



DOCTORAL STUDENT HANDBOOK

Department of Biological Sciences Doctoral
Program in Biosciences University of Texas at El
Paso (UTEP)

I. Doctoral Program Details

A. Advisors, Registration, Dissertation Mentor, GPA, Standings, and Stipends

Advising and Registration: Full-time Doctoral Students must register for nine doctoral or graduate-level credit hours in each of the fall and spring semesters prior to completion of all required courses except for BIOL 6398 and BIOL 6399. Summer registration may be required depending on the funding source. For students that have advanced to candidacy and completed all required courses, full-time is three credit hours/semester (BIOL 6398 for one semester and BIOL 6399 for one or more semesters). Dates and times for graduate courses and registration are listed in each semester's course schedule. Doctoral Students are required to consult with the program faculty advisors each semester for planning their course work. The Biology Graduate Program *Director* (Dr. Aguilera), *Co-Director* (Dr. Quintana), and *Doctoral Advisors* (Drs. Han and Spencer) will advise all incoming and enrolled graduate students. Students entering the program in even years (2020, 2022, 2024, etc) should primarily see Dr. Han for advising while students entering the program in odd years (2021, 2023, 2025, etc) should primarily see Dr. Spencer for advising. Together, these advisors will help oversee the trainee's program of study. In addition to these advisors, there is also a *BioMedical Sciences Advisory Committee (BMSAC)* that will work as the Ombudsman for graduate students.

Dissertation Mentor: Upon admission to the program, trainees will choose a *Dissertation Mentor*, who will be the main faculty member responsible for the training and mentorship of the student, and for providing the means and theme for the student's doctoral dissertation. Choosing a Dissertation Mentor is a critical step in the Ph.D. training program. In certain circumstances, students may want to switch their Dissertation Mentor. While this is allowed, it is recommended that students limit the number of laboratory changes to one and do it prior to the proposal defense (see below).

Should a student choose to switch their Mentor after advancing to candidacy (i.e., proposal defense), the student and either, their current Dissertation Mentor or their Faculty Advocate (see below) must meet with the program director to evaluate the request. If approved, this post-candidacy transition requires the student to get a new Dissertation Committee and perform an additional qualifying examination using the subject matter of their new laboratory. After such a voluntary transition, students are not allowed to use the data from their previous Dissertation Mentor in their final Dissertation. However, the data obtained by the student with their previous Dissertation Mentor can be used for publication by their former Dissertation Mentor, and the publication can be used to satisfy the **authorship requirement** towards the student's Ph.D. (see **item F** below) but only if the student is the lead author.

Students seeking a second change of Dissertation Mentor, regardless of their stage in the program, must meet with the program director and their current Dissertation Mentor or their Faculty Advocate to seek approval for the change. The graduate program director will also help the student develop an "exit strategy" from the current laboratory. This includes developing a timeline amenable to both parties and allowing opportunities for the student to collect data and provide that data to the previous Dissertation Mentor. The BMSAC may also be solicited to make alternative suggestions or recommend a terminal master's degree, a graduate certificate, or termination from the program at the behest of the program director. All Mentor changes must be reported in writing by email to the graduate program director within a week of taking place.

Dissertation Committee: The student, together with their Dissertation Mentor, will assemble a Dissertation Committee. The goals of this Dissertation Committee are to guide the student through their doctoral research, oversee the proposal and dissertation research of the trainee's program, and approve the dissertation defense and the written dissertation. The Dissertation Committee must include the

Dissertation Mentor as a Chair, two or three faculty members from the department, one faculty member from another department (or another university, in which case the external faculty member must be approved as Temporary Graduate Faculty by the Department of Biological Sciences, the College, and the Graduate School), and a *Faculty Advocate*. The latter is a faculty member whose main function is to ensure the fair treatment of the graduate student while encouraging the student to abide by a high standard of productivity and scientific integrity during their studies.

Biomedical Sciences Advisory Committee (BMSAC): The BMSAC includes faculty from the Department of Biological Sciences with research interests within the Biomedical fields. The BMSAC provides oversight for the administration of the program, recruitment, and admissions, and will provide recommendations to the Director of the Ph.D. program or the Chair of the Biological Sciences when solicited. The Committee will meet with students who have programmatic concerns, do not meet major milestones, and those requesting to change their Dissertation Mentors (switch labs).

Standing, Stipend, and Tuition: The Department of Biological Sciences guarantees up to eight regular semesters of Teaching Assistantship stipends for each doctoral student. Under special circumstances, this may be increased to ten regular semesters upon approval from the Academic and Graduate Deans. The decision is based on past progress and availability of funds. To receive a stipend as Teaching Assistant (TA), the trainee must be enrolled full-time, be in good academic standing, and comply with all program milestones according to the timeline below. Doctoral students can be supported by mechanisms other than Teaching assistantships, including Research Assistantships (RA), federal grants, and foundation grants. An RA is generally funded by the student's Dissertation Mentor or through internal or external funding. Students are encouraged to coordinate with their Dissertation Mentors to seek external support by submitting competitive grant applications. The eight regular semesters of Teaching Assistantship stipends by the department are independent of the other mechanisms of support. Students enrolled in the program may be eligible for tuition remission. Eligibility is determined by the graduate school and the funds will be dispersed from the graduate school for those that are awarded TA positions and are eligible to receive the funds. RAships will provide an equivalent amount of tuition remission.

Independent of the source of financial support, all doctoral students are expected to pursue research training for a minimum of 40 hours per week, in agreement with guidelines established by the NIH in the F31 and F99 training programs. It should be anticipated that individual research will require flexibility with the time spent, particularly considering the type of research you perform (in vitro, animal care and husbandry, etc.) and that the Ph.D. program is a "training program." Thus, the minimum 40 hours per week is likely to include but not be limited to teaching responsibilities, courses, writing, literature review, attendance at seminar series, and very importantly, original research in the laboratory. Time management strategies will effectively help you balance your time and all students are recommended to attend workshops sponsored by the Graduate School regarding time management. Please keep in mind that original research in the form of a written Dissertation is a requirement for graduation from the Ph.D. program. Students should attempt to complete their Ph.D. within four to five years and not exceed a period of six years. Each student must also maintain a minimum GPA of 3.0 to remain in good academic standing. To improve future tracking of trainees and for ease of communication, all trainees are expected to create and maintain an updated LinkedIn account (www.linkedin.com).

B. Course Requirements

The courses offered to Doctoral Students are grouped into four categories: Required, Menu Electives, Free Electives, and Doctoral Research/Dissertation.

1. Required Courses (13 SCH)

BIOL 6130	Seminar (at least three seminar courses)
BIOL 6131	Ethical, Social, and Political Dimensions
BIOL 6309	Scientific Writing
BIOL 6310	Advanced Research Techniques
BIOL 6328	Biostatistics

In addition to these courses, all Doctoral Students are **REQUIRED** to participate in the **Graduate Student Seminars Series throughout the duration of their doctoral training. Participation at the Graduate Student seminar includes attendance and regular presentations (approximately 1/year). Students are also required to attend the Biological Sciences Seminar Series.** The Biological Sciences Seminar series includes presentations by renowned invited speakers and on occasion presentations by Biomedical Doctoral Students. Students will attend this series as a “for credit” seminar for three semesters (see “Required Courses” above). After completion of the 3 semesters, attendance and participation will continue to be mandatory. Attendance at the Graduate Student Seminars and Biological Sciences Seminar series will be considered for assigning TA positions and deciding eligibility for the various awards available, including the G-RISE award and the Dr. Keelung Hong Graduate Research Fellowship. Failure to participate in the Graduate Student Seminars will be reported to the program director, who will notify the student of non-compliance. Students can be dismissed from the program for lack of attendance and/or participation in this series if attendance does not improve following discussions with the program director.

2. Menu Electives (6 SCH – i.e., select two courses from the list)

BIOL 6301	Basic Principles of Toxicology
BIOL 6303	Gene Regulation
BIOL 6304	Physiological Regulatory Mechanisms
BIOL 6321	Advanced Molecular Biology
BIOL 6326	Advanced Topics in Immunology
BIOL 6340	Structure and Function of Macromolecules

3. Free Electives (min 9 SCH)

BIOL 6305	Cellular Physiology
BIOL 6306	Membrane Biology
BIOL 6342	Synthesis and Degradation of Macromolecules
BIOL 6343	Cellular Toxicology
BIOL 6344	Molecular Pathogenesis
BIOL 6345	Molecular Parasitology

The courses from Menu Electives (not taken for that requirement):

BIOL 6301	Basic Principles of Toxicology
BIOL 6303	Gene Regulation
BIOL 6304	Physiological Regulatory Mechanisms
BIOL 6321	Advanced Molecular Biology
BIOL 6326	Advanced Topics in Immunology
BIOL 6340	Structure and Function of Macromolecules

New courses that have been taught for several years

BIOL 6302	Developmental Neurobiology
BIOL 6308	Rsrch Funding & Prof Developmt
BIOL 6311	Neurobiology of Brain Diseases
BIOL 6329	Physiology of Bacterial Cell
BIOL 6330	Cancer Biology
BIOL 6319	GPCR Biology
BIOL 5319	GPCR Biology
BIOL 5351	Intro Bio I:Basic Seq. Comp
BIOL 5352	Intro Bio I:Gene Find/Compar
BIOL 5353	Internship in Biological Sci
BIOL 5354	Post-genomic Analysis
BIOL 5355	Genomic Analysis and Assembly

Other courses per the Dissertation Committee approval

(e.g. EEB courses and courses offered by other departments or colleges)

Up to 24 hrs of graduate-level coursework from an earned master's degree may be considered for transfer to the Doctoral Degree. To apply for transfer of credit, students must submit a list of the courses, as well as the official course descriptions and syllabi, to the Doctoral Advisor. For credit to be transferred, the Doctoral Advisor must find that the course is an appropriate substitution for the degree program and that it was successfully completed by the student. Final approval is given by the Graduate School.

4. Doctoral Research. Students must accumulate 30 hours of doctoral-level research (BIOL 6X90) before taking the required 6 credit hours of dissertation, i.e., BIOL 6398 and BIOL 6399. BIOL 6398 should be taken first. Students must enroll in BIOL 6399 during the semester in which they plan to have their final dissertation defense. A student can only take BIOL 6398 and BIOL 6399 after successful completion of their Qualifying Exam. Details for the Qualifying exam can be found in the following sections.

C. Laboratory Rotations

Students accepted into the Biomedical Sciences Doctoral Program are required to perform two laboratory rotations. A laboratory rotation requires the student to become an active participant in the research activities performed in the chosen laboratory. This typically includes being assigned a specific research project, with well-defined goals to be pursued using specific experimental approaches within a set timeframe. During a laboratory rotation, a student is expected to spend all their research time, i.e., time not spent on teaching activities associated with their Teaching Assistantship, performing research in the chosen laboratory. This will allow the student to experience a full immersion in the research environment of the chosen laboratory. For students that enter the program with an identified mentor, the student can petition the graduate program director for permission to perform only one laboratory rotation. The written request should detail the reason why the student is choosing to perform only one rotation. The request must be approved by the graduate program director. **Upon completing their rotations, students are required to submit a rotation report as indicated below.**

Rotation Report. Trainees must write a 2–5-page report of their rotation results and experience as part of the grade for the course (see Table 1). This report should be written in the form of a research paper with the following components: (1) Summary/Abstract (include the specific aims of project), (2) Brief

Introduction, (3) Materials and Methods, (4) Results, (5) Discussion (or Results and Discussion) and (6) References. It is expected that data in the form of figures will be included in the report. It is important to state at the beginning the aim(s) of the project and the results obtained during the rotation. The report will be reviewed and returned for correction. Grades will not be entered until the corrections have been returned to the Graduate Program Director. **If reports are not provided within a year of completion of the rotations, the final grade will be lowered to a B after one semester. Each semester without a rotation report submission the grade for each student will be downgraded by one letter grade. In addition, trainees will not be allowed to proceed to their qualifying exams if reports are not submitted prior to these exams.** UTEP master's students that transfer to our Ph.D. program and remain with the same research mentor will be required to submit only one rotation report consisting of the work performed during the MS portion of their training. The report must be submitted during the first semester of the Ph.D. program, and it is subject to the same guidelines provided above.

D. Annual Committee Meetings

The Annual Committee Meeting is a requirement for all Ph.D. students and must be completed yearly. The meeting should include all members of your Dissertation Committee and the mentee should present a 30–45-minute presentation that summarizes the annual progress towards completion. It is anticipated that the presentation will include research progress as well as professional development activities (grant writing training, oral presentations, poster presentations, etc.). Each student must provide the committee with a written document of previous goals, progress towards those goals, and goals for the upcoming year at least 1 week prior to the in-person meeting.

Annual committee meetings must be performed to gain approval for advancing to the Qualifying Examination and Dissertation phases (described in sections E&F below). At the end of each Annual Committee Meeting, each student must complete the Annual Committee Meeting Form. The Annual Committee Meeting Form will reflect approval for advancement to the next phase of the Ph.D. program.

E. Qualifying Exam

Students are strongly recommended to take the **Qualifying Exam** by the end of the second year and must complete it no later than by the end of the third year.

The Qualifying Exam consists of the *Dissertation Proposal*, the *Written Exam*, and the *Oral Defense*. The Dissertation Committee will be responsible for administering all parts of the Qualifying Exam. The execution of the exam will be coordinated by the Faculty Advocate, who will act as a non-examining member of the Dissertation Committee.

Dissertation Proposal: The first part of the Qualifying Exam is the Dissertation Proposal, which must be written by the student following the NIH R21 format and is typically based on the research to be performed by the student for their doctoral dissertation. The proposal should include Specific Aims (1 page), Research Strategy (no more than 6 pages), and References (no page limit). The Research Strategy should include three sections, Background/Significance, Innovation, and Approach. Preliminary data obtained by the student is appropriate but not required. After the student submits the Dissertation Proposal to the student's Dissertation Committee, the Committee will have 2 weeks to review and request changes to the proposal. If changes are requested, the student will have one week to introduce the changes requested. Once all members of the Dissertation Committee approve the proposal, the student will be allowed to continue to the Written Exam. Should the student not meet the deadline for all

requested changes, the Dissertation Committee will meet and make recommendations for pass, conditional pass, or fail. If the student fails to meet the expectations of the committee within the timeframe indicated above, the student may be asked by their committee to leave the program with a terminal master's degree or a Graduate certificate.

Written Exam: The Written Exam component of the Qualifying Exam must be successfully completed prior to the Oral Defense. The Written Exam will consist of four questions prepared by members of the Dissertation Committee. The questions will preferably be related to the Dissertation Proposal; this will allow the Dissertation Committee to assess the student's knowledge of basic biological sciences, the research area relevant to the student's dissertation project, and their ability to conduct and analyze the proposed research. The questions should be delivered to the student within 1 week after approval of the Dissertation Proposal. The student will choose 2 of the 4 questions to answer in writing; the other 2 questions are to be answered in the Oral Defense. The student will have up to 2 weeks to complete the Written Exam, followed by up to 2 weeks for the Committee members to review the answers and accept or request changes to the answers. If changes are requested, the student will have 1 week to modify the answers. If the student does not meet the expectations on the timeline presented above, the Dissertation will meet and make recommendations of pass, pass with conditions, or fail. Students that cannot meet the expectations of the written component may be asked by their committee to leave the program with a terminal master's degree or a graduate certificate.

Oral Defense: Following approval of the Written Exam by all members of the student's Dissertation Committee, the student may proceed to schedule their Dissertation Proposal Defense (the Oral Defense). A general announcement of the scheduled day and time of the Oral Defense should be distributed among all faculty members and graduate students of the Department at least one week in advance.

For the Oral Defense, the student is expected to give an oral presentation of their research proposal (open to the public), including details related to the background, significance, and methodologic aspects of the research proposed. Preliminary data can be included but is not required. Immediately following the oral presentation of the proposal, an oral exam closed to the public will be administered by the Committee. If the oral defense is not successful, the student may be allowed an additional opportunity at the discretion of the Dissertation Committee. If the committee denies a second opportunity the student will be provided with a terminal master's degree, a graduate certificate, or released from the program.

Plagiarism: All evidence of plagiarism in any component of the Qualifying Exam must be submitted to the BMSAC for review. Students found guilty of plagiarism may be expelled from the program or put on probation, as judged adequate by the program director. Plagiarism includes copying individual sentences from others, even if the reference from which the sentence has been copied is cited. In general, the copying-pasting of even single sentences is strongly discouraged.

Students are encouraged to work with their mentor to submit their proposal for external funding.

Potential funding agencies include, but are not limited to:

- NIH NRSA F31
- NSF GRFP
- American Lung Association
- American Heart Association
- DoD SMART
- Ford Foundation
- Graduate Women in Science
- Hertz Foundation
- HHMI

- NDSEG

F. First Author Research Paper

All doctoral students are required to publish at least one first-author research paper during their doctoral studies. Co-first authorship is acceptable but requires approval by their Dissertation Committee. Considering the time involved in publishing a research paper, from submission to final acceptance, we encourage doctoral students to be ready to submit their paper at least one year before their expected graduation time. Similarly, given the competitive nature of most career paths followed by doctoral students, we also encourage students to try to have more than one first-author research paper and several co-authored manuscripts by the end of their graduate studies.

NOTE: Having a research paper submitted is not the same as having it accepted for publication. Submission of a first-author research paper does not satisfy this requirement for graduation. Acceptance is required.

G. Dissertation Defense

Approval to Advance to the Dissertation Defense: To complete the doctoral program, each student must successfully defend their Doctoral Dissertation based on their original research. Agreement to advance to the dissertation defense should occur during an annual committee meeting; this approval should be reflected in the Annual Committee Meeting Form.

Approval of the Written Dissertation: To complete the doctoral program, each student must write a Doctoral Dissertation based on their original research. Each written Doctoral Dissertation should be formatted according to the University guidelines that can be found on the graduate school website. The content and length of the Doctoral Dissertation will vary but a typical Doctoral Dissertation is 5 chapters. These include 1) Introduction (literature review); 2-4) Chapters detailing the original research which will include methods, data analysis, images, etc.; 5) Discussion chapter followed by any appendices to discuss in detail experiments/methods not covered elsewhere. A typical introduction chapter is approximately 30-50 pages in length and uses on average 50-80 citations. The purpose of the introduction is to summarize the field of study in detail, identifying the knowledge gaps each student will address in the subsequent original research. Chapters 2-4 should describe in detail the original research performed with methods, results, figures, and statistical analysis, all performed with the rigor required for peer-review publication. Finally, the Discussion chapter will be used to address the findings in the context of the field, the impact the work will have, and future directions. A discussion is typically over 15 pages. The page limitation recommended here are considering 1-inch margins, 11-12pt font, and double spacing. The student should anticipate a final document that ranges from 150-300 pages depending on the discipline.

In instances where a student has 2 or 3 first author publications accepted at the time of graduation the Dissertation Committee may approve a “hybrid” dissertation. The hybrid dissertation requires the student to write the typical Introduction and Discussion as described above. However, the student will have the option to “insert” the final draft of each published manuscript for chapters 2-4. Importantly, because of copyright rules associated with the dissertation and most scientific publications, the student is not allowed to use the published article in the format that is displayed by the publisher/journal. They must use the last submission prior to acceptance.

In some cases, students may enter the program after completing a master's degree in the laboratory they intend to complete their Ph.D. In such cases, students cannot include text or experiments from their master's thesis as part of their Dissertation. The thesis is a published document and therefore, the inclusion of this text in their dissertation would be self-plagiarism. Unpublished data from a master's thesis can be used for publication and that publication may count towards the publication requirement of the Ph.D. program. Your dissertation committee will provide approval on a case-by-case basis as to whether previous publications qualify as a degree requirement and are sufficient to enter the dissertation phase of the Ph.D. program.

After the dissertation is written, it should be submitted for approval by each member of the Dissertation Committee. Once approval is given, the student will be allowed to move to the Oral Dissertation Defense stage.

In the instance that the committee rejects the written dissertation, the student will be required to meet with the program director to determine the options available to the student. These may include: 1) performing the dissertation defense a second time, 2) leaving the program with a terminal master's degree, or 3) dismissal from the program.

Oral Dissertation Defense: The scheduling of the oral defense of the dissertation must be announced to the Department AT LEAST ONE WEEK PRIOR TO THE INTENDED DEFENSE DATE. A CORRECTED final complete copy of the dissertation will be given to each member of the committee AND a copy will also be placed in the Biology Office for review by interested faculty at least one week prior to the date of the intended defense. The oral dissertation defense should follow the format of a 45-minute-long formal presentation open to the public, followed by a 10-minute-long Q&A session with the general public and a closed-door final Q&A session with the Dissertation Committee. In the instance that the committee rejects the Oral Dissertation Defense, the student will be required to meet with the program director to determine the options available to the student. These may include: 1) performing the Oral Dissertation Defense a second time, 2) leaving the program with a terminal master's degree, or 3) dismissal from the program.

H. Timeline for Biology Doctoral Degree

The requirements for awarding a Doctor of Philosophy Degree are:

- Successful identification of a Dissertation Advisor
- Successful development of a Dissertation Committee
- Successful completion of required coursework and laboratory rotations
- Successful completion and approval of an annual Individual Development Plan
- Successful annual completion of the Doctoral Student Progress Report
- Successful completion of the Qualifying Exam
- Successful acceptance of a first-author or co-first-author research article in a peer-reviewed journal
- Successful completion and defense of the Doctoral Dissertation

To encourage timely completion of the degree, the following time constraints are enforced for full-time students in this program:

At the start of the program, students must either have already selected a Dissertation advisor prior to admittance or should select a mentor through the available laboratory rotations course. The Graduate Advisor and/or the Dissertation Mentor will aid the student in designing a course of study tailored to the

trainee’s interests. The trainee must form a Dissertation Committee. It is essential to note that the Dissertation Advisor must be a faculty of the Biological Sciences faculty.

By the end of the first year, students should have rotated in the laboratories of two/one approved faculty. Rotations are taken once for credit as the Advanced Research Techniques (BIOL 6310) course. If a third rotation is required because the student is unable to find a Dissertation advisor due to extenuating circumstances, the trainee must obtain permission from the Graduate Program Director prior to engaging in conversations with prospective rotation mentors. No additional rotations will be allowed after a potential third rotation.

Students that fail to comply with the major milestones of the program (i.e. rotation report submission, qualifying exam by the end of the 3rd year) will be asked to meet with the program directors to facilitate the completion of the milestones in a timely manner. Students who fail to complete their milestones within a reasonable timeframe agreed upon after the review by the program director may be removed from the program with a terminal master’s degree or a master’s Certificate.

Table 1. Timeline for Doctoral Candidates.

Timeline	Requirements	Course Requirements
Year 1	<ul style="list-style-type: none"> • Completion of one/two semester-long laboratory rotations and submission of one/two research reports to the graduate program director. • Mentor is selected and committee is formed. • Completion of an Individual Development Plan. (Must be approved to continue to qualifying exams) • Annual committee meeting. 	<p>Enroll in core courses.</p> <p>Take seminar class both semesters.</p> <p>Must complete rotation/s and submit rotation report/s for grades prior to preliminary exams.</p>
Year 2- 3	<p>Qualifying Exam</p> <ul style="list-style-type: none"> • Consists of 4 written questions. Students answer 2 and the other 2 will be part of oral exam during the proposal defense. Written answers will be limited to 5 single spaced pages per question. • After passing the written portion of the exam, students will defend their research proposal and have an oral examination. • Written and oral exams are coordinated the faculty advocate (mentioned earlier). 	<p>Complete all coursework including free electives and core courses.</p> <p>Take seminar course for at least one more semester (at least 3 credits required).</p>
Years 1-5	<ul style="list-style-type: none"> • Annual committee Meeting. • Completion of the annual Doctoral Student Progress Report. • Completion of annual Individual Development Plan. • Poster/oral presentation at the Annual Symposium of the Biomedical Sciences. Travel grants are available the graduate school for conference 	

	travel.	
Years 4-6	<ul style="list-style-type: none"> • Permission to write the dissertation must be unanimous among committee members. • Students must have one research paper accepted for publication related to their dissertation research to be eligible for graduation. 	Research hours (as needed) and at least 6 credits of thesis hours.

By the sixth semester, and preferably by the end of the second year, students should have completed ALL CORE courses for the doctoral program. NOTE that some of the core courses are offered only once every two years and must be taken in the year they are offered.

I. Summary of Normal Progress towards the Ph.D. Degree:

1. **Selection of a Dissertation Mentor and Laboratory Rotations** – The student must choose the faculty member who will act as their Dissertation Mentor and perform the laboratory rotation/s in agreement with the guidelines provided in item C above.
2. **Formation of the Committee-** In consultation with the Dissertation Mentor, the student should form their committee no later than the end of Year 1.
3. **Milestones Agreement** – At the end of the first semester, the student must submit the signed Milestones Agreement to the Graduate School.
4. **Core Course Work-** Coursework must be completed by the sixth semester of the student’s program of study.
5. **Individual Development Plan-** Each student must turn in an annual Individual Development Plan available at the graduate school website. The form is to be sent directly to the graduate school. The form must be discussed, agreed on, and signed by the Dissertation Committee Chair. Evidence of successful submission will be required before your Program Advisor will allow registration for the next year.
6. **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.
7. **The Qualifying Examination-** This exam will be taken as soon as feasible (no later than the end of year 3) after the completion of the core courses and relevant elective coursework. If the student attends the program with the help of financial aid, it is important to note that she/he cannot continue to take research credits beyond what is required by the program. Financial aid will not cover credits that do not count toward your degree and therefore, completing the qualifying exam will help to ensure you are financial aid eligible.
8. **Advancement to Candidacy-** After passing the written qualifying exam, defending the dissertation proposal, and successfully completing the oral exam, students are advanced to candidacy. Each student must submit the completed form available from the graduate program after approval by the Dissertation Committee. Students must thereafter formally meet with the Dissertation Committee once a year at which time a progress report will be presented.
9. **Completion of Ph.D. Program-** Students are provided eight regular semesters of teaching assistantships when entering the program. Students should make all efforts to complete the Ph.D. requirements (including the dissertation and publication of a first-author research paper) by the fourth year, but no

later than the sixth year in the program. Permission for providing teaching assistantships beyond the 4th year and extending the Ph.D. timeline beyond the 6th year must be approved by the Graduate Dean. ALL TRAINEES SHOULD BE AWARE THAT THE STATE DOES NOT PERMIT STATE FUNDING (i.e., Teaching Assistantships or Assistant Instructorships) AFTER COMPLETION OF 99 CREDIT HOURS.

J. Exceptions to the Guidelines

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

K. Accessibility/Disabilities

If you are a student with a disability (physical, learning, etc) please contact The Center for Accommodations and Support Services at 747-5148 or at cass@utep.edu or go by Room 106 Union East Building).

L. Dismissal from the program

Students in the Ph.D. program in Biosciences can be dismissed from the program for the following reasons:

1. Failure to complete the qualifying exam in a timely manner.
2. Unacceptable performance on the qualifying exam.
3. Failure to comply with UTEP's institutional Code of Conduct.
4. Failure to complete the Dissertation Defense in a timely manner.
5. Failure to comply with the 40-hour weekly training commitment for an unjustifiable time, as assessed by the Dissertation Mentor and/or the program director/BMSAC.
6. Recommendation by the program director and/or BMSAC.
7. Plagiarism or any other type of scientific misconduct.

Registration in the program indicates acceptance of all the regulations indicated in this handbook, including the reasons for dismissal enumerated above.

II. Forms To Be Used

The forms provided below correspond to the ones that must be used by Doctoral Students in accordance with the rules provided in this handbook. All students must keep electronic copies of the signed forms for their own records. All forms should be turned into the biology office to lfernandez4@utep.edu or if unavailable to biology@utep.edu.

1. Rotation Selection Form
2. Selection of Committee Meeting Form
3. Annual Committee Meeting Form
4. Qualifying Examination Form
5. Request to Change Dissertation Mentor
6. Dissertation Defense Form

THE UNIVERSITY OF TEXAS AT EL PASO
Graduate School
 El Paso, Texas 79936-0587
PROGRAM OF STUDY FOR THE DOCTORAL PROGRAM IN BIOSCIENCES

STUDENT: _____ STUDENT NUMBER: ____ - ____ - _____
 DEPARTMENT: **Biological Sciences** MAJOR: **Biosciences**
 [Minor not applicable]

DATE OF ACCEPTANCE INTO PROGRAM: _____
 TERM OF FIRST COURSE USED TOWARDS DEGREE: _____
 This program has a **DISSERTATION REQUIREMENT**.

INITIAL FACULTY MENTOR: _____

REQUIRED CORE COURSES:

	<u>DATE / GRADE</u>
BIOL 6130 [Seminar]	_____
BIOL 6130 [Seminar]	_____
BIOL 6130 [Seminar]	_____
BIOL 6131 Ethical, Social and Political Dimensions	_____
BIOL 6309 Scientific Writing	_____
BIOL 6310 Advanced Research Techniques	_____
BIOL 6328 Biostatistics	_____

MENU ELECTIVES [6 SCH, choose two]:

	<u>DATE / GRADE</u>
BIOL 6301 Basic Principles of Toxicology	_____
BIOL 6303 Gene Regulation	_____
BIOL 6304 Physiological Reg. Mechanisms	_____
BIOL 6321 Advanced Molecular Biology	_____
BIOL 6326 Advances in Immunological Concepts	_____
BIOL 6340 Struct and Fct of Macromolecules	_____

OTHER APPROVED ELECTIVES [9 SCH, choose three]:

<u>Course Number and Title</u>	<u>DATE / GRADE / Transfer</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

DISSERTATION RESEARCH [total of 29 SCH]:

- BIOL 6190 Independent Research
- BIOL 6290 Independent Research
- BIOL 6390 Independent Research
- BIOL 6490 Independent Research
- BIOL 6590 Independent Research
- BIOL 6690 Independent Research

DISSERTATION [total of 6 SCH]:

BIOL 6398 Dissertation, first semester
BIOL 6399 Dissertation, continuing semesters

Total 63 SCH

QUALIFYING DATE AND OUTCOME (PASS/FAIL):

DISSERTATION COMMITTEE

CHAIR: _____

MEMBER: _____

MEMBER: _____

OUTSIDE MEMBER: _____

MEMBER [optional]: _____

DISSERTATION PROPOSAL

TITLE: _____

DATE APPROVED: _____

SUCCESSFUL DISSERTATION DEFENSE DATE: _____

APPROVALS [Required for all changes and updates]:

GRADUATE DOCTORAL ADVISOR / DATE

DIRECTOR OF GRADUATE STUDENT SERVICES / DATE

Students are urged to study the general requirements for graduate degrees stated in the Graduate Studies Catalog. Students are responsible for checking their own progress to be sure they meet these requirements. Any deviation from the above course schedule must have the approval of the Department Doctoral Graduate Advisor and the Director of Graduate Student Services. The Preliminary Program of Study should include all course work required for the graduate degree. It does not constitute a waiver of any requirements for the degree as set by the Graduate School or Department Program requirements beyond the minimum required for the degree that are listed above.

SIGNATURE OF STUDENT / DATE

Appendix A: Current Administrative Positions and Contact Numbers

Chair, Department of Biology:

Dr. Bruce Cushing Bioscience 2.118 747-5844

Director/Co-Director of Graduate Studies:

Dr. Renato Aguilera Bioscience 4.144 747-6852

Dr. Anita Quintana Bioscience 5.150 747-8988

Doctoral Advisor:

Dr. Kyung An-Han Bioscience 3.152 747-8950

Dr. Charles Spencer Bioscience 5.148 747-8776

MS Graduate Advisor:

Dr. Jerry D. Johnson Biology 205 747-6984

Dr. Michael Moody Biology 306 747-5087

Building Manager:

Oscar Sanchez Bioscience 2.158 747-6881

Biology 115 747-5986

Biology Office Staff:

Biology@utep.edu Bioscience 2.138 747-6879

BBRC Staff:

Mayanin Acuña Bioscience 2.132 747-6850

RISE Staff:

Elizabeth Fields Bioscience 2.136 747-6890

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 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 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 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 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 described above.
- 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.**

Timeline for Biology Doctoral Degree:

- For the Bioscience program, incoming trainees must enroll (once) in BIOL 6310 (Advanced Research Techniques) and conduct rotations in two/one laboratories during the first two semesters. Trainees must submit two/one written reports to obtain a final class grade (see Ph.D. Handbook for instructions).
- Course work should be initiated during first semester and completed by the sixth semester in residence.
- Will meet with dissertation committee once a year and provide progress report at each meeting.
- Will take qualifying exam preferably at the end of Year 2 and no later than by the end of the third year in program. Written permission is required to extend beyond year 2.
- Trainees must have an accepted research manuscript for publication prior to applying for graduation.
- Trainees should complete the Ph.D. requirements (including dissertation) preferably by the fourth year, but no later than the sixth year in the program. If it is anticipated that the project will not be completed by the end of the sixth year, the Committee Chair must petition on behalf of the student for an official extension.

Student

Advisor

Date