

# Handbook for Ecology and Evolutionary Biology Doctoral Program

Updated 3/6/2023

## A. Glossary of Terms

Throughout the document, the following terms are used and defined here:

**EEB Program Director** is responsible for on-going development and review of the EEB program, including the doctoral program.

**EEB Doctoral Program Advisor** is responsible for student coursework advisement and review of fulfillment of academic and graduate school requirements for Qualifying Exams and Dissertation Defense.

**EEB Program Advisory Committee:** committee consisting of 3 individual faculty members from the EEB program, in addition to the Program Director and Program Advisor. The Program Director is Chair of the committee. The Program Committee is responsible for the administration of the program, including recruitment and admission of students, oversight of the required exams, making recommendations to the Department Chair concerning financial support for students, and ensuring the quality of the students that graduate from the program. This committee reviews all appeals made by students and is also responsible for dismissal of students from the program.

**Doctoral Trainee or Student:** Beginning doctoral student who is still completing coursework or has not completed qualifying exams.

**Doctoral Candidate:** Doctoral student who has passed the qualifying exam and completed all coursework (not including research hours and dissertation hours).

**Research mentor, faculty mentor or research advisor:** Faculty member from the Dept. of Biological Sciences who oversees the Doctoral trainee/candidates research and is Chair of the student's Dissertation Committee.

**Dissertation Committee:** The Dissertation Committee consists of the research mentor, who is Committee Chair and from the Tenured/Tenure-Track faculty of the Department of Biological Sciences Graduate Faculty plus three additional members of the Graduate Faculty, at least one of whom must be from outside of the Department of Biological Sciences and at least one from within Biological Sciences. Committee members from outside UTEP must be approved as temporary Graduate Faculty.

**Advocate:** Faculty member from the Dept of Biological Sciences, outside of the student's Dissertation Committee, who is selected by the student to attend both the student's Qualifying Exam and Dissertation Defense and act as their advocate. The advocate acts to ensure the student is treated fairly during the exams.

**Ombuds (Ombudsman):** In addition to the advocate, a departmental ombuds exists to resolve disputes from a neutral standpoint. If the ombuds is unable to resolve a dispute, then the student can appeal to the Advisory Committee.

## **B. Advisors, Committees, Registration, and Standing.**

Upon admission to the program, or within the first semester, students should select or be assigned a faculty mentor in their desired area of study. Doctoral Students are required to consult with their faculty mentors each semester for planning of their course of study and registration. In addition, the EEB Doctoral Program Advisor will advise all incoming and enrolled graduate students at least once per year. By the end of the second semester, trainees and their research mentor will assemble a dissertation committee. This committee will guide the student through their doctoral research, qualifying exam and writing of their dissertation and will be responsible for final approval of the written dissertation. Any faculty on the Dissertation Committee who are external to UTEP must apply to be graduate faculty at least 6 months prior to initiation of the qualifying exam.

Change of faculty advisors or committee members: If desired, a student may change their faculty advisor once, preferably within the first year of study. If they would like to change mentors a second time (to a third faculty mentor), they will need to meet with the EEB Advisory Committee to explain the situation. Committee members can be changed with the approval of faculty mentor.

Full time doctoral students must register for nine doctoral-level credit hours (see below) in each of the fall and spring semesters; doctoral candidates, who have passed their qualifying exam and completed all coursework (required courses and electives), may be permitted to register for fewer hours. However, students are advised to keep track of the total number of research hours required to graduate and ensure an appropriate number are taken each semester in order to graduate in a timely manner. Students are reminded that financial aid will not cover hours not required by the program (e.g. excess research hours). Dates and times for graduate registration are listed in UTEPs academic calendar and graduate school webpage. Each student must maintain a minimum GPA of 3.0 to remain in good academic standing. To receive a TA position, the trainee must be enrolled full time and be in good academic standing.

## C. Course Requirements

Course credits required for Doctoral Students include those from these categories: Required Courses, Free Electives, and Doctoral Research and Dissertation. The most up-to-date degree plan will be viewable on graduate school web pages; if your degree plan is older and does not match the displayed degree online, you should consult with the Graduate Advisor. Doctoral trainees/candidates can access their Degree Evaluation on Goldmine to verify if requirements have been met.

**C1. Required Courses** will be offered at least every two years and must be taken promptly, when they are offered, in order to complete degree requirements in a timely manner. Depending on their catalog year, each student must take four to five core courses (see table below) and three seminars. For full-time students, these core courses should be completed in the first two years of the program. These courses include:

2022-2023		After Fall 2023	
BIOL 6327	Advances in Ecological Theory	BIOL 6331	Advances in Evo & Eco Theory
BIOL 6322	Advances in Evolutionary Theory		
BIOL 6328	Biostatistics	BIOL 6328	Biostatistics
BIOL 6208	Professional Skills Development in EEB	BIOL 6208	Professional Skills Development in EEB
BIOL 6209	Research Proposals in EEB	BIOL 6209	Research Proposals in EEB
BIOL 6130	Biology Seminar for EEB students (students must take at least 3 seminar courses)	BIOL 6129	Seminar for EEB students (students must take at least 3 seminar courses)

**C2. Free Electives** will ideally be offered every two years. In addition to the credit hours required above, each doctoral student must take additional credit hours of free electives or excess menu electives to total a **minimum of 15 hours (prior to Fall 2023), or 18 (after Fall 2023)**. A list of recommended electives includes the following (the full list is available on the website):

BIOL 6321	Selected Advanced Topics
BIOL 6305	Herpetology
BIOL 6313	Biogeography
BIOL 6316	Biosystematics
BIOL 6351	Bioinformatics I
BIOL 6352	Bioinformatics II
BIOL 6360	Aquatic Ecology
BIOL 6312	Biodiversity

In addition, as of Fall 2022, we regularly offer special topics courses in Spatial Ecology, Ecosystem Ecology, Soil Ecology, etc. Other courses will be considered by request to the Graduate Advisor.

A limited number of graduate level course work from an earned Master's degree may be considered for transfer to the doctoral degree. To apply for transfer of credit, the student's Graduate Committee must find that each course is an appropriate substitution for the degree program and that it was successfully completed

by the student. The student then submits a list of the courses, as well as the official transcripts and course descriptions, to the Doctoral Advisor. Most often, any transferred courses will be listed under the “Free Electives” portion of the program of study.

**C3. Doctoral Research and Dissertation.** Students must accumulate 27 hours of doctoral level research (BIOL 6X90) plus 6 hours of dissertation (BIOL 6398 and BIOL 6399). Dissertation hours are only allowed after admission to candidacy following completion of the qualifying exam and all coursework. Dissertation hours cannot be taken concurrently.

## D. Qualifying Exam

The **Qualifying exam** should be taken before the end of the second year. It is recommended that most, if not all, coursework (required courses and electives) is completed prior to starting this exam. If the Qualifying Exam is not completed by the end of the 3rd year, then the student could be removed from the program. Exceptions can only be granted by formal petition and an in-person meeting with the EEB Director and Advisory Committee to discuss what is causing the delay and what is being done to resolve it.

The exam will consist of a written section as well as an oral exam administered by the student’s Dissertation Committee. The oral portion of the exam must be attended in person by all Dissertation Committee Members and the Advocate, unless special circumstances require virtual attendance as determined by the committee.

The qualifying exam is overseen by a member of the committee other than the research mentor. This committee member will solicit questions from the Dissertation Committee and forward 4 questions to the student. The written portion of the Qualifying exam is taken prior to defense of the dissertation research proposal. The student will choose 2 of the 4 questions to address in the written exam. The student will have 2 weeks to complete the written exam. In general, each question should be answered in approximately 4-5 pages of text; however, the Dissertation Committee may modify these requirements at their discretion. After successfully completing the written portion as assessed by all the Dissertation Committee members, the student will be allowed to continue to the oral exam and defense of the Research Proposal. At the discretion of the Dissertation Committee, if the student does not pass the written exam, the students may be given one chance to address the issues outlined by the committee and resubmit a written response based on the committee’s recommendation within one week. During the oral exam, the student will directly answer the two questions not included in the written exam and may also be asked additional questions regarding the previously written questions. The oral examination and proposal defense must take place within 8 weeks of passing the written exam. The oral defense is open to the public. Notification of the oral defense must be distributed to the Department faculty and a copy of the dissertation research proposal (see below) made available to the Department at least one week prior to the defense. Immediately following the research proposal defense, the oral examination will be administered by the committee. If the examination is not successful, the student may petition for a second examination at the discretion of the Dissertation Committee and the EEB Program Director.

**A Dissertation Research Proposal** is part of the Qualifying Examination. Each student will write a detailed Dissertation Proposal, including a review of the field, statement of hypothesis and/or key science questions and specific aims, a detailed description of the approach and methods to be used, a timeline and management plan, preliminary data (if any) and all appropriate references. All proposals should aim to have at least 3 major objectives, which could be framed as separate chapters publishable in peer-reviewed literature. We recommend that proposals be no more than 15 pages single spaced (font size 11), including figures.

References should be in addition to this. While preliminary data is recommended for inclusion, it is not required. This proposal must be made available at least 1 week prior to the oral examination for comments by the Department of Biological Sciences Graduate Faculty. A physical or electronic version are both acceptable methods for sharing this document.

## E. Timeline for Biology Doctoral Degree

While Table A lists specific details, the basic requirements for awarding a Doctor of Philosophy Degree are:

- Complete the Milestone agreement no later than the last class day of the Spring semester
- Successful completion of required course work
- Completion of qualifying exams
- Successful defense of dissertation proposal
- A first-author article must be submitted and accepted for review in a peer-reviewed journal with a Journal Impact Factor greater than 1.0. This paper can be included as a chapter in the dissertation.
- Successful completion and defense of dissertation

It is expected that students will continue to make timely progress on their dissertation work, with annual presentation of results for review by the Dissertation Committee. In order to encourage timely completion of the degree, Table A (see below) outlines detailed annual requirements for the degree. In brief, trainees should progress through the following:

- 1. Formation of Committee:** In consultation with the dissertation advisor, the student should form their committee no later than at the end of Year 1.
- 2. Annual Committee meeting:** Starting in the first year and each subsequent year, the student is to have a formal meeting with the committee to review progress and set future milestones.
- 3. Annual Student Update Talks:** After their first year in the EEB doctoral program, students will present an update on their research progress once a year during the EEB Seminar.
- 4. Course Work:** Course work should be completed by the end of the 2<sup>nd</sup> year of the student's program of study.
- 5. The Qualifying Examination and Dissertation Proposal:** This exam should be taken before the end of the second year. It is recommended that most, if not all, coursework (required courses and electives) is completed prior to starting this exam.
- 6. Advancement to Candidacy:** After passing the qualifying exam, defending the dissertation proposal, and completing all coursework, students are advanced to candidacy.
- 7. Completion of Ph.D. Program:** Ideally, students should complete the Ph.D. requirements (including dissertation) by the end of the fourth year, but no later than the sixth year in the program. Permission for extension of the Ph.D. timeline beyond the sixth year must be approved by the candidate's Dissertation Committee and the EEB Program Director. Candidates should pay close attention to Graduate School deadlines that will be posted regarding specific deadline for the semester/summer of the proposed dissertation defense. All candidates should be aware that the state does not permit state funding (i.e., Teaching assistantships) after receiving 8 semesters of state funding.

## F. Final Oral Dissertation Defense

To complete the doctoral program, each student must successfully defend their Doctoral Dissertation based on their original research. When the student and their committee agree that research progress has been sufficient, the candidate must submit the "Application for Doctoral Degree" form

(<https://www.utep.edu/graduate/forms.html>) that will be signed by all committee members and the EEB Program Director indicating that the student has permission to defend the dissertation. It is important to note that students must be registered for dissertation hours (BIOL6399) in the semester in which they plan to defend. After the dissertation is written, the student must pass their dissertation through the SafeAssign plagiarism checker, which will be available on a Blackboard page associated with their dissertation course for that semester (BIOL 6399). The SafeAssign results must be reviewed and approved by their committee. The committee chair will sign a form indicating the SafeAssign score. The student may then schedule a public oral defense of the dissertation. At least one week prior to that date, a final complete copy of the dissertation will be given to each member of the committee AND a copy will be made available to the Department for review by interested faculty. Following the public defense, the committee will meet privately with the student to evaluate the dissertation and defense and will determine whether to accept, accept with modifications, or to reject the dissertation. If a dissertation is accepted with modifications, the committee should specify whether the final version needs a full review by the committee or only by the Chair of the Committee or designate. Before their defense, the candidate should prepare all forms required by the Graduate School (<https://www.utep.edu/graduate/forms.html>) for graduation ([Application for Doctoral Degree, Graduation/Defense Form & Dissertation Signature Form](#)).

### **G. Exceptions to the Guidelines**

Exceptions to guidelines require the specific approval of the Doctoral Committee, the EEB Program Director and the Graduate School. Candidates requesting exceptions will be required to fully justify that request.

### **H. Dismissal from the program could occur for the following reasons:**

- 1) Failure to make progress towards milestones, or towards addressing suggestions made by the committee or mentor during the annual IDP
- 2) Failure to complete qualifying exam in a timely manner
- 3) Unacceptable performance on qualifying exam
- 4) Failure to comply with UTEPs institutional [Code of Conduct](#)
- 5) Failure to complete Dissertation Defense in a timely manner

## Appendix A: Current Administrative Positions and Contact Numbers

### Chair, Department of Biological Sciences:

Dr. Bruce Cushing	Bioscience 2.118	747-8894
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### Director of Graduate Studies:

Dr. Renato Aguilera	Bioscience 4.144	747-6852
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### Director of EEB PhD Program

Dr. Vanessa Lougheed	Biology 316	747-6887
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### Doctoral Advisor:

Dr. Michael Moody	Biology 306	747-5087
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### Ombuds:

Dr. Jerry D. Johnson	Biology 205	747-6999
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### Building Manager:

Oscar Sanchez	Bioscience 2.158	747-6881
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Pedro Garcia	Biology	747-5986
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### Biology Office Staff:

TBD	Bioscience 2.138	747-7478
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**Table A. Timeline for completion of doctoral degree in EEB.**

Degree Timeline	Dissertation Requirements	Course Requirements
Year 1	<p>At the start of your first semester, you should:</p> <ul style="list-style-type: none"> <li>Meet with the EEB Graduate Advisor (Required to register for classes)</li> </ul> <p>By the end of the first semester, you should:</p> <ul style="list-style-type: none"> <li>Identify your Research Mentor (Research Advisor)</li> <li>Complete IDP &amp; Milestones agreement with your advisor's input (<a href="https://www.utep.edu/graduate/forms.html">https://www.utep.edu/graduate/forms.html</a>)</li> <li>With your faculty mentor, agree on expectations of the student-mentor relationship. An example contract is included below; however, individual labs may have their own contracts and expectations.</li> </ul> <p>By the end of your first year, you should have met with, or scheduled a meeting with, your Dissertation Committee.</p>	<p>Complete core courses (if available) and any deficiencies (as required)</p> <p>Take seminar class both semesters</p>
Year 2	<p>During your second year, you should:</p> <ul style="list-style-type: none"> <li>Meet annually with the EEB Graduate Advisor (<u>Fall Semester</u>)</li> <li>Meet annually with your Dissertation Committee</li> <li>Update your IDP</li> <li>Work on your research proposal, with the intent of completing your qualifying exam towards the end of the year</li> <li>Seek any IRB approvals necessary for your research (if applicable)</li> <li>Present some aspect of your research at the EEB seminar (instructions vary by semester)</li> </ul> <p>Qualifying Exam (should be completed by end of Year 2)</p> <p><u>Suggested Timeline for the qualifying exam</u>            After you have written your research proposal, you must allow <u>at least 6 weeks</u> for the following process (please note, the days are an example only of an ideal timeline, the process may take longer depending on the availability of your committee members and other factors):</p> <p><u>Day 1:</u> A designated coordinating committee member (not the mentor) will send the proposal to the committee and request qualifying questions \.</p> <p><u>Day 7:</u> You will be provided with 4 questions by the coordinating committee member of your qualifying exam. Two questions must be answered formally (i.e. written), while the other 2 will be part of <u>the</u> oral exam following the proposal defense.- <u>Day 14-21:</u> After receiving the questions, you will have a maximum of 14 days to submit the 2 written answers to the coordinating committee member for the qualifying exam. Your committee will <u>decide</u> on the appropriate length of time, depending on your coursework and research load.</p> <p><u>Day 21-28:</u> Within 7 days, your committee should determine whether you have passed the written section of your qualifier, at which point you may proceed with the oral section of the qualifier.</p> <p><u>The oral section of your qualifying exam must be completed within 8 weeks of successful completion of the written exam, as follows:</u></p> <p><u>TBD:</u> Make a copy of your proposal available to the department (physical or electronic copies allowed) and distribute the announcement of the oral proposal and defense. This announcement must occur <u>at least 1 week</u> before your oral defense.</p>	<p>Complete coursework (including free electives and core courses (as required))</p> <p>Take seminar class for at least one more semester (at least 3 credits required)</p>

	<u>TBD</u> : Give and defend oral presentation of proposal and oral qualifying exam questions.	
Year 3	<p>During your third year, you should:</p> <ul style="list-style-type: none"> <li>• Meet annually with the EEB Graduate Advisor (Fall semester)</li> <li>• Meet annually with your Dissertation Committee</li> <li>• Update your IDP</li> <li>• If not done already, complete your qualifying exam and become a Doctoral Candidate</li> <li>• Present some aspect of your research at the EEB seminar (instructions vary by semester)</li> </ul>	<p>All formal coursework should be completed; if not, see instructions in Year 2</p> <p>Research hours (as required)</p>
Year 4-6	<p>During your fourth and subsequent years, you should:</p> <ul style="list-style-type: none"> <li>• Meet annually with the EEB Graduate Advisor (Fall Semester)</li> <li>• Meet annually with your Dissertation Committee</li> <li>• Update your IDP annually</li> <li>• Present some aspect of your research at the EEB seminar annually (instructions vary by semester)</li> <li>• Complete a manuscript(s) for publication (at least 1 required for graduation)</li> </ul> <p>As you approach the completion of your dissertation, you should:</p> <ul style="list-style-type: none"> <li>• Submit Application for Doctoral Degree form to defend your dissertation; this decision must be unanimous among all committee members (<a href="https://www.utep.edu/graduate/forms.html">https://www.utep.edu/graduate/forms.html</a>)</li> <li>• You must submit 1 first author paper for publication related to dissertation prior to your defense; this paper can be a chapter in the dissertation.</li> </ul> <p>Completion and Oral defense of dissertation</p> <ul style="list-style-type: none"> <li>• Dissertation defense date should be scheduled in referring to semester deadlines set out by Grad School; committee should be consulted well in advance to select date.</li> <li>• Have dissertation format reviewed and accepted by Grad School</li> <li>• The dissertation will be made available for review by the entire Department at least 1 week in advance.</li> <li>• Complete revisions to dissertation by deadlines set out by Grad School</li> <li>• Complete exit interview</li> </ul>	<p>Research hours (as required)</p> <p>6 credits of dissertation hours after student reaches candidacy and has completed (or nearly completed) research hours.</p>

Example of a contract between students and faculty mentors. Individual labs may have their own version of this document, which may serve as an alternative.

## **FACULTY MENTOR/DOCTORAL STUDENT CONTRACT**

### **Faculty Mentor Responsibilities**

#### **The faculty mentor**

- Will keep trainee “on track” and hold mentee accountable for his/her time and quality of effort.
- Will review and provide feedback on annual IDP
- Will provide opportunities for trainee to develop research and academic skills
- Will advise the trainee on the selection of trainee’s dissertation committee and will ensure this committee is instituted within the first year of residence.
- Will ensure that the trainee meets with dissertation committee at least once a year.
- Will have frequent meetings with mentee and provide an open environment for discourse and questions.
- Will ensure that the trainee fulfills all graduate program responsibilities and meet milestones (see timeline below)
- Will ensure adherence to the general rules for the responsible conduct of research by the trainee and will hold responsibility for the general validity of the data generated and published by the trainee.
- Will ensure adherence by the trainee to the animal and recombinant DNA protocols approved for the lab.
- Will guide the design and planning of research/assays and interpretation and the completion of the research
- Will provide constructive criticism and review dissertation work and possible publications.
- Will assist the trainee in preparing research presentations at departmental and scientific meetings.
- Will notify Graduate Program Director if the mentee is experiencing difficulties.
- Will submit a report on yearly dissertation committee meetings to the Biology Graduate Program Director.

### **Student Responsibilities**

#### **The student**

- Will have the primary responsibility for the successful completion of his/her degree.
- Will complete and share IDP on an annual basis with the mentor,
- Will meet regularly with their research advisor and provide him/her with updates on the progress and results of their activities and experiments.
- Will work with their research advisor to develop a dissertation project. This will include establishing a timeline for each phase of the work. The student will strive to meet the established deadlines.
- Will work with their research advisor to select a dissertation committee. This will be done by the end of the first academic year.
- Will meet with this committee at least once annually (or more frequently, if needed). The student will be responsive to the advice of and constructive criticism from the committee.

- Will attend and participate in laboratory meetings, seminars and journal clubs that are part of their educational program.
- Will maintain a detailed, organized, and accurate laboratory notebook. The student should be aware that their original notebooks and all research data in all formats are the property of the laboratory and institution but that they are able to take a copy of their notebooks after completion of the dissertation.
- Will discuss policies on work hours, sick leave and vacation with their research advisor.
- Will discuss policies on authorship and attendance at professional meetings with their research advisor.
- Will attend the doctoral student seminar series. Attendance is mandatory. Students will present once per year commencing in their second year.
- Must make timely progress toward degree completion and satisfactorily meet the standards of scholarship established by the University according to the timeline indicated below.
- Must have a clear understanding of the requirements to complete their degree objectives and develop a plan to satisfy these requirements within the shortest reasonable timeline.
- Graduate students who receive financial support for their graduate program should understand the responsibilities associated with the support they receive and to carry out these responsibilities in a timely, conscientious and professional manner.
- Graduate students with assignments as teachers have special responsibilities to be prepared for their class/laboratory sessions, and to maintain professional and mentoring relationships with their students.
- Continuous registration is required of all graduate students. Graduate students who fail to register and are not on an official leave of absence are not considered to be students.

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Student Name and Signature

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Advisor Name and Signature

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Date