>d</sup>Students pursuing an M.S. degree are required to take 3 semester hours of a “Journal Club” course. For purposes of this curriculum, a “journal club” course refers to a course that is predominantly centered around data extraction and analysis, via student-led discussions, critiques, and presentations. Although historically ENT 8100 has served this purpose, courses other than ENT 8100 may be substituted if deemed appropriate and documented by the student’s Advisory Committee.

<sup>e</sup>Electives may be selected from Entomology or other disciplines pertinent to the student's area of study, as determined by the student and the Advisory Committee. Some of these electives may be other than 8000-level courses, but see the following note.

<sup>f</sup>Additional courses may be required by the student's Advisory Committee. For M.S. degree candidates only, when these courses are to be listed on the Graduate Degree Curriculum (Form GS-2), there should not be more credits of 6000-level courses than of 8000-level courses, exclusive of thesis research. Other courses that are undergraduate courses or courses that are considered deficiencies are not included in this calculation and are listed separately on the Form GS-2.

<sup>a</sup>A. Variations in these M.S. degree prerequisites and course expectations may be recommended by the student's Advisory Committee and approved by the Graduate Admissions and Policy Committee and the Graduate Coordinator (Section H.3., below).
b. A graduate student must maintain a minimum overall average of B (3.0) for all courses taken, and a B average in all courses listed on the Plan of Study (Form GS-2). If at any time the student fails to meet this requirement, the student will be automatically placed on academic probation for one semester, during which time the student will not be eligible for financial aid or assistance. A student is permitted only one probationary semester during the entire course of the graduate tenure. In addition, a failing grade (D or F) in any course may be cause for outright dismissal regardless of overall average.

G. Ph.D. Degree Core Curriculum

1. The Ph.D. Degree Program in Entomology is designed for students who have completed satisfactorily
   a. A B.S. or B.A. degree at an accredited 4-year baccalaureate-granting institution or a M.S. degree at an accredited graduate-degree-granting institution. Ordinarily, a Master's Degree with a thesis requirement is expected of students admitted into the Ph.D. program. Students who are exceptions to this expectation must have demonstrated competence in independent research and outstanding academic ability.

   b. Admission to the Graduate School.

   c. Other prerequisite courses peculiar to the needs and goals of the student, as identified by the student and his/her Advisory Committee, may also be recognized. These other prerequisite courses and the general entomology course may be undertaken while the student is enrolled in the Ph.D. Degree Program in Entomology.

2. Objective: The Ph.D. Degree Program in Entomology is designed to prepare students to be well-rounded research scientists who are respected nationally and internationally for their competence and productivity in insect science and related interdisciplinary fields.

3. Courses: To accomplish this objective, a minimum core of courses is to be undertaken by each Ph.D. degree candidate, which consists of the core courses of the M.S. Degree Program and structured electives*** that support the research of the candidate. The core courses of the M.S. Degree Program are cited in Section F.3. above. For the Ph.D. Degree Program, the exceptions to this list of core courses are that
   a. students pursuing a Ph.D. are required to take 5 semester hours of a “Journal Club” course, and

   b. at least 18 credits of Doctoral Dissertation Research (ENT 9910) are required [instead of 6 credits of Master's Thesis Research (ENT 8910)].

***Electives are to be structured courses selected from Entomology or other disciplines pertinent to the student's area of study, as determined by the student and the Advisory Committee. If a Ph.D. degree-seeking student has not first obtained an M.S. degree, the student should expect to undertake a total of at least 45 credits of structured courses, including at least the structured M.S. core courses, with sufficient electives to make the difference. This requirement is subordinate to the Graduate School requirement that all such students must pursue a minimum of 60 credit hours beyond the B.S./B.A. degree.

4. Variations in these prerequisites and course expectations for the Ph.D. degree may be recommended by the student's Advisory Committee and approved pursuant to Section H.

H. Waiver of Course Requirements

1. A student who has undertaken, at another institution, a course equivalent to one of the structured courses listed in Sections F.3. and G.3. (above) may exempt the required course by demonstrating competency and/or providing evidence of equivalency to his/her Advisory Committee and the faculty member responsible for that subject area. The responsible faculty member for that subject area will file a memorandum stating the recommendation for the
2. When determined necessary by the Advisory Committee or core-course faculty member, a special examination may be offered to meet these requirements. Such examinations should be scheduled with the consent of the Major Advisor and Graduate Coordinator, and the Graduate Coordinator will appoint the examiner. The examiner will transmit a memorandum stating his/her recommendation to the Graduate Coordinator for the student's file. In the case of M.S. Degree students, because of Graduate School requirements, such waived courses must be substituted with structured courses that satisfy the Graduate School rule regarding 6000- and 8000-level courses; these substitute courses are to be approved by the student's Advisory Committee and the Graduate Coordinator, compatible with the student's goals and needs.

3. Waiver of a structured core curriculum course can be accomplished only by concurrence of the Advisory Committee and the Graduate Academic Programs Committee.

I. Research Proposal (Form PES/ED-3)

1. All students who are required to complete a Master's Thesis or Doctoral Dissertation should submit a detailed research proposal to their Advisory Committee for recommendations and approval by the end of the first full semester of enrollment. The requirement is important because it describes the proposed subject matter of the student's thesis/dissertation, provides a means for assessing its feasibility, and gives the student valuable preparatory experience for grant-proposal writing. Initial plans for the research and format for the proposal should be discussed with the Advisory Committee in advance, usually at the time of the Assessment Examination.

2. This proposal should follow the format recommended by the Advisory Committee and include the following:
   a. A thorough literature review,
   b. Research needs or problems, hypotheses, and objectives of the research,
   c. The experiment design, methods, and statistical analyses that will be used in the collection, analysis, and interpretation of data, with a schedule for their accomplishment, and
   d. A budget of anticipated expenses.

3. A hard copy of the proposal must be attached to a completed Form PES/ED-3 and be placed in the student's Entomology Graduate Program file upon its completion.

J. Annual Progress Reports (Form PES/ED-4)

1. To help the student sustain optimum progress toward completion of his/her degree, the student must arrange a meeting with the Advisory Committee at least once in each 12-month period to determine that satisfactory progress is being made in his/her program, both in research and coursework, and a written statement to that effect (completed Form PES/ED-4), signed by the Major Advisor and all Advisory Committee members, and reviewed by the Program Coordinator, will be placed in the student's file following each such meeting with the Advisory Committee.

2. The student should supply the Advisory Committee with a written progress report one week prior to each meeting, which will be attached to the completed Form PES/ED-4.

K. Residency (Form PES/ED-5)

1. All degree-seeking graduate students must satisfy residency requirements of the Graduate School and the Entomology Graduate Program. Evidence of satisfying this requirement will include completion of Form PES/ED-5 for the student's Entomology Graduate Program file.
   a. M.S. Students: Residency is satisfied by completion of nine (9) hours of graduate credit (including ENT 8910) during a single semester or two consecutive summer sessions, or completing fifteen (15) hours of graduate credit (including ENT 8910), on the Clemson University campus.
   b. Ph.D. Students: Residency is satisfied by compliance with Graduate School Requirements.
Form PES/ED-5 can be used to satisfy any necessary reporting requirements for the Graduate School, regarding residency.

L. Teaching Requirement (Form PES/ED-6; Ph.D. degree-seeking students only)

1. To help attain the poise and organizational skills anticipated in professional entomologists holding the Ph.D. degree, each Ph.D. student is required to assist with the teaching of at least one course for at least one semester.

2. This assistance must involve more than mere laboratory preparation. The Advisory Committee, in conjunction with the course instructor, will decide how the student will best satisfy this obligation.

3. Evidence of satisfying this requirement will include completion of Form PES/ED-6 for the student's Entomology Graduate Program file.

M. Dissemination of Novel Research Findings Requirement

1. Refereed Publication Requirement (Form PES/ED-7)
   a. To help attain the publication record expected of professional entomologists holding the M.S. or Ph.D. degree, each degree-seeking graduate student is required to prepare, as a first, senior, or sole author, at least one manuscript for publication to a refereed scientific journal before submission of the GS-7M/D.
   b. The manuscript must be based on work conducted while enrolled in the student’s current degree program in the Clemson University Entomology Graduate Program.
   c. Prior to submission to a refereed journal, the manuscript must be submitted for Entomology Graduate Program review. To facilitate the review process, manuscripts must be submitted for Program review at least three weeks before the deadline for submission of the GS-7M/D.
   d. For doctoral students, at least one manuscript must be accepted by the refereed journal before submission of the GS-7D.
   e. Evidence of satisfying this requirement will include completion of Form PES/ED-7 for the student's Entomology Graduate Program file. A copy of the notice of manuscript receipt or acceptance by the journal must be attached to Form PES/ED-7.

2. Oral Presentation Requirement (PES/ED-9)
   a. Each M.S. degree student is required to present orally at least one (1) paper at a professional meeting.
   b. Each Ph.D. degree candidate is required to present orally at least two (2) papers at professional meetings.
   c. Evidence of satisfying this requirement consists of completion of Form PES/ED-9, to which should be attached a photocopy of the title from the program of the meeting in which the presentation was given.

N. Seminar Requirements

1. Each M.S. or Ph.D. degree student is required to take seminar each fall and spring semester for Pass/Fail credit (ENT 8090 Seminar in Entomology); i.e., several credits of ENT 8090 may be taken, depending on the number of semesters that a student is in residence.

2. Taking ENT 8090 includes the expectation that students will participate in discussions and meetings with all seminar speakers.

3. If the student has a scheduled, weekly extenuating circumstance that prevents participation in the seminar, the student may substitute, with the Advisory Committee’s documented permission, another seminar program (e.g., Biological Sciences) for the semester.

4. Each M.S. or Ph.D. degree student is required to present an exit seminar to the Program on the
results of the thesis/dissertation research after the research has been completed and prior to graduation. This seminar must be given as the initial part of a Final Oral Examination, with all faculty and students invited for the presentation.

O. Public Service Requirement (PES/ED-10)
1. Each graduate student must participate in at least one public service activity for each year of his or her residency.
2. Public service is defined as a non-research activity that transmits entomological knowledge to members of the public.
3. Evidence of satisfying this requirement consists of completion of a copy of Form PES/ED-10 for each year of the student's graduate program.

P. Preparation and Submission of Curriculum vitae
1. A curriculum vitae (CV) is an essential component to presenting professional qualifications, as well as ensuring that student accomplishments are noted by Program, College, and University administration. As such, all Entomology Graduate Program students will maintain an updated CV in their folder.
2. An updated CV is required to be submitted no later than September 1 of each calendar year, beginning with the student's second year.

Q. Comprehensive Examination (Form GS-5D; Ph.D. Students Only)
1. A requirement for the Ph.D. degree in Entomology is the successful completion of a written and oral Comprehensive Examination. The purpose of the examination is to
   a. evaluate the student's basic scientific comprehension and his/her knowledge of current issues in science and world events, and
   b. test the student's understanding of the significance of his/her research program, and the intellectual and technical problems associated with it, as exemplified by his/her knowledge of scientific literature and ability to synthesize and analyze it.
2. The examination will be administered by the Advisory Committee, which will decide the date of the exam. The Comprehensive Examination must occur no more than four (4) years from the time of initial enrollment in the Entomology Graduate Program, no less than six (6) months and no more than five (5) years prior to the date of graduation. By this time, the following progress should have been accomplished:
   a. the majority of course requirements in the degree program have been met, and
   b. the student's dissertation research has progressed sufficiently to stand critical assessment by the Advisory Committee.
3. Any Clemson University faculty member may participate in the Comprehensive Examination. All faculty in the Entomology Graduate Program, except off-campus Adjunct Faculty, all members of the student's Advisory Committee, and the Dean of the Graduate School specifically receive an invitation from the Major Advisor.
4. Faculty are to submit to the student's Major Advisor written questions by the deadline indicated in the Examination announcement. In so doing, they are to indicate a time limit for answering their questions and whether their questions are to be answered with assistance of any written information ("open book") or without assistance ("closed book").
5. Ordinarily, written examinations from all faculty, including Advisory Committee members and others, are to be completed within three (3) weeks. The oral portion of the Comprehensive Examination should be scheduled to occur within two (2) weeks of completion of the last set of written questions.
   a. The results of each written examination will be reported in writing to the Major advisor who
will, in turn, discuss the decisions with the student. The decision options from each examiner should be either (1) Passed or (2) Repeat This Particular Written Examination (one time only).

b. Based on the results of the written part of the examination, the Major Advisor may declare a delay in the schedule of the oral examination to accommodate a repeat written examination and further preparation for the oral examination by the student.

6. The results of the Comprehensive Examination, reported to the Graduate School on Form GS-5D, will be one of the following:

a. Pass - The student will be recommended for admission to candidacy for the Ph.D. degree.

b. Failure - Should the student fail to pass the Comprehensive Examination, he/she may be given a second opportunity, if so recommended by the Advisory Committee. A second failure shall result in the student being declared ineligible to receive the Ph.D. degree in Entomology at Clemson University.

R. Final Thesis and Dissertation Preparation (M.S. and Ph.D. Degrees) (Form PES/ED-8)

1. The process of writing a thesis or doctoral dissertation, which must ultimately be accepted by the Graduate School, usually includes the following phases:

a. The graduate student develops a complete and comprehensive thesis or dissertation manuscript that is acceptable to his/her Major Advisor. The student can expect to go through several drafts before it is accepted and should allow 2 or 3 weeks for review by the Major Advisor per submission.

b. Once the thesis manuscript is approved by the Major Advisor for review, a review sheet (Form PES/ED-8) bearing the advisor's signature and accompanied by a hard copy of the thesis/dissertation manuscript will be sent to each Advisory Committee member. Advisory Committee members are to refuse to review a manuscript not bearing a signed Form PES/ED-8. The manuscript must be provided to the members of the Advisory Committee no less than three weeks prior to the scheduled date of the final examination and must be refused by Advisory Committee members if received after that date. If any Committee member requests revision with subsequent Committee member review, a revised copy, along with its respective review sheet will be returned to the Committee member for an additional review period of one week. Specific reasons must be cited if major revisions of the manuscript are recommended.

2. The thesis/dissertation manuscript must be submitted for Entomology Graduate Program Faculty review, through an advisor-approved copy in the front office, no less than three (3) weeks prior to the scheduled date of the final examination.

3. Prior to submission of the final draft of the thesis or dissertation document to the Graduate School, each member of the Advisory Committee shall sign the Form GS-7M/D, signifying that all of their suggestions, corrections, etc. have been satisfactorily incorporated into the final copy.

S. Voucher Specimens from Thesis or Dissertation Research (Form PES/ED-8)

1. Representative vouchers of all subject insects studied for M.S. theses and Ph.D. dissertations are to be deposited in a suitable permanent institution according to its established procedures and are to be referenced in the thesis or dissertation. (The value of this career-long practice has been noted often in the Bulletin of the Entomological Society of America [e.g., 1975, vol. 21, pp. 157-159; 1978, vol. 24, pp. 141-142; 1984, vol. 30, no. 4, pp. 8-11], to which articles the student should refer for details.)

2. The Clemson University Arthropod Collection is prepared to maintain voucher specimens. Students should consult with the Collection's curator or technical staff for labeling and deposition procedures.

3. Reference to the number of voucher specimens, their life history stage(s) or sex(es), and the institutional repository is to appear typically in the "Materials and Methods" section of the thesis or
dissertation.

T. Intent to Graduate (Letter from Student)

1. No later than the end of the semester before the semester that the student submits the Application for Graduation and Diploma Order (Form GS-4) to the Graduate School, he/she must submit a letter with an up-to-date checklist to the Entomology Graduate Program Coordinator, requesting approval to graduate.

2. The letter should declare formally that the student intends to graduate the ensuing semester and agrees to complete all remaining departmental requirements in accordance with the Entomology Graduate Student Requirements.

3. If any deficiencies in Entomology Graduate Program requirements are identified, a point-by-point plan for resolving each deficiency should be included in the letter, and the letter must be signed by the student's major advisor.

4. The Entomology Graduate Program Coordinator will present the student's letter, academic file, and checklist to the Entomology Faculty at the soonest opportunity, or no later than prior to the end-of-semester College Faculty Meeting. The faculty will vote to approve or disapprove the student's graduation.

5. Oversight of the completion of any outstanding Programmatic requirements rests with the student's advisor and advisory committee.

U. Final Examination for the M.S. Degree (Form GS-7M)

1. The date and place for the final examination are scheduled by agreement of the student and his/her Major Advisor in consultation with all Advisory Committee members and those responsible for the examination room. The exam is advertised to all current AES faculty, staff and students, Advisory Committee members, and the Deans of the College of Agriculture, Forestry and Life Sciences and of the Graduate School at least ten (10) days before the exam. Student must fill out the form found at http://www.clemson.edu/graduate/calendar/defense-form.html in order to notify the Graduate School and Enrolled Services. Provide information to administrative assistant in department so that faculty and students can be notified as well.

2. Nature and Content of Final Examination:
   a. Each candidate for the Master's Degree, after completion of the thesis and at least three (3) weeks before the degree is to be awarded, must pass a Final Oral Examination administered by the student's Advisory Committee.
   b. The student should be prepared to give a summary of his/her research (limited to 45 minutes) at the final examination. The presentation is the only portion of the final examination process open to the public. Attendees are encouraged to ask questions and requested to provide written evaluation of the student's presentation (Exit Seminar Evaluation; Form SACS-2a).
   c. The first part of the examination will provide opportunity for the candidate to defend his/her thesis.
   d. The second part of the examination will ascertain the general knowledge of the candidate with particular reference to the major field of study and any minor subjects. In addition, questions will be asked on any of the subject areas recognized as deficient in the Assessment Examination.

3. Any Clemson University faculty member may participate in the Final Examination. All Faculty in AES (except off-campus Adjunct Faculty), all members of the student's Advisory Committee, and the Dean of the Graduate School specifically receive an invitation from the Major Advisor.

4. Results of the Final Examination will be one of the following:
   a. Pass - The student's performance was satisfactory.
      a) Note: A vote to pass a student based on his/her performance at the Final
Examination (Form GS-7M) does not imply approval of the thesis; signatures may be postponed until the thesis meets all criteria.

b. Failure - A student who fails a final examination may be allowed a second opportunity in a subsequent semester only with the recommendation of the Advisory Committee. Failure of the second final exam will result in dismissal from the Graduate School.

V. Final Examination for the Ph.D. Degree (Form GS-7D)

1. The date and place for the final examination are scheduled by agreement of the student and his/her Major Advisor in consultation with all Advisory Committee members and those responsible for the examination room. The exam is advertised to all current AES faculty, staff and students, Advisory Committee members, and the Deans of the College of Agriculture, Forestry and Life Sciences and of the Graduate School at least ten (10) days before the exam. Student must fill out the form found at http://www.clemson.edu/graduate/calendar/defense-form.html in order to notify the Graduate School and Enrolled Services. Provide information to administrative assistant in department so that faculty and students can be notified as well.

2. The student should be prepared to give a summary of his/her research (limited to 45 minutes) at the final examination. The presentation is the only portion of the final examination process open to the public. Attendees are encouraged to ask questions and requested to provide written evaluation of the student's presentation (Exit Seminar Evaluation; Form SACS-2a).

3. Nature and Content of Final Examination:

   1) The majority of the Final Examination for the Ph.D. degree will consist of a defense of the student's dissertation. In addition, general questions may be asked, and questions will be asked for any subject areas recognized as deficient in the Comprehensive Examination.

4. Any Clemson University faculty member may participate in the Final Examination. All Faculty in AES (except off-campus Adjunct Faculty), all members of the student's Advisory Committee, and the Dean of the Graduate School specifically receive an invitation from the Major Advisor.

5. Results of the Final Examination will be one of the following:

   a. Pass - The student's performance was satisfactory.

      a) Note: A vote to pass a student based upon his/her performance at the Final Examination (Form GS-7D) does not imply approval of the dissertation; signatures may be postponed until the dissertation meets all criteria.

   b. Failure - A student who fails a final examination may be allowed a second opportunity in a subsequent semester only with the recommendation of the Advisory Committee. Failure of the second final exam will result in dismissal from the Graduate School.

W. Change of Degree Program (Form GS-14)

1. Once admitted to a particular degree program, a student cannot change to another degree program without a complete review of his/her application by the Entomology Graduate Program Admissions Committee and Department Chair of the department in which the student now intends to major.

2. In general, students will not be permitted to change from the Master’s of Science (M.S.) to the Doctor of Philosophy (Ph.D.) degree program in Entomology prior to completing all requirements of the M.S. degree.

3. Highly qualified M.S. students may petition their advisory committee to participate in a "Master's en route to the Ph.D." program. Requests may be made after significant progress has been achieved toward the M.S. degree, generally after nine months from the date of acceptance into the M.S. program. A recommendation is made by the requesting student's committee to the Entomology Program's Graduate Admissions Committee, which makes the final decision. Students who are approved for a Master's en route program must comply with all Graduate
School requirements for the M.S. degree (e.g., coursework) and must complete all requirements outlined above for the M.S. degree (including publication and presentation requirements), except the requirement of a thesis. Master’s research completed at the time of entry into the Ph.D. program may be included in the dissertation, at the discretion of the student’s advisory committee.

X. Entomology Graduate Program Financial Support for Graduate Students

1. Financial support depends on availability of funds. Applicants are encouraged to contact prospective advisors for information on funding for research and assistantship support.

2. In no instance shall a firm financial commitment be made to a student, nor construed by the student, until all admission requirements of the Program have been met and he/she has been officially admitted by the Graduate School. A letter providing specifics of financial support, including expectations shall be provided to the student, signed by both the student and advisor, and a copy inserted in the student’s Entomology Graduate Program folder.

3. Failure of the student to maintain an overall or Course of Study GPA of ≥3.0 is sufficient basis for immediate withdrawal of financial support as described in Section F.3.b, M.S. Degree Core Curriculum.

4. Continuation of assistantship support, regardless of source, is contingent on satisfactory progress toward research and academic goals, as reported by the student’s Advisory Committee and a satisfactory rating by the assistantship supervisor in the report of the annual committee meeting (Form PES/ED-4).

5. M.S and Ph.D. degree-seeking students who are graduate assistants must each enroll for at least nine (9) semester hours each fall and spring semester and at least six (6) semester hours during Long Summer Session.

6. A change of research area and/or Major Advisor may result in review and possibly cancellation of financial support.

Y. Exit Interview Requirement

1. Each graduate student must schedule an Exit Interview with the Entomology Program Coordinator prior to departure from the University. If the student feels there is a conflict of interest in this relationship, then he/she must schedule an interview with the current Division or School Chair/Director and notify the Entomology Graduate Program administrative assistant.

2. The purpose of the Exit Interview is to review the student’s experiences and to identify strengths and weaknesses of the Entomology Graduate Program.

Z. Waiver of Requirements

1. In extraordinary, extenuating circumstances, a student may petition for a waiver of any requirements specified herein.

2. A petition for a waiver must be made in writing and approved and signed by the student’s Major Advisor and Advisory Committee, and subsequently by the Entomology Graduate Coordinator; the petition must be submitted at least six (6) months prior to the expected graduation date.

3. Waivers will not be granted except in truly extraordinary, extenuating circumstances.
Appendices
<table>
<thead>
<tr>
<th>ITEM</th>
<th>FORM</th>
<th>SCHEDULE</th>
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<tbody>
<tr>
<td>1. Select Major Advisor and Advisory Committee</td>
<td>ED-2</td>
<td>Prior to second semester of enrollment</td>
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<tr>
<td>2. Assessment Examination &amp; Annual Committee Meeting</td>
<td>ED-2</td>
<td>Prior to second semester of enrollment</td>
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<tr>
<td>3. Plan of Study</td>
<td>GS-2</td>
<td>By middle of second semester of enrollment (after Assessment Examination)</td>
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<tr>
<td>4. Research Proposal</td>
<td>ED-3</td>
<td>Approved by the end of the first full semester of enrollment</td>
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<tr>
<td>5. Annual Advisory Committee Meeting &amp; Annual Report; Assistantship Performance Rating</td>
<td>ED-4</td>
<td>Each year</td>
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<td>6. Curriculum Vitae</td>
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<td>By September 1 of each calendar year of enrollment</td>
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<tr>
<td>8. Teaching Requirement (Ph.D. students only)</td>
<td>ED-6</td>
<td>Before graduation</td>
</tr>
<tr>
<td>9. Research Publication requirement</td>
<td>ED-7</td>
<td>Submitted to the journal prior to submitting the GS-7 to the Graduate School. Must be submitted for Entomology Graduate Program Faculty review at least 3 weeks before the anticipated journal submission date</td>
</tr>
<tr>
<td>10. Oral Presentation requirement (M.S. students - one presentation; Ph.D. students - two presentations)</td>
<td>ED-9</td>
<td>Before Final Examination</td>
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<tr>
<td>11. Public Service requirement (One activity each year)</td>
<td>ED-10</td>
<td>All required activities before Final Examination</td>
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<tr>
<td>12. Comprehensive Exam (Ph.D. students only)</td>
<td>GS-5D</td>
<td>After completion of most course work but before 4 years from initial enrollment in the Entomology Graduate Program</td>
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<tr>
<td>13. Admission to Candidacy/Diploma Order/Letter of intent to graduate</td>
<td>GS-4</td>
<td>After 15 hours of coursework (M.S.) OR after successful completion of Comprehensive Exam (Ph.D.) AND before the date in January, June, or September established by the Graduate School/Department for graduation expected in May, August, or December, respectively</td>
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<tr>
<td>15. Draft of thesis/dissertation to Advisory Committee members</td>
<td>ED-8</td>
<td>At least 3 weeks before Final Examination</td>
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</table>
16. Copy of thesis/dissertation for examination
   In Department office at least 7 days before final examination

17. Final examination
   GS-7M/D After Advisory Committee approves thesis content and at least 21 days before graduation
   At least 14 days before graduation

18. Review and approval by the Graduate School of completed and signed thesis/dissertation (Signed copy of signature page in student's Entomology Graduate Program file)

19. Submission of duplicated copies of thesis/dissertation to Graduate School
   At least 7 days before graduation

20. Exit interview with Entomology Graduate Coordinator
   Prior to graduation

21. Graduation
   No more than 6 years from initial enrollment (M.S.) OR no less than 6 months and no more than 5 years from completion of the Comprehensive Examination (Ph.D.)
Recommendation for Acceptance to the Graduate School
Entomology Program

Graduate Admissions and Policy Committee member ________________
Date initially distributed to GAPC: _____________________________
Applicant: ______________________________________________________
Program (Ph.D., M.S., non-degree): ______________________________
Recommendation:

<table>
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<tr>
<th></th>
<th>Accept</th>
<th>F/P/C*</th>
<th>Reject</th>
<th>Date</th>
<th>Initials</th>
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<tr>
<td>Ph.D.</td>
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<td>M.S.</td>
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<td>Non-degree</td>
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*Please specify if acceptance is Full (F), Provisional (P), or Conditional (C).

If provisional acceptance is recommended, please specify below the provisions to be met. (Ph.D. and non-degree applicants cannot be accepted provisionally.)

If conditional acceptance is recommended, what application materials still need to be supplied? Comments:

Entomology Graduate Program (Form PES/ED-1) (rev Oct 1991)
Record of Graduate Student Assessment Examination
Entomology Program

Student: ___________________________ Degree Program: _____________

Examination Date: __________________

A Program Planning Review was conducted and the Plan of Study was developed. YES ____ NO ____ (If YES, this form serves as an indicator for the first annual committee meeting.)

Specific Recommendations and Requirements by Advisory Committee:

<table>
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<tr>
<th>Major Advisor:</th>
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<td>typed/printed name</td>
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Advisory Committee:

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Graduate Coordinator Endorsement: ________________________ __________

Entomology Graduate Program (Form PES/ED-2) (rev Jan 2002)
Graduate Research Proposal
Entomology Program

Date: ___________________

Graduate Student: _________________________________________________

Degree Program (M.S. or Ph.D.): ______________________________________

Title of Proposed Research: _________________________________________

Estimated date of completion: _______________________________________

Estimated total cost: _______________________________________________

Proposed funding source(s): _________________________________________

Summary of problem, hypothesis, and experimental procedures (complete proposal, literature review, and budget attached):

Major Advisor:

________________________ ________________________ __________
typed/printed name signature date

Advisory Committee:

typed/printed name signature date

________________________ ________________________ __________
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Entomology Graduate Program (Form PES/ED-3) (rev Oct 1991)
Annual Graduate Student Progress Report
and Assistantship Performance Rating
Entomology Program

Date: ___________________

Graduate Student: _______________________________________________

Degree Program (M.S. or Ph.D.): _________________________________

Date of initial enrollment: _________________________________________

Completed forms in Student's Entomology Graduate Program File:

  Graduate School forms (copies):________________________________

  Previous Forms ED-4 (dates): _________________________________

  Other Entomology Program forms: _______________________________

Forms (requirements) yet to be completed (met):

  Graduate School forms: _____________________________________

  Entomology Program forms: __________________________________

Courses on Plan of Study (Form GS-2) yet to be completed:

Summary of thesis/dissertation research progress to date (student's full progress report attached):

Entomology Graduate Program (Form PES/ED-4) (rev Oct 1991)
Page 1 of 2
Annual Graduate Student Progress Report (continued)
Page 2 of 2

Date: ___________________

Graduate Student: _______________________________________________

Progress Evaluation: _____ Satisfactory _____ Unsatisfactory

Recommendations:

Major Advisor:

________________________ ________________________ __________
typed/printed name    signature      date

Advisory Committee:

typed/printed name    signature    date

________________________ ________________________ __________
________________________ ________________________ __________
________________________ ________________________ __________
________________________ ________________________ __________

Supported by Assistantship?   ____ Yes    ____ No

Assistantship Performance Rating:   ____ Satisfactory   ____ Unsatisfactory

Recommendations:

Assistantship Supervisor:

________________________ ________________________ __________
typed/printed name    signature      date

Graduate Coordinator

________________________ ________________________ __________
typed/printed name    signature      date

Entomology Graduate Program (Form PES/ED-4) (rev May 2012)
26
Graduate Student Residency at Clemson University
Entomology Program

Date: ___________________

Graduate Student: _______________________________________________

Degree Program (M.S. or Ph.D.): _________________________________

Date of initial enrollment: _____________________________________

Date residency began: _________________________________________

Date residency requirement completed: __________________________

Total months of residency: _____________________________________

Major Advisor:

________________________ ________________________ __________
typed/printed name    signature      date

Entomology Graduate Program (Form PES/ED-5) (rev Oct 1991)
Graduate Student Teaching Experience
Entomology Program

Date: ___________________

Graduate Student: _______________________________________________

Course taught/assisted: ___________________________________________

Semester and year: ______________________________________________

Specific responsibilities of the student teacher/assistant:

Performance evaluation: _____ Satisfactory _____ Unsatisfactory

Comments:

Recommendations:

Supervising Instructor:

typed/printed name __________________ signature _______________ date _______________

Entomology Graduate Program (Form PES/ED-6) (rev Oct 1991)
Thesis/Dissertation Review
Entomology Program

Date: ___________________

Graduate Student: _____________________________________________________

Thesis/dissertation title: ________________________________________________
_________________________________________________________________

Anticipated graduation date: ______________________________________________

Last possible final examination date: ________________________________________

Voucher specimen repository/date: _________________________________________

The accompanying draft of the above thesis/dissertation meets my approval and, therefore, is submitted for your review. Please return the manuscript and this form with your recommendations by the following date: ______________________________________________

Major Advisor:

________________________ ________________________ __________
typed/printed name    signature      date

Reviewer's evaluation:
_____ Additional research is needed.
_____ Manuscript needing major revision.
_____ Manuscript needing minor revision.
_____ Manuscript acceptable in present form.
_____ I wish to review the manuscript again after revision.

Reviewer's comments:
_____ See also attached additional comments.
_____ See also comments on manuscript.

Reviewer:

________________________ ________________________ __________
typed/printed name    signature      date

Entomology Graduate Program (Form PES/ED-8) (rev Oct 1991)
Graduate Student Presentation in a Professional Meeting
Entomology Program

Date: ___________________

Graduate student presenting paper: ________________________________________________

Title of presentation: __________________________

______________________________________________

Complete authorship: ________________________________________________

Professional Meeting: ________________________________________________

Date presented: ________________________________

Photocopy of Title from Printed Program of the Meeting (and abstract, if included in program):

Major Advisor:

_______________________ ______________________ _________
typed/printed name    signature      date

Entomology Graduate Program (Form PES/ED-9) (Apr 1999)
Graduate Student Public Service
Entomology Program

Date: ___________________

Graduate Student: ______________________________________________________

Date of Public Service: __________________________________________________

Description of Public Service that was provided:

Performance evaluation: _____ Satisfactory _____ Unsatisfactory

Comments:

Recommendations:

Evaluating Faculty Member:

_________________________ _________________________ ____
 typed/printed name signature date

Entomology Graduate Program (Form PES/ED-10) (Apr 1999)
Appendix 3. Listing of Entomology Graduate Program Faculty and Staff

1. Faculty
   b. Robert G. Bellinger (Ph.D., Virginia Polytechnic Institute and State University): Extension pesticide coordinator and pesticide safety education coordinator
   c. Eric Benson (Ph.D., Clemson University): Baiting strategies for ants and termites, control strategies for bed bugs
   d. Michael Caterino (Ph.D.,):
   e. Juang Horng Chong (Ph.D., University of Georgia): Ecology, biodiversity and management of insect pests and their natural enemies in turfgrass and ornamental plant systems
   f. Jeremy K. Greene (Ph.D., Clemson University): Management strategies for arthropod pests of cotton
   g. Francis P.F. Reay-Jones (Ph.D., Louisiana State University): Ecology and management of stink bugs; biodiversity, dynamics, and management of insects in switchgrass; sampling and spatial ecology; tobacco insect pest management; corn insect pest management
   h. Jennifer Tsuruda (_____):
   i. Matthew W. Turnbull (Ph.D., University of Kentucky): Molecular and cellular biology of insects and other arthropods
   j. Geoff Zehnder (Ph.D., University of California at Riverside): Sustainable agriculture and IPM including biological control and sustainable agriculture education
   k. Patricia Zungoli (Ph.D., Virginia Polytechnic Institute and State University): Ecology and management of insects in the urban environment

2. Emeritus Faculty
   a. Gerald Carner (Ph.D., Auburn University): Insect pathology, microbial control, IPM of soybeans, cotton, and vegetable crops
   b. Jay Chapin (Ph.D., Clemson University): Insect management in peanut and wheat production
   c. W. Michael Hood (Ph.D., University of Georgia): Apiculture including management of small hive beetle
   d. John Morse (Ph.D., University of Georgia): Systematics and historical biogeography of Trichoptera; aquatic insect faunistics and biology; water quality biomonitoring; insect biodiversity and conservation
   e. Merle Shepard (Ph.D., Texas A&M University): IPM of insect pests, development of natural product alternatives to synthetic pesticides

3. On-campus Adjunct Faculty
   a. Alfred Wheeler (Ph.D., Cornell University): Ecology of terrestrial Heteroptera (especially Miridae); detection and distribution of adventive insects in North America; ecology of insects in specialized communities

4. Staff (Administrative, Clerical, Technical)
   a. Ken Allen: Informational technology
   b. Eddie Beard: Research specialist, aquatic Diptera internist
   c. Jackie Ellis: Instructor/Training coordinator, PCO schools and others
   d. Kelly Flynn: Research associate, IPM and Sustainable Agriculture program
   e. Shawn Jadrnicek: Student organic farm manager
   f. Tammy Morton: Administrative assistant (oversees Entomology Program)
   g. Tracy Pratt: Accounts receiving (oversees Entomology expenditures)
# Appendix 4. Checklist/Progress Report

CHECKLIST/PROGRESS REPORT FOR ____________________

Major Advisor ______________________________

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PLANNED DATE</th>
<th>ACCOMPLISHED DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admitted by GAPC (Form PES/ED-1)</td>
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</tr>
<tr>
<td>First enrolled in MS/Ph.D./non-degree Program</td>
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<tr>
<td>Assessment Examination (Form PES/ED-2)</td>
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<tr>
<td>Plan of Study (Form GS-2)</td>
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<tr>
<td>Graduate Research Proposal (Form PES/ED-3)</td>
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<tr>
<td>Annual Advisory Committee Meeting &amp; Annual Report; Assistantship Performance Rating (Form PES/ED-4)</td>
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<tr>
<td>Residency (Form PES/ED-5)</td>
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<tr>
<td>Teaching Requirement (Ph.D. students only, Form PES/ED-6)</td>
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<tr>
<td>Research Publication requirement (Form PES/ED-7)</td>
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<tr>
<td>Presentation requirement (Form PES/ED-9)</td>
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<tr>
<td>Public Service requirement (Form PES/ED-10)</td>
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<tr>
<td>Comprehensive Exam (Ph.D. students only, Form GS-5D)</td>
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<tr>
<td>Application for Graduation and Diploma Order (Form GS-4)</td>
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<tr>
<td>Draft of thesis/dissertation to Advisory Committee members (Form PES/ED-8)</td>
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<tr>
<td>Copy of thesis/dissertation for examination in Departmental office</td>
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<tr>
<td>Final Examination (Form GS-7M/D)</td>
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<tr>
<td>Submission of signed thesis/dissertation to Graduate School (Signed copy of signature page in student’s Entomology Graduate Program folder)</td>
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<tr>
<td>Submission of duplicated copies of thesis/dissertation to Graduate School</td>
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<tr>
<td>Exit Interview with Entomology Graduate Coordinator</td>
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<tr>
<td>Graduation</td>
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</tbody>
</table>
Appendix 5. Receipt of Entomology Requirements

RECEIPT
FOR
ENTOMOLOGY GRADUATE
PROGRAM STUDENT
REQUIREMENTS

Provided to _________________________________ on ____________ (date)

I have read and understand the accompanying Entomology Graduate Program Graduate Student Requirements and agree to comply with them during my period of enrollment in the Clemson University Graduate School and in the Entomology Graduate Program of the Department of Agricultural and Environmental Sciences.

____________________________________  ____________________________________
(Student signature)          (Advisor signature)

____________________________________  ____________________________________
(date)             (date)

This receipt is to be returned to the Entomology Graduate Program office for deposit in the student’s official file.

Graduate Handbook version date:  

__________________________________________