

# Entomology (MS, PhD)

Graduate Student Handbook  
2021-2022

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Clemson® University

### DEPARTMENT OF PLANT & ENVIRONMENTAL SCIENCES

Physical/ mailing Address, Clemson, SC 29634-0310

864-656-4964

[clemson.edu/pes](http://clemson.edu/pes)



*College of*  
**AGRICULTURE, FORESTRY  
AND LIFE SCIENCES**

## Clemson Graduate School Information

These guidelines supplement the current version of the [Clemson University Graduate School Policy Handbook](https://www.clemson.edu/graduate/files/pdfs/gc_policy_handbook.pdf) ([https://www.clemson.edu/graduate/files/pdfs/gc\\_policy\\_handbook.pdf](https://www.clemson.edu/graduate/files/pdfs/gc_policy_handbook.pdf))

The policies and procedures of the Graduate School have been established to ensure that a consistent set of standards are followed from the admissions process all the way through to the awarding of degrees for every Graduate School program.

### Graduate School Forms

(<https://www.clemson.edu/graduate/students/forms.html>)

### Graduate School Deadlines

(<https://www.clemson.edu/graduate/students/deadlines.html>)

## Overview of Program

The Entomology (ENT) Program offers M.S. and Ph.D. programs. Either option requires the completion of a research thesis (M.S.) or dissertation (Ph.D.)

Students earning a graduate degree in Entomology will be prepared for careers in academia, industry, and extension. A successful graduate will demonstrate expertise in arthropod identification, ecology, physiology, and biodiversity, as well as modern methods of pest management.

Graduates of the Entomology graduate program may enter careers in academia, agriculture, public and private museum science, pest diagnosis and control, forestry, wildlife biology, military and other health management organizations, biotechnology, and a wide variety of government regulatory agencies.

### *Goal*

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.

### *What Entomology Graduates do*

Areas of specialization within entomology are aligned with those of the major advisor (advisory committee chair). The most common areas of specialization include research topics in:

- integrated pest management
- arthropod biodiversity

- urban entomology
- insect physiology

### ***Professional Licensure***

No professional licensure applies to the Entomology Graduate Program

### ***Approved Locations and Modalities of Delivery***

Facilities of the South Carolina Experiment Station on campus and at four research and education centers located in various regions of the state are available for graduate student research. In addition to teaching and research laboratories, specialized facilities within the department include the Clemson University Arthropod Collection; laboratories for molecular genetics, electron and light microscopy, tissue culture and analytical chemistry/toxicology; wet laboratories; controlled and ambient temperature insect-rearing facilities; and greenhouses.

### ***Cohort information***

No cohort information applies to the Entomology Graduate Program

### ***Basic Program Metrics***

Typical time to degree:

- MS (thesis) ..... 2.0 - 2.5 years
- MS (non-thesis) ..... 1.5 - 2.0 years
- PhD ..... 3.5 - 4.0 years
- PhD (MS en route) ..... 5.0 – 5.5 years

### ***Contact Information***

Program Coordinator: Dr. Michael S. Caterino

Email: [mcateri@clemson.edu](mailto:mcateri@clemson.edu)  
 Office: E254 Poole Ag. Center  
 Phone: 864-656-3105

Program Admin. Assistant: Ms. Tracy Reynolds

Email: [tracyr@clemson.edu](mailto:tracyr@clemson.edu)  
 Office: Poole 171  
 Phone: 864-656-4964

### ***Advisory Board***

There is no Advisory Board for the Entomology Graduate Program.

## Admission Requirements

### *Requirements (in addition to Graduate School requirements)*

- A Graduate Record Examination (GRE) is required. There is no minimum score requirement, but scores exceeding 150 for verbal and quantitative components, and 4.0 on the analytical writing portion, are typical for successful applicants.
- For students from countries where English is not the official language, TOEFL or IELTS scores must be reported; TOEFL scores should generally exceed 90 (combined) IELTS scores should generally exceed 7.0.
- Ordinarily, a Master's Degree with a thesis requirement is expected of students applying to 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 exceptional academic ability.
- Strong letters of recommendation from at least two referees familiar with the applicant's academic history.

### *Other expectations:*

- A Grade Point Average (GPA) 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 GPA of at least 3.00 or its equivalent in graduate coursework.
- In nearly all cases, an applicant should have identified and contacted a prospective major advisor from among the Entomology faculty, whose areas of specialization closely correspond to the applicant's goals, and who should have established some plan for funding the student's tuition and research work.
- Some of the above expectations may be offset by other evidence of accomplishment, such as high-quality publications or other evidence of involvement in entomological research; or by strong recommendations by one or more Entomology Graduate Program faculty with whom the student would work.
- All applicants are strongly urged to visit Clemson University and meet the Entomology Graduate Program's faculty, staff, and students.

### *Dates and deadlines*

There are no specific application deadlines for the Entomology Graduate Program. Applications may be reviewed up to within a month of the start of the academic term the applicant wishes to enroll. However, there are much earlier deadlines to be eligible for certain departmental, college, and

university fellowships, many of them around January 15 (for the following fall term). Please see the Graduate School's Fellowships page for more information.

### *Support Mechanisms*

The most common mechanism of support is a Graduate Research Assistantship (GRA). Interested students are encouraged to contact prospective advisors regarding GRA availability and eligibility. These assistantships are awarded on a competitive basis directly by the Principal Investigator of each research project.

Graduate Teaching Assistantships (GTA) are sometimes available, but are much less common than GRAs. Some students may have the opportunity to combine GRA and GTA support.

A few recruitment fellowships and other merit-based scholarships are also available to be awarded on a competitive basis. Prospective advisors should inform interested students of these opportunities as appropriate.

### *Fees*

No Program-specific Fees apply to the Entomology Graduate Program.

### *Transfer Credits*

The Entomology Program follows Graduate School guidelines for transfer credits

## Requirements for Degree

### *Minimum Degree Requirements*

- **M.S.** – A minimum of twenty-three (23) semester hours of graduate credit (exclusive of thesis research) and seven (7) 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.
- **Ph.D.** – The Graduate School requires that Ph.D. students receive  $\geq 30$  hours of coursework beyond the M.S. degree (if previously awarded), or  $\geq 60$  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. Twenty-six (26) 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.
  - For either degree, at least one-half of the total graduate credit hours required by the advisory committee, exclusive of thesis research, must be selected from courses

numbered 8000 or above. 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.

- The Plan of Study (Form GS-2: <https://www.clemson.edu/graduate/students/plan-of-study/index.html>) is a listing of the courses that a student plans to complete and apply toward the minimum credits required for the particular degree program. In addition to the minimum requirements above, the Entomology program requires courses in several specific areas:
  - ENT 6150/6151 Insect Taxonomy (3 credits)
  - ENT 8700 Insect Physiology & Molecular Biology (3 credits)
  - ENT 6250 Insect Ecology (3 credits)
  - ENT 8090 Seminar in Entomology (enrolled every semester)
  - ENT 8100 Special Topics (Discussion) (3 credits for M.S.; 5 for Ph.D.)
  - STAT 8010 Statistical Methods (3 credits)
  - Electives (3 credits M.S.; 10 credits Ph.D.), potentially including the following:
    - ENT 6000 Insect Morphology
    - ENT 6010 Integrated Pest Management
    - ENT 6040 Urban Entomology
    - ENT 6060 Diseases of Insects of Turfgrass
    - ENT 6070 Applied Agricultural Entomology
    - ENT 6200 Systematics & Biodiversity
    - ENT 6360 Insect Behavior
    - ENT 6690 Aquatic Insects
    - ENT 8020 Conservation Genetics
    - ENT 8080 Taxonomy of Immature Insects
    - BIOCH 6230 Principles of Biochemistry
    - BIOSC 6610 Cell Biology
    - or other courses deemed necessary by the student's Advisory Committee
- Variations in these degree prerequisites and course expectations may be recommended by the student's Advisory Committee and approved by the Graduate Coordinator (see Section 10, below).
- A student who has undertaken, at another institution, a course equivalent to one of the structured courses listed in Table 1 (below) 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 student's file. When determined necessary by the Advisory Committee or core-course faculty member, a special examination may be offered to meet these requirements. 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.

- A graduate student must maintain a minimum overall GPA of B (3.0) for all graduate-level courses, 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, during which time the student may become ineligible for financial aid or assistance. A student is permitted only two probationary semesters 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.

### *Advisory Committees*

The Entomology program follows the Graduate School Policy Handbook's guidelines for forming and modifying advisory committees, requiring three members of the Graduate Faculty for M.S. advisory committees, and four for Ph.D. advisory committees. Entomology adds several minor considerations as follows:

- Students enrolled in Entomology Graduate Program whose primary Major Advisor is stationed off-campus are required to have at least one committee member who is stationed on the Clemson University main campus.
- The Major Advisor must be a tenure-track or tenured faculty member within the department of Plant & Environmental Sciences. Certain Special Faculty (as defined by the Clemson Faculty Manual), including Adjunct Faculty, Research Faculty, and Extension Faculty, may serve as co-Major Advisor if appointed to the Plant & Environmental Sciences Graduate Faculty.
- 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.
- 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.

### *Preliminary Exams*

All incoming graduate students will be required to take an Assessment Examination that covers basic science and general knowledge, the student's comprehension of the scientific method, the student's ability to generalize and synthesize from different scientific disciplines, and his/her understanding of entomological subjects. The exam will also 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.

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.

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.

In conjunction with and immediately following the Assessment Examination, a Program Planning Review will be administered by the student's Advisory Committee, in order to:

- formulate a plan to overcome deficiencies identified in the Assessment Examination and relevant to the student's career objectives.
- outline a Plan of Study (Form GS-2) and a research program consistent with the student's career objectives.

This meeting will serve as an annual committee meeting and be so indicated on Form PES/ED-2.

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 brief statement of the student's career objectives.
- 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.
- A list of courses the student anticipates undertaking in his/her proposed graduate degree program.
- A preliminary general research plan. (This is not yet expected to be a fully developed Research Proposal (Sec. 6.d), but must include the following elements: Title, Summary of problem, Literature review, Hypotheses, Methods, Budget, and Proposed funding source(s))

### *Comprehensive Exam*

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

- evaluate the student's basic scientific comprehension and his/her knowledge of current issues in science and world events, and
- 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.

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:

- the majority of course requirements in the degree program have been met, and
- the student's dissertation research has progressed sufficiently to stand critical assessment by the Advisory Committee.

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.

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").

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.

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).

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.

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

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

### ***Expectations for Thesis/Dissertation***

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

- The graduate student develops a complete and comprehensive thesis or dissertation manuscript that is acceptable to his/her Major Advisor, the general structure of which has been approved by the Advisory Committee. 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.
- Once the thesis manuscript is approved by the Major Advisor for review, a digital (.doc or .pdf) copy of the thesis/dissertation manuscript will be sent to each Advisory Committee member, along with a copy of the advisor-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 may 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.

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.

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 suggestions, corrections, etc. have been satisfactorily incorporated into the final copy.

### *Additional Requirements*

#### Research Proposal (Forms GS-ResearchApproval & PES/ED-3)

- All students who are required to complete a Master's Thesis or Doctoral Dissertation will submit a preliminary research proposal to their Advisory Committee for recommendations and approval prior to their Assessment Examination (above). A complete Research Proposal must be submitted for approval during the second semester of enrollment for final approval.
- This proposal should follow the format recommended by the Advisory Committee and include the following:
  - A thorough literature review,
  - Research needs or problems, hypotheses, and objectives of the research,
  - 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
  - A budget of anticipated expenses.

- Approval by the student's Advisory Committee must be indicated on the GS-ResearchApproval form (<https://www.clemson.edu/graduate/files/pdfs/GS-ResearchApproval.pdf>), which is to be submitted to the Graduate School.
- 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.

#### Annual Progress Reports (Form PES/ED-4)

- 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.
- 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.

#### Residency (Form PES/ED-5)

- 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.
  - 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.
  - 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.

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

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

### Refereed Publication Requirement (Form PES/ED-7)

- To help attain the publication record expected of professional entomologists holding the M.S. or Ph.D. degree, each graduate student is required to submit, as a first, senior, or sole author, at least one manuscript for publication to a refereed scientific journal.
- The manuscript must be based on work conducted while enrolled in the student's current degree program in the Clemson University Entomology Graduate Program.
- Prior to submission to a refereed journal, the manuscript must be submitted for the Major Advisor's review.
- For Master's students, acknowledgment of receipt by the journal must be attached to the ED-7 form.
- For doctoral students, at least one manuscript must be accepted by the refereed journal, with a copy of the notice of acceptance attached to the ED-7.
- The ED-7 form must be filed prior to the deadline for filing the student's GS-7M/D.

### Oral Presentation Requirement (PES/ED-9)

- Each M.S. degree student is required to present orally at least one (1) paper at a professional meeting.
- Each Ph.D. degree candidate is required to present orally at least two (2) papers at professional meetings.
- 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(s) were given.

### Seminar Requirements

- 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.

### Public Service Requirement (PES/ED-10)

- Each graduate student must participate in at least one public service activity for each year of his or her residency.
- Public service is defined as a non-research activity that transmits entomological knowledge to members of the public.
- 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.

## Preparation and Submission of Curriculum vitae

- 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, to be submitted no later than September 1 of each calendar year.

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

- Representative vouchers of all insect taxa 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.)
- The Clemson University Arthropod Collection is prepared to maintain voucher specimens. Students should consult with the Collection's director or collection manager for labeling and deposition procedures.
- 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.

## Intent to Graduate (Letter from Student)

- No later than the end of the semester before the semester that the student applies to graduate with 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.
- 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.
- 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.
- 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, pending successful completion of remaining examinations and other requirements.
- Oversight of the completion of any outstanding Programmatic requirements rests with the student's advisor and advisory committee.

- The student must then “Apply for Graduation” through iRoar, at least three months before the Graduation Date.

#### Defense and final Examination for the M.S. Degree (Form GS-7M)

- 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.
- 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 PES 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.
- Nature and Content of Final Examination:
  - 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).
  - The second part of the examination will consist of a defense of the content of the thesis and may also assess 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.
- Any Clemson University faculty member may participate in the Final Examination. All Faculty in PES (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.
- Results of the Final Examination will be one of the following:
  - Pass - The student's performance was satisfactory.
    - 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.
  - 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.

#### Defense and final Examination for the Ph.D. Degree (Form GS-7D)

- Each candidate for the Ph.D. 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.
- 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 PES 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.
- Nature and Content of Final Examination:
  - 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).
  - 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.
- Any Clemson University faculty member may participate in the Final Examination. All Faculty in PES (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.
- Results of the Final Examination will be one of the following:
  - Pass - The student's performance was satisfactory.
    - 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.
  - 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.

### Exit Interview Requirement

- 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 Department Chair and notify the Plant & Environmental Sciences administrative assistant.

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

#### Waiver of Requirements

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



## Suggested Timetable of Student Progress

Time	Action (and required forms)
Before registration	<ul style="list-style-type: none"> <li>Familiarize yourself with Graduate School and Entomology Graduate Program Handbooks.</li> <li>Meet with Major Advisor and Graduate Program Coordinator</li> </ul>
First month	<ul style="list-style-type: none"> <li>Introduce yourself to faculty members and staff of the department.</li> <li>Become acquainted with policies for laboratory, greenhouse and vehicle use.</li> <li>Begin project literature review.</li> <li>Select Advisory Committee members (form <b>GS-2</b>).</li> </ul>
First semester	<ul style="list-style-type: none"> <li>Prepare preliminary Research Proposal.</li> <li>Conduct first Advisory Committee Meeting (<b>ED-4</b>).</li> <li>Schedule Assessment Exam (<b>ED-2</b>).</li> <li>Consider applying for fellowships.</li> </ul>
Second semester	<ul style="list-style-type: none"> <li>Finalize Research Proposal (<b>GS-ResearchApproval</b>).</li> <li>Complete Plan of Study (form <b>GS-2</b>).</li> </ul>
Third semester	<ul style="list-style-type: none"> <li>Confirm residency (<b>ED-5</b>).</li> <li>Ph.D.: Begin arranging teaching experience (<b>ED-6</b>).</li> <li>M.S. &amp; Ph.D.: Attend and present at professional conference (<b>ED-9</b>).</li> <li>M.S.: File Intent to Graduate form (<b>GS-4</b>; penultimate semester).</li> </ul>
Fourth semester (M.S.)	<ul style="list-style-type: none"> <li>Prepare and submit Letter of Intent to Graduate.</li> <li>Prepare manuscript for journal submission (<b>ED-7</b>).</li> <li>Prepare written thesis or dissertation (<b>ED-8</b>).</li> <li>Conduct Final Defense/Examination (<b>GS-7M</b>).</li> <li>Deposit voucher specimens in CUAC (<b>ED-8</b>).</li> </ul>
Third year (Ph.D.)	<ul style="list-style-type: none"> <li>Schedule Comprehensive Exam (<b>GS-5D</b>).</li> <li>Prepare manuscript for journal submission (<b>ED-7</b>).</li> </ul>
Fourth year (Ph.D.)	<ul style="list-style-type: none"> <li>Prepare and submit Letter of Intent to Graduate.</li> <li>Attend and present at professional conference (<b>ED-9</b>).</li> <li>Prepare written thesis or dissertation (<b>ED-8</b>).</li> <li>Conduct Final Defense/Examination (<b>GS-7D</b>).</li> <li>Deposit voucher specimens in CUAC (<b>ED-8</b>).</li> <li>Schedule exit interview with Graduate Program Coordinator.</li> </ul>
Annually (all)	<ul style="list-style-type: none"> <li>Update Curriculum vitae.</li> <li>Hold Advisory Committee meeting (<b>ED-4</b>).</li> <li>Participate in Public Service event (<b>ED-10</b>).</li> </ul>

# Standards of Performance

## *Annual Review of Progress*

Annual Review of Progress - Graduate students are required to meet at least once a year with their advisory committee. During these meetings, students should present progress reports on research, coursework, and professional development activities. The advisory committee should make recommendations for improvement of the work and activities and approve timelines for completion of the degree.

Maintaining records – Graduate students are ultimately responsible for keeping up with deadlines and requirements for their degree program. Students should review checklists each semester, and file annual updates with their major advisors. Complete and signed copies of all Program Forms should be maintained by the student, with copies submitted to the Major Advisor and a digital copy to the Graduate Program Coordinator. Students who are not in compliance with program deadlines, including annual committee meetings, will not be eligible for fellowships or other program awards.

## *Academic Performance*

The Entomology Graduate Program follows Graduate School policy and expectations for academic performance.

## *Professional Requirements and Expectations*

The Entomology Graduate Program does enforce requirements for publication, professional presentation, and for teaching (for Ph.D. students only), as detailed above.

## *Performance Expectations for Graduate Assistants*

The Entomology Program follows Graduate School guidelines on performance expectations for Graduate Assistants.

## *Attendance Policies*

The Entomology Program follows Graduate School guidelines on performance expectations on attendance.

**ED-2: 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:

Major Advisor:

_____	_____	_____
typed/printed name	signature	date

Advisory Committee:

_____	_____	_____
typed/printed name	signature	date

_____	_____	_____
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_____	_____	_____
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_____	_____	_____
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_____	_____	_____
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Graduate Coordinator Endorsement: \_\_\_\_\_

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

**ED-3: 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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\_\_\_\_\_

**ED-4: 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):

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

**ED-5: 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

**ED-6: 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



**ED-7: Graduate Student Research Publication**  
Entomology Program

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

Graduate student: \_\_\_\_\_

Names of all authors (in order listed on the manuscript):

\_\_\_\_\_  
\_\_\_\_\_

Title of manuscript: \_\_\_\_\_

\_\_\_\_\_

Journal: \_\_\_\_\_

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

Date accepted (Ph.D. students only): \_\_\_\_\_

Abstract:

Major Advisor:

\_\_\_\_\_  
typed/printed name

\_\_\_\_\_  
signature

\_\_\_\_\_  
date

Entomology Graduate Program (Form PES/ED-7) (rev Oct 1991)

**ED-8: 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)

**ED-9: 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)

**ED-10: 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:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Entomology Graduate Program (Form PES/ED-10) (Apr 1999)

**Appendix 4. Checklist/Progress Report**

CHECKLIST/PROGRESS REPORT FOR \_\_\_\_\_

Major Advisor \_\_\_\_\_

ITEM	PLANNED DATE	ACCOMPLISHED DATE
Admitted by GAPC (Form PES/ED-1)		
First enrolled in MS/Ph.D./non-degree Program		
Assessment Examination (Form PES/ED-2)		
Plan of Study (Form GS-2)		
Graduate Research Proposal (GS-ResearchApproval)		
Annual Advisory Committee Meeting & Annual Report; Assistantship Performance Rating (Form PES/ED-4)		
Residency (Form PES/ED-5)		
Teaching Requirement (Ph.D. students only, Form PES/ED-6)		
Research Publication requirement (Form PES/ED-7)		
Presentation requirement (Form PES/ED-9)		
Public Service requirement (Form PES/ED-10)		
Comprehensive Exam (Ph.D. students only, Form GS-5D)		
Letter of intent to Graduate (to program and Graduate School)		
Draft of thesis/dissertation to Advisory Committee members (Form PES/ED-8)		
Copy of thesis/dissertation for examination in Departmental office		
Final Examination (Form GS-7M/D)		
Submission of signed thesis/dissertation to Graduate School (Signed copy of signature page in student's Entomology Graduate Program folder)		
Submission of duplicated copies of thesis/dissertation to Graduate School		
Deposition of voucher specimens		
Exit Interview with Entomology Graduate Coordinator		
Graduation		

**Appendix 5. Receipt of Entomology Requirements**

RECEIPT  
FOR  
ENTOMOLOGY GRADUATE  
PROGRAM STUDENT  
REQUIREMENTS

Provided to \_\_\_\_\_ on \_\_\_\_\_ (date)

I have read and understand the Entomology Graduate Program Graduate Student Requirements AND the Clemson University Graduate School Policies & Procedures, 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: \_\_\_\_\_