



**Department of Entomology
Graduate Student Handbook
2022-2023**

DEPARTMENT OF ENTOMOLOGY
University of California, Riverside

Entomology Graduate Student Handbook
and
Supplementary Information Pamphlet*

These guidelines are meant to assist the student toward the successful completion of the Entomology Graduate program in a timely fashion. ***All forms needed in the program are called out in underlined, italic print.*** All forms are available on the Entomology website at <https://entomology.ucr.edu/graduate-studies-program> or via the RGrad program or on the Graduate Division website at <https://graduate.ucr.edu/petitions-and-forms> .

Information on the Administrative Staff duties, contact information, and the organization of the business office can be found at <https://entomology.ucr.edu/administrative-staff-2> .

*The requirements and procedures described in this pamphlet are in addition to, and not in lieu of, those available from the Graduate Division or on-line at <http://graduate.ucr.edu>.

Revised: Fall 2022

Table of Contents

	<u>Page</u>
I. PhD and MS GENERAL INFORMATION	4
A. Instruction and Student Affairs Committee (ISAC).....	4
B. Admission of Graduate Students	5
C. Minimum Requirements for Graduate Work in Entomology	5
D. Required Courses	6
E. Seminars.....	7
F. Other Professional Development Requirements.....	8
G. Graduate Advisors and Quarterly Advising	8
H. Student Petitions	8
I. Foreign Language	8
J. Change in Major Professor	8
K. Financial Support for Graduate Students.....	9
L. Tuition and Fees	10
M. Taxes	11
N. Entomology Graduate Student Association.....	12
II. SUPPLEMENTARY REQUIREMENTS AND PROCEDURES FOR THE DEGREE OF MASTER OF SCIENCE	13

A.	Major Professor (1 st Quarter)	13
B.	M.S. Guidance Committee (2 nd Quarter)	13
C.	Program of Study (3 rd Quarter)	13
D.	Advancement to Candidacy	14
E.	Final Oral Examination	14
F.	Thesis	14
G.	Normative Time	14
H.	M.S. Student Advancement to the Ph.D. Program	15
I.	M.S. Timeline	15
III.	SUPPLEMENTARY REQUIREMENTS AND PROCEDURES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY	16
A.	Major Professor (1 st Quarter)	16
B.	Ph.D. Guidance Committee (2 nd Quarter)	16
C.	Program of Study (3 rd Quarter)	16
D.	Dissertation Proposal (4 th Quarter)	17
E.	Qualifying Committee (6 th Quarter)	17
F.	The Qualifying Examination (7 th Quarter)	18
G.	The Dissertation Committee and Final Oral Exam	18
H.	Ph.D. Dissertation	19
I.	Normative Time	19
J.	Ph.D. Timeline	19
IV.	SUPPLEMENTARY REQUIREMENTS AND PROCEDURES FOR THE COMBINED B.S.+M.S. PROGRAM	
A.	Major Professor (Junior year)	21
B.	M.S. Guidance Committee (1st Quarter)	21
C.	M.S. Course Requirements	22
D.	Advancement to Candidacy	22
E.	Final Oral Examination	22
F.	Thesis	23
G.	Normative Time	23
H.	M.S. Student Advancement to the Ph.D. Program	23





I. PhD and MS GENERAL INFORMATION

The faculty of the Department of Entomology study all aspects within the field of Entomology. We are recognized around the world for having exceptional breadth and depth in within the Biological Sciences as they are applied to insects. Our general areas of expertise include, but are not limited to the following areas:

Arthropod vectors of human, animal, and plant diseases	Integrated Pest Management
Behavior	Invasive Species and Biological Control
Biochemistry and Physiology	Medical and Veterinary Entomology
Biological control	Molecular biology, genetics and genomics
Chemical Ecology	Nematology
Conservation Biology and Global Change	Neuroscience
Ecology and Evolution	Pesticide toxicology
Endocrinology and Development	Plant- Herbivore Interactions
Genetics, Genomics, and Molecular Biology	Social Insects and Pollination Biology
Insect Pathology	Urban Entomology
Insect-plant interactions	

Information on participating individuals and their areas of research may be found on the Department of Entomology Web site (insects.ucr.edu). Suggested courses of study and information on other matters pertinent to all UCR graduate programs are found in the "UCR General Catalog", which may be viewed online at <http://catalog.ucr.edu> , and online at <http://graduate.ucr.edu> .



A. Instruction and Student Affairs Committee (ISAC)

The Instruction and Student Affairs Committee (ISAC) is responsible for establishing the policies and procedures pertaining to the academic programs in the Department of Entomology. This committee also reviews applications, forms, and petitions submitted by students. ISAC consists of a Chair, who is the Departmental Representative to the Graduate Division, a Vice Chair who serves when the Chair is away, the Graduate Advisors, the Undergraduate Advisors, other faculty from the Department, the student

services advisor (Graduate Coordinator), and a graduate student representative selected by the Entomology Graduate Student Association (EGSA - see Section L). During the academic year, ISAC meets at least bi-weekly. Petitions and business that need ISAC attention should be send via e-mailor given to Kathy Redd in the CNAS Graduate Student Affairs Center (1140 Batchelor Hall) for inclusionon the ISAC agenda.

B. Admission of Graduate Students

Our University requires that all students apply on-line at

<https://graduate.ucr.edu/admissions>

When you fill out the application forms online, please carefully read and follow all instructions. Applicants are required to submit (a) Unofficial transcripts from all institutions of higher learning attended (these are uploaded as attachments in the application) (b) A minimum of three letters of recommendation from persons familiar with the applicant's academic training or research experience (recommenders get a request to complete electronically through an interface).

All applicants whose first language is not English and who have not earned an advanced degree at an institution where English is the exclusive language of instruction must submit passing current exam scores from the Test of English as a Foreign Language (TOEFL) or Academic Modules of the International English Language Testing System (IELTS). Test Scores submitted may not be borrowed, photocopied, returned to you or sent elsewhere.

C. Minimum Requirements for Graduate Work in Entomology

Campus requirements for M.S. and Ph.D. degrees are given on the Graduate Division website at <http://graduate.ucr.edu>. For admission to the graduate program, students must have a bachelor's degree with a major in either entomology, a biological science, chemistry, biochemistry, or a suitable equivalent.

Regardless of undergraduate major, students must have had, or complete soon after entering graduate school, the following:

- The equivalent of one year of course work each in general biology, general chemistry, and organic chemistry.
- The equivalent of a one quarter course each in genetics and biochemistry.
- The equivalent of 30 quarter units of life sciences other than entomology.
- Students who wish to specialize in insect biochemistry, insect physiology, molecular entomology, neuroscience, or toxicology may substitute additional courses in physical, organic, and biological chemistry; toxicology; and pharmacology for courses in life sciences.

D. Required Courses

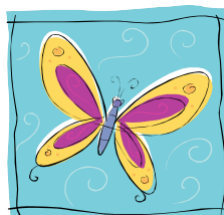
All PhD and MS graduate students are required to take the following courses: ENTM 201 (Core Areas of Entomology I: Subcellular-Cellular Disciplines), ENTM 202 (Core Areas of Entomology II: Suborganismal-Organismal Disciplines), and ENTM 203 (Core Areas of Entomology III: Supraorganismal Disciplines). Normally, these courses will be taken during the first year at UCR. Students who can demonstrate that they have had equivalent graduate-level courses elsewhere may petition ISAC to waive taking one or more of these courses. In addition, students must satisfy seminar requirements (see section E).

SUGGESTED FIRST-YEAR GRADUATE PROGRAM:

Fall	Winter	Spring
ENTM 201 (5 units) Core Areas of Entomology I: Subcellular-Cellular Disciplines	ENTM 202 (5 units) Core Areas of Entomology II: Suborganismal- Organismal Disciplines	ENTM 203 (5 units) Core Areas of Entomology III: Supraorganismal Disciplines
ENTM 100 ^a (4 units) General Entomology	Elective	Elective
ENTM 250 (1 unit) Seminar in Entomology	ENTM 250 (1 unit) Seminar in Entomology	ENTM 250 (1 unit) Seminar in Entomology
Research units with Major Professor (297 and 299)	Research units with Major Professor (297 and 299)	Research units with Major Professor (297 and 299)
ENTM 2-Unit Seminar ^b	ENTM 2-Unit Seminar ^b	ENTM 2-Unit Seminar ^b

^a Only if recommended by major professor or graduate advisor.

^b Four letter-graded seminars are required during the graduate program. We encourage students to take one seminar per academic year in years 1-4. See page 7 for a listing of the seminars offered each quarter. Whereas a 2-unit Seminar is listed in the Fall, Winter, and Spring for illustrative purposes, students will take a seminar in only one of the quarters.



E. Seminars

The Department has four seminar requirements.

1. Enrollment in the "Seminar in Entomology" (ENTM 250), graded Satisfactory/No Credit (S/NC), is required of each student during all three quarters of the academic year. This class features guest speakers each week, and exposes students to a myriad of entomological topics. For a satisfactory grade, students must attend at least 70% of the seminars offered during each quarter.
2. Ph.D. Students must take at least four Entomology 2-unit seminar courses for a letter grade during their graduate career. M.S. students must take at least two Entomology 2-unit seminar courses for a letter grade during their graduate career. Students are strongly encouraged to take one seminar per academic year and to take a variety of seminars. Students are graded on their preparation and delivery of a formal seminar, and on their participation in the discussions of presentations. These courses are designed to give students an in-depth study of the subject matter, in addition to formal training in presenting scientific information. Check the current schedule of classes for a listing of the 2-unit seminars that will be offered in a particular quarter.

Department of Entomology Letter-graded Seminars

Fall Quarter	Winter Quarter	Spring Quarter
ENTM255 (2022, then odd years after) Med/Vet. Entomology	ENTM251 Insect-Plant Interactions	ENTM255 (2022, then odd years after) Med/Vet. Entomology
Social Insects (even years)	ENTM258 Insect Pest Management	ENTM 256 Systematic Entomology
ENTM 253 Urban and Industrial Entomology		ENTM 257 Pollinators and Pollination
ENTM 289 (offered Fall 2022 and sporadically after) Special Topics in Neuroscience		

3. Continuing students must present a seminar (10-15 minutes) or a poster presentation of their research progress at the Annual Entomology Student Seminar Day, held just prior to the beginning of each fall quarter. This is an opportunity for students to share their work with the Department, and to learn about other student's projects.
4. Ph.D. and M.S. candidates must present a formal seminar on their dissertation or thesis research as part of their final defense. If possible, this seminar should be scheduled as one of the regular ENTM 250 presentations.

F. Other Professional Development Requirements

Students are required to complete an Individual Development Plan and submit it with their Report on Progress of Graduate Student form each year during the spring quarter.

G. Graduate Advisors and Quarterly Advising

When students arrive at UCR, they are assigned a Graduate Advisor in addition to their Major Professor. The Graduate Advisor provides advice on the student's academic program and course selection and remains with the student throughout their graduate program,. Typically, near the middle of each quarter, students meet with their Graduate Advisor to discuss courses for the following quarter. Prior to advancement, students are required to meet with their Graduate Advisor in order to receive clearance for registration. In anticipation of these advising sessions, the student should have a clear idea of which classes they wish to take, and they should discuss these selections with their Major Professor. The Graduate Advisors serve on ISAC, and because of this linkage they are able to transmit student issues to the faculty.

H. Student Petitions

Students may petition to have departmental requirements waived or modified. The General Petition Form is available on the Graduate Division Website, the Entomology web site, from the Graduate Advisor, or from the CNAS Graduate Student Affairs Center. Each petition must be signed by the student, the Major Professor, and the Graduate Advisor before returning it to the Student Services Advisor in the CNAS Graduate Student Affairs Center, who will forward it to ISAC for consideration.

I. Foreign Language

Proficiency in a language other than English is not a blanket requirement for all M.S. or Ph.D. degrees. However, the Major Professor or Guidance Committee may require a student to attain foreign language proficiency if deemed necessary.

J. Change in Major Professor

Students can change their Major Professor if this change is in the best interest of either the student or the Major Professor. Prior to such a change, the student should consult with his/her Graduate Advisor. In addition, the Department Chair must be informed by the Major Professor and the student of any substantial change in their professional relationship. To formalize the change, the Change of Major Professor Form should be completed and forwarded to the Student Services Advisor in the CNAS Graduate Student Affairs Center.

K. Financial Support for Graduate Students

Typically PhD graduate students in the Entomology Department at UCR are supported during their graduate studies. Funds come from a variety of sources classified either as Salary or as Fellowship/Stipend.

- Salary is paid for employment as a Graduate Student Researcher (GSR) funded by their Major Professors' grants or to a limited extent by the Department (depending upon availability of funds), or for employment as a Graduate Teaching Assistant (TA). A graduate student may not be employed more than 50% time (20 hours per week) during an academic quarter. Students are typically employed with an appointment as a GSR (49%), TA (50%), or split TA/GSR (25%/24%). Salary is paid monthly at the end of each month for the previous month's work (e.g., paid on Feb. 1st for work performed in January). Note: Students that TA during the fall quarter, will receive their first paycheck on Nov 1st, even though they begin work in September. Summer employment with a GSR appointment is typically provided by the student's Major Professor.
- Fellowship/Stipend support typically comes from competitive fellowships from the UCR campus, the Department or external sources including state or federal agencies. Fellowship/stipend support is paid quarterly as a lump sum at the beginning of each academic quarter (on October 1st, January 1st, or April 1st) and must be managed carefully by the student to cover all their expenses for the entire quarter.
 - When transitioning from a quarter paid by fellowship/stipend to a quarter paid by salary (GSR or TA), students will need to stretch their stipend for an additional month (1 quarter + 1 additional month) since they will not receive the first salary payment until the end of the first month of the new quarter.
 - Campus-based fellowship/stipend support is only available to students during academic quarters and cannot be used to support students during the summer months.
- For a few students, financial support may also come from other sources including funding by a student's home country or even by the student themselves (self-funding). Support provided by these other sources will vary by funding source, and students must communicate with the funding source as well as with their Major Professor and Graduate Advisor to understand how support from these sources will be provided to the student.
- Payments to students are delivered through either financial aid or payroll and students are encouraged to sign up for direct-deposit from Student Business Service (via R'Web) and through UC PATH. For questions contact the Graduate Student Services Advisor/Coordinator.

Each student's financial package is unique and should be clearly understood by the student and their Major Professor prior to the student accepting the admissions offer from UCR. Students who wish to be considered for the best funding packages should submit their application for graduate studies no later than January 5 of the year of anticipated enrollment.

L. Tuition and Fees (assessed Quarterly)

Students employed at least 25% time by UCR (as a GSR or TA) will have their tuition and fees paid as part of their employment. Similarly, tuition and fees are also covered by most fellowships/stipends. In addition, for students that are not residents of California, the non-resident tuition (NRT) fee may be paid by campus as described below. However, students are generally responsible for paying some miscellaneous campus fees each quarter. The various types of campus fees are described below:

- Tuition and Student Services Fee: Mandatory fees for student education at UCR.
- Graduate Student Health Insurance Premium (GSHIP): Fee for the health insurance plan that is mandatory for all graduate students not enrolled in a comparable private health insurance plan.
- Misc. UCR Campus Fees (PAID BY STUDENT): Mandatory fees assessed for various campus facilities and services that support students (e.g., UCR Recreation Center, Graduate Student Association, Student Technology Fee). These fees are paid quarterly by the student and are approx. \$300 (for year 2021).
- Non-resident Tuition (NRT): Additional fee for students who are not residents of California.
 - Domestic (U.S.) students: When funds are available, campus will pay NRT fees for domestic non-resident students during their first academic year. Non-resident students must establish California residency during their first year to avoid paying NRT in subsequent years.
 - International students: When funds are available, campus will pay NRT fees for international students through their 7th academic quarter (first quarter of 3rd year) by which time students are expected to have completed their qualifying exams and have advanced to candidacy. International students who fail to advance to candidacy by the end of the 7th academic quarter will be charged NRT each quarter until they successfully advance to candidacy. After advancing to candidacy, international students are not charged NRT for 9 academic quarters (3 years). International students failing to complete their PHD within these 9 quarters after advancing to candidacy will again be charged NRT until completing their degree.

Current costs for all fees are available here: <https://registrar.ucr.edu/tuition-fees/quarterly-fees>

M. Taxes

Students receiving financial support should be aware that part or all of this support might be subject to state and/or federal income tax. The information provided in this handbook may not apply to all students and should not be interpreted as tax advice; tax obligations can vary for different persons and under different circumstances. If you are unsure of your tax obligations, it is recommended that you seek advice from a tax professional.

- Salary (GSR or TA) is typically taxed through payroll and amount of tax withheld each month can be seen on monthly pay statements. Salary income is reported to the IRS and is subject to being taxed.
- Fellowship/Stipend may be subject to state and federal tax. However, taxes are typically not automatically withheld from fellowship/stipend payments for domestic students. This can result in larger tax obligations than expected when students file their taxes. More information on tax obligations for fellowship/stipend funds is available from Graduate Division:
<https://graduate.ucr.edu/regulations-and-procedures#taxes>
- International students can find information on employment and taxes through the UCR International Affairs office:
<https://international.ucr.edu/students/employment-and-taxes>



N. Entomology Graduate Student Association (EGSA)

The purpose of the Entomology Graduate Student Association (EGSA) is to serve the needs, welfare, and interests of present and future entomology graduate students at UCR. All registered graduate students in the Entomology program at UCR are members of this organization and are encouraged to participate in EGSA activities, though this is strictly voluntary. All members are responsible for exercising their voting privileges on issues pertinent to EGSA and the Department of Entomology. Members are appointed annually to serve on EGSA committees and as representatives to departmental or campus committees as outlined below.

Measures to meet the needs of current graduate students include:

- encouraging social interactions between students and departmental faculty and staff (Social Committee)
- facilitating professional interactions between students and faculty from other universities (Seminar & Special Lectures Committee)
- teaching members of the public what entomology is and why it is important (Displays, Exhibits & Outreach Committee)
- providing a computer lab and software to students (Technology & Social Media Committee)
- coordinating with the Entomology Research Museum (Entomology Research Museum Committee)
- representing the students to the governing bodies of the Entomology Department, the Graduate Student Association (GSA), and UCR as a whole (GSA Representative and EGSA President)

In addition, one student serves as a representative to ISAC, with attendance and voting privileges when ISAC is considering the interpretation, modification, or additions to the graduate instructional program, as outlined in this supplemental guide. This individual is also available to ISAC and the Department Chair for consultation as needed.

Meeting the needs of future graduate students is done by:

- interacting with prospective students on their campus visits (Hospitality Committee)
- maintaining the EGSA website (Website & Newsletter Committee) and UCR Entomology social media accounts (Technology & Social Media Committee)
- seeking visibility in Riverside and the surrounding area (Displays, Exhibits & Outreach Committee).

Many of these activities would be impossible without funding, and EGSA is fortunate to be able to organize fundraising events (Fundraising & Events Committee) and sell merchandise (Merchandise Committee). EGSA also receives funding from the GSA.

For more information, visit the EGSA website at egsa.ucr.edu.

SUPPLEMENTARY REQUIREMENTS AND PROCEDURES FOR THE DEGREE OF MASTER OF SCIENCE



A. Major Professor

Generally, students have identified their Major Professor upon admission to the M.S. program. However, for those who have not selected a Major Professor, they are encouraged to consult with Faculty members, Graduate Advisors, and other students to facilitate this selection. The Major Professor should be selected by the end of the **first quarter**. The Major Professor directs the student's research project and serves as Chair of the M.S. Guidance Committee.

B. M. S. Guidance Committee

Once the student has selected a Major Professor, a M.S. Guidance Committee is formed. This committee consists of the Major Professor and at least 2 other faculty members. Although it is common to choose these members from the Entomology Department faculty, faculty outside of the Department also may serve. The majority of the members must be from Entomology. Upon selection of the committee members, the student completes the M.S. Guidance Committee Form, secures the initials of committee members, and returns it to the Student Services Advisor who will forward it to ISAC for approval. This form must be completed by the end of the **second quarter**.

The M.S. Guidance Committee will meet with the student at least annually, during the **spring quarter**. Prior to the meeting the student is required to Complete the Individual Development Plan part of the form. Following this meeting, the M.S. Guidance Committee provides a candid evaluation of the student's progress on the Report on Progress of Graduate Student Form. This form is sent to the students and Major Professors by the Student Services Advisor early in the spring quarter. The progress reports serve as a permanent record of each student's progress, and a copy is forwarded to the Graduate Division.

C. Program of Academic Study

Each student, with the advice of their M.S. Guidance Committee, will select courses that will complement their research program. These courses must be submitted to ISAC for approval on the MS Program of Academic Study Form, no later than the end of the **third quarter** at UCR. The Program of Academic Study will be binding upon approval by ISAC, and the student is expected to take all of the courses listed as "required" prior to advancement to candidacy.

There is a minimum of 36 units required for all M.S. students. This consists of a minimum of 24 units of graduate coursework. In addition to the required graduate coursework in General Section D and E, students may include 12 units of Entomology Research (ENTM 297) and/or Entomology Thesis (ENTM 299). The remaining 12 units

may be from graduate level or upper division undergraduate coursework (100 level classes).

Students may check their degree progress at any time by accessing their Degree Works application in Rweb.

D. Advancement to Candidacy

At the beginning of the last quarter of enrollment, a student must complete the *Application for Candidacy for the Master's Degree* available in the RGrad application found in Rweb.

E. Final Oral Examination

A minimum of 30 days is required between submission of the thesis to the M.S. Committee and the Final Oral Examination. This period should be sufficient for the Committee to read and provide comments on the thesis, and for the student to complete revisions and return the thesis for approval by the M.S. Committee prior to the Final Oral Examination. The Thesis will include an Abstract, Introduction, Data chapter(s) and Summary/Conclusions.

The Final Oral Examination will deal primarily with the relation of the thesis to the general field in which the subject lies. This examination will be given by the M.S. Committee. The Major Professor, chair of the M.S. Committee, is responsible for scheduling the time and place of the examination. The student must inform the Student Services Advisor of when and where the exam will be administered. The Student Services Advisor prepares the Report on Final Defense for Master's Degree form and gives it to the Major Professor before the defense. A seminar open to the academic community will be required as part of the Final Oral Examination for all M.S. students (see page 7). Following the examination, the Major Professor is responsible for transmitting the result to the Student Services Advisor, who then forwards the results of the examination to the Graduate Division.

F. Thesis

Details concerning formatting and submission of the thesis are available at <http://graduate.ucr.edu>

G. Normative Time

All requirements for the M.S. degree should be completed within two years (six academic quarters) following entry into the graduate program at UCR. Should a student require more than six quarters to complete the M.S. program, the Graduate Adviser will consult with the Major Professor to determine the need for a revised timetable of completion.

H. M.S. Student Advancement to the Ph.D. Program

Students who are enrolled in the M.S. degree program and have nearly completed the requirements for this degree at UCR may petition ISAC if they wish to enroll in the Ph.D. program. Transfer to the Ph.D. program is not automatic. It usually is contingent upon completion of the M.S. requirements and requires clear evidence of promise in the Ph.D. program. The student completes a *Petition for Change in Degree Objective* (available at <http://graduate.ucr.edu>) accompanied by the following: 1) a letter of evaluation from each member of the M.S. Committee, and 2) a letter from the prospective Ph.D. Major Professor expressing a willingness to serve in this capacity, addressing the question of financial support, and providing an estimated timeline for completion.

I. M.S. Timeline

Quarter	Milestone	Action
2 (Year 1 Winter)	Select guidance committee	Submit M.S. guidance committee form
3 (Spring)	Guidance committee meeting	Submit report on progress form
3 (Spring)	Guidance committee recommends coursework	Submit program of academic study form
6 (Year 2 Spring)	M.S. thesis	Submit written thesis 30 days or more before the scheduled date for the Final Oral Examination.
6 (Year 2 Spring)	Final Oral Examination	Submit Report on Final Defense for Master's Degree

III. SUPPLEMENTARY REQUIREMENTS AND PROCEDURES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY



A. Major Professor

Generally, students have identified their Major Professor upon admission to the Ph.D. program. However, for those who have not selected a Major Professor, they are encouraged to consult with Faculty members, their Graduate Advisor, and other students to facilitate this selection. The Major Professor should be selected by the end of the **first quarter**.

In addition to directing the student's research project, the Major Professor serves as Chair of the Ph.D. Guidance Committee and the Ph.D. Dissertation Committee. The Major Professor does not serve on the Qualifying Committee.

B. Ph.D. Guidance Committee

Once the student has selected a Major Professor, a Ph.D. Guidance Committee is formed. This committee consists of the Major Professor, and at least two more members from the Entomology Department. In some cases a member from outside the Department serves as a fourth member. The student completes the Ph.D. Guidance Committee Form with the names of the committee members, and returns it to the Student Services Advisor who will forward it to ISAC for approval. This form must be completed by the end of the **second quarter**.

The Ph.D. Guidance Committee will meet with the student at least annually, during the **spring quarter**. Prior to the meeting the student is required to complete the Individual Development Plan part of the form. Following this meeting, the Ph.D. Guidance Committee provides a candid evaluation of the student's progress on the Report on Progress of Graduate Student Form. This form is sent to the students and Major Professors by the Student Services Advisor early in the spring quarter. The progress reports serve as a permanent record of each student's progress, and a copy is forwarded to the Graduate Division.

C. Program of Academic Study

Each student, with the advice of their Ph.D. Guidance Committee, will select courses that complement their research program and help the student prepare for the qualifying examination. These courses must be submitted to the Student Services Advisor who will forward it to ISAC for approval on the PhD Program of Academic Study Form, no later than the end of the **third quarter** at UCR. This program of academic study will be binding upon approval by ISAC, and the student is expected to take the courses listed as "required" prior to the end of the seventh quarter, when the qualifying examination is given.

Required courses are explained in General Section D & E. Students come to UCR with diverse interests, varying degrees of prior training, and numerous career objectives, thus there are no specific course requirements for the various fields of specialization. Students should work closely with the Guidance Committee to develop an appropriate course plan to complete prior to advancement.

Students may check their degree progress at any time by accessing their Degree Works application in Rweb.

D. Dissertation Proposal

The written Dissertation Proposal serves as the formal guide for the student's dissertation research. A well written proposal is vital for a successful graduate program, second in importance only to the actual dissertation. As such, the creation of the Dissertation Proposal is a process that starts with the early ideas of the project, through reviews by the Major Professor and the Ph.D Guidance Committee, until the final proposal is ready for submission to the Qualifying Committee.

Each student will submit a draft of their Dissertation Proposal to the Ph.D. Guidance Committee by the end of their **fourth academic quarter** (usually Fall of year two). This proposal should include the following sections: Introduction (that includes background/summary of prior relevant research and justification), objectives, and methodology for reaching the objectives. Possible styles could include those used for NSF, USDA, or NIH proposals, but the ultimate format is determined by the guidance committee. The research proposal (initial and final drafts) should not exceed 15 pages of text and figures, with references considered as separate. From this original submission, the proposal will evolve with the input of the Major Professor and Guidance Committee through the **sixth quarter**, when the final proposal is approved by the Major Professor for distribution to the Qualifying Committee (see Section E). This approval is required before the student can submit names for their Qualifying Exam Committee. The proposal must be distributed to the Qualifying Committee members at least 4 weeks before the Qualifying Exams commence.

E. Qualifying Committee

By the end of the **sixth quarter**, the student, in consultation with the Ph.D. Guidance Committee, will select three faculty members to serve on the Qualifying Committee (Part I). The Major Professor may not serve on the Qualifying Committee. The three members will consist of the Chair, one other faculty member from Entomology, and one faculty member from outside of Entomology. Typically, these three faculty members have also served on the Ph.D. Guidance Committee, but this is not required. These three names are submitted to ISAC on the *PhD Qualifying Exam Committee Form*. ISAC, upon approval of the three, will suggest three additional names for service on the Qualifying Committee on the ISAC Qualifying Exam Committee Form. The student chooses two from this list of three, completing the 5-member Qualifying Committee. The approved committee is submitted to the Graduate Division, who confers final appointment.

F. Qualifying Examination

The student is expected to complete all required courses in the Program of Academic Study (see page 13) prior to taking the Qualifying Examination. This examination is administered by the Qualifying Committee by the end of the **seventh quarter**. Failure to take the qualifying examination by the end of the seventh quarter will be viewed as a departure from normal progress, and must be justified by the student and his or her Major Professor.

The qualifying examination consists of a written portion and an oral portion. The Chair of the Qualifying Committee is responsible for scheduling the time and place of both portions of the examination. The student must inform the Student Services Advisor of when and where the examination will be administered. The Student Services Advisor prepares the Report on Qualifying Examination for the Degree of Doctor of Philosophy form and gives it to the Chair before the oral examination. Each member of the Qualifying Committee submits questions for the written examination to the Chair, who determines the order in which questions are given to the student. Assuming the student passes the written portion of the exam, an oral qualifying examination is scheduled to follow shortly thereafter.

The Committee may meet once prior to the written examination to discuss the student's progress, the dissertation proposal, or other issues related to the student's program, and to coordinate the examination procedure. The Major Professor, though not a member of the Qualifying Committee, may submit questions to the Qualifying Committee for consideration of inclusion in the written examination. The Major Professor may attend the oral examination and provide information as needed or requested, but may not attend or take part in the deliberations following the examination. After the vote is taken and recorded, the Qualifying Committee Chair will verbally summarize the Committee's assessment of the student's performance on the qualifying examination for the student and Major Professor. The Chair of the Qualifying Committee also is responsible for transmitting the result of the examination to the Student Services Advisor, who then forwards this information to the Graduate Division. Possible grades are pass, fail with the option to retake the exam, or fail.

Students who fail the qualifying examination and who are eligible, must retake it within six months, but not sooner than three months, with the approval of the Graduate Division. If the exam is failed a second time, the student will be subject to dismissal from the Ph.D. program. Passing the qualifying examination along with fulfillment of all course requirements normally qualifies the student for Advancement to Candidacy.

G. The Dissertation Committee and Final Oral Examination

Within one quarter of successful completion of the Qualifying Examination, the student selects a Dissertation Committee. This committee consists of the Major Professor and at least two other faculty members, and is submitted to ISAC on the PhD Dissertation Committee Form. Because the Ph.D. Guidance Committee has become familiar with the student's research, the members of the Ph.D. Guidance Committee often are selected

to serve on the Dissertation Committee, but this is not required. The Dissertation Committee is responsible for guidance, editing, and approval of the dissertation. This Committee also administers the Final Oral Examination.

A minimum of 30 days is required between submission of the written dissertation to the Dissertation Committee and the Final Oral Examination. This period should be sufficient for the Committee to read and provide comments on the dissertation, and for the student to complete revisions and return the dissertation for approval by the Dissertation Committee prior to the Final Oral Examination.

A seminar, open to the academic community and the public, will be required as part of the Final Oral Examination (see page 7). The student is responsible for notifying the Student Services Advisor of when and where the Final Oral Exam will take place. The Student Services Advisor prepares the Report on Final Examination for the Degree of Doctor of Philosophy form and gives it to the Major Professor before the defense. Upon completion of the exam, the Major Professor and Dissertation Committee complete this form and give it to the Student Services Advisor, who then forwards the results of the examination to the Graduate Division.

H. Ph. D. Dissertation

Details concerning formatting and submission of the dissertation are available at <http://graduate.ucr.edu>

I. Normative Time

Students entering the Ph.D. program with either a B.S. or M.S. in Entomology or a related field should complete all requirements for the Ph.D. degree within 17 quarters. Should a student require more than 17 quarters to complete the Ph.D. program, the Graduate Adviser will consult with the Major Professor to determine the need for a revised timetable of completion. A memo then will be sent to Graduate Division notifying the Division of the revised timetable.

J. Ph.D. Timeline

Note that this timeline is based on normative time. While most of the action items are required to be done in concordance with this timeline, some students will, for example, take the qualifying exam before quarter 7. Students may take fewer than 17 quarters to defend. If more than 17 quarters are required, the timetable will be revised and this revision will be sent to Graduate Division.

Quarter	Milestone	Action
2 (Year 1 Winter)	Select guidance committee	Submit guidance committee form
3 (Spring)	Guidance committee meeting	Submit report on progress form
3 (Spring)	Guidance committee recommends coursework	Submit program of academic study form

4 (Year 2 Fall)	Rough draft of dissertation proposal	Submit rough draft to guidance committee for comment.
6 (Spring)	Finalize dissertation proposal	Submit finalized proposal and obtain guidance committee approval before selecting the qualifying exam committee
6 (Spring)	Qualifying exam committee	Submit Ph.D. qualifying exam committee form (parts 1 and 2).
6 (Spring)	Guidance committee meeting	Submit report on progress form
7 (Year 3 Fall)	Qualifying exam	Take qualifying exam
7/8 (Fall/Winter)	Dissertation committee	Submit Ph.D. dissertation committee form
9 (Spring)	Dissertation committee meeting	Submit report on progress form.
12 (Year 4 Spring)	Dissertation committee meeting	Submit report on progress form
15 (Year 5 Spring)	Dissertation committee meeting	Submit report on progress form
17 (Year 6 Fall/Winter)	Ph.D. dissertation	Submit written dissertation 30 days or more before the scheduled date for the Final Oral Examination.
17 (Fall/Winter)	Ph.D. public seminar and Final Oral Examination	Submit Report on Final Examination



IV. SUPPLEMENTARY REQUIREMENTS AND PROCEDURES FOR THE COMBINED B.S.+M.S. PROGRAM IN ENTOMOLOGY

A. Major Professor

Students must have identified their Major Professor upon admission to the combined B.S.+M.S. program and during the submission of the Statement of Interest and Eligibility during their junior year. The Major Professor directs the student's research project and serves as Chair of the M.S. Guidance Committee.

B. M. S. Guidance Committee

In the senior year, thesis research will be conducted. During the first quarter of the senior year, the student will work with their Major Professor to form the M.S. Guidance Committee. This committee consists of the Major Professor and at least 2 other faculty members. Although it is common to choose these members from the Entomology Department faculty, faculty outside of the Department also may serve. The majority of the members must be from Entomology. Upon selection of the committee members, the student meets with the committee and Major Professor to complete the B.S.+M.S. Program of Academic Study Form, secures the initials of committee members, and returns it to the Student Services Advisor who will forward it to ISAC for approval. This form must be completed by the end of the **first quarter of senior year**. The Program of Academic Study will be binding upon approval by ISAC, and the student is expected to take all of the courses listed as "required" prior to advancement to candidacy.

The M.S. Guidance Committee will meet with the student at least annually, during the **spring quarter of both the senior and MS years**. If the student remains in good standing at the end of their senior year, the B.S.+M.S. Faculty Advisor will contact the student with directions to submit their application to the M.S. program via GradSIS. Students must upload their UCR transcript, statement of personal history, statement of purpose, signed B.S.+M.S. Program of Academic Study Form, and 3 names for reference letters (which must include the Major Professor and the B.S.+M.S. Faculty Advisor).

C. M.S. Course Requirements

A minimum of 36 units of total coursework is required for the Master's portion of the program. As is the case for all Entomology graduate programs, the departmental seminar, ENTM 250, is required during all quarters of the M.S. portion of the program. 24 units must be 200-level, and no more than 12 units may come from 297 or 299 research units. No more than 12 units earned prior to matriculation to graduate status (including ENTM 19X) can be applied toward the M.S. degree requirements. 3 units must be ENTM 250 and the remaining 200-level courses can be taken from this list of courses: ENTM 201, ENTM 202, ENTM 203, ENTM 207, ENTM 209, ENTM 210, ENTM 212, ENTM 219, ENTM 227, ENTM 229, ENTM 230, ENTM 240, ENTM 241, ENTM 242, ENTM 249, ENTM 251, ENTM 252, ENTM 254, ENTM 255, ENTM 256, ENTM 257, ENTM 258, ENTM 262, ENTM 267, ENTM 289, ENTM 290, BPSC 230, BPSC 234, BPSC 246, BPSC 247, EEOB 215, EEOB 217, EEOB 230, EEOB 282, EEOB 283, STAT 231A, STAT 231B. Up to 6 units of upper division 100 level ENTM courses may be taken during the M.S. portion of the program. Students may check their degree progress at any time by accessing their Degree Works application in R'web.

D. Advancement to Candidacy

At the beginning of the last quarter of enrollment, a student must complete the *Application for Candidacy for the Master's Degree* available in the R'Grad application found in R'web.

E. Final Oral Examination

A minimum of 30 days is required between submission of the thesis to the M.S. Committee and the Final Oral Examination. This period should be sufficient for the Committee to read and provide comments on the thesis, and for the student to complete revisions and return the thesis for approval by the M.S. Committee prior to the Final Oral Examination. The Thesis will include an Abstract, Introduction, Data chapter(s) and Summary/Conclusions.

The Final Oral Examination will deal primarily with the relation of the thesis to the general field in which the subject lies. This examination will be given by the M.S. Committee. The Major Professor, chair of the M.S. Committee, is responsible for scheduling the time and place of the examination. The student must inform the Student Services Advisor of when and where the exam will be administered. The Student Services Advisor prepares the Report on Final Defense for Master's Degree form and gives it to the Major Professor before the defense. A seminar open to the academic community will be required as part of the Final Oral Examination for all M.S. students (see page 14). Following the examination, the Major Professor is responsible for transmitting the result to the Student Services Advisor, who then forwards the results of the examination to the Graduate Division.

F. Thesis

Details concerning formatting and submission of the thesis are available at <http://graduate.ucr.edu>

G. Normative Time

All requirements for the combined B.S.+M.S. program should be completed within two years (six academic quarters) following entry into the B.S.+M.S. program, which is three quarters after entering the M.S. portion of the program. Should a student require more than six quarters to complete the program, the B.S.+M.S. Faculty Advisor and Graduate Adviser will consult with the Major Professor to determine the need for a revised timetable of completion.

H. M.S. Student Advancement to the Ph.D. Program

Students who are enrolled in the M.S. degree program and have nearly completed the requirements for this degree at UCR may petition ISAC if they wish to enroll in the Ph.D. program. Transfer to the Ph.D. program is not automatic. It usually is contingent upon completion of the M.S. requirements and requires clear evidence of promise in the Ph.D. program. The student completes a *Petition for Change in Degree Objective* (available at <http://graduate.ucr.edu>) accompanied by the following: 1) a letter of evaluation from each member of the M.S. Committee, and 2) a letter from the prospective Ph.D. Major Professor expressing a willingness to serve in this capacity, addressing the question of financial support, and providing an estimated timeline for completion.