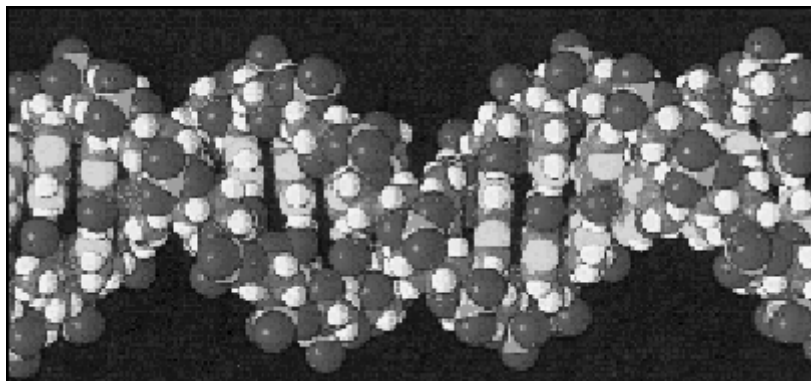


University of Texas at Dallas

DEPARTMENT OF MOLECULAR AND CELL BIOLOGY

Graduate Student Reference Guide



Developed by the Graduate Education Committee

Revised October, 2006

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Department of Molecular and Cell Biology

Graduate studies

POLICIES AND PROCEDURES FOR GRADUATE STUDENTS IN MOLECULAR AND CELL BIOLOGY

**A HANDBOOK AND SUPPLEMENT TO THE GRADUATE CATALOG
REVISED OCTOBER 2006**

The following pages expand upon the general information available in the graduate catalog¹, and are intended to inform our graduate students about additional policies and procedures that are specific to the Department of Molecular and Cell Biology. These policies apply to all graduate students in the Department of Molecular and Cell Biology.

¹ <http://utdallas.edu/dept/graddean/>

1 **ADMISSION**

Admission to the graduate program in Molecular and Cell Biology requires approval by the Graduate Education Committee (GEC). In addition to ensuring that students satisfy University requirements, the major criterion for admission is the judgment of the Committee members that the student has a reasonable chance of successfully completing the requirements for an M.S. or Ph.D. degree. Admission may be conditional as defined in the letter of admission. Conditions typically include the provision of documents not yet on file, registration for remedial courses, or other requirements. Students should satisfy all conditional requirements as soon as possible as determined by the Graduate Adviser.

The Department of Molecular and Cell Biology defines a Ph.D.-track student as one who intends to take the Qualifying Examination and perform dissertation research (see p. 5).

All other students are defined as M.S. students. When students are first admitted by the Graduate Education Committee they should be classified as either:

1. Ph.D.-track students
- or, 2. M.S. students for a laboratory research (Thesis) degree,
- or, 3. M.S. students for a non-thesis degree

[IMPORTANT NOTE: The University classifies all Ph.D.-track students as M.S. students until they have earned at least 42 semester credit hours (SCH), at which time they are re-classified as Ph.D. students. [Terminal M.S. students require a minimum of 36 SCH to graduate.]

Students are to be advised by the Graduate Adviser (and later by their Supervising Committee) on an appropriate course of studies each semester, so that at each registration period the student can register appropriately.

If a student wishes to change the degree option, he/she must formally submit this request to the Graduate Advisor for review, by the Graduate Education Committee.

For admission of Non-degree Students, see Catalog.

There is no foreign language requirement. However, international students are required to communicate readily in both verbal and written English. The proficiency standards are more demanding of students appointed as Research Assistants and particularly for those appointed as Teaching Assistants. In this respect, all international students awarded a teaching assistantship (TA) are required by the University to pass an English proficiency test, to be administered by the University prior to the assumption of teaching duties. Students who otherwise demonstrate deficiencies in English, as determined by low TOEFL or verbal GRE scores, or by their performance in the Program, may be required to take appropriate remedial English courses. In addition, students should strive to improve their proficiency at the verbal level by as much exposure to the English language as possible. Students with deficiencies may be required to retake the TOEFL or GRE verbal tests to evaluate any improvements. Proficiency in the English language is crucial for international students, as a number of students have been unable to complete their degree program primarily due to language problems.

2 TYPICAL CURRICULUM FOR Ph.D.-TRACK STUDENTS

2.1 Minimum total credit hours (graduate level)

24	credit hours earned in Core Courses
9-12	credit hours earned in General Electives (minimum of four elective courses)
54-57	additional credit hours earned in any category of biology courses
<hr/>	
90	credit hours in total Biology courses

2.2 Core Courses

The core courses provide basic knowledge of biology with emphasis on molecular aspects. The following core courses are mandatory for Ph.D. students:

BIOL5410	Biochemistry of Proteins and Nucleic Acids (Fall)
BIOL5420	Molecular Biology (Fall)
BIOL5V50	Methods in Molecular & Cell Biology I (Fall)
BIOL6193	Colloquium in Molecular & Cell Biology (Fall)
BIOL5430	Macromolecular Physical Chemistry (Spring)
BIOL5440	Cell Biology (Spring)
BIOL5V51	Methods in Molecular & Cell Biology II (Spring)
BIOL6V02	The Art of Scientific Persentation (Spring)

The requirement to take a particular core course may be waived if the student demonstrates proficiency, usually through a written examination before lectures begin, and obtains permission from the Instructor-in-charge and the Graduate Advisor. However, such permission is infrequently granted. If a student has graduated from the UT Dallas undergraduate program in Biology, the requirement for BIOL5410 may be waived if, during the course of her/his undergraduate studies, the student has successfully completed BIOL3361 and 3362 (Biochemistry I and II, respectively) with a minimum “B” grade in both courses.

2.3 Laboratory Rotations. All Ph.D. students are required to rotate in two different laboratories. Rotations typically take place during the first year. Registration for rotations is under BIOL5V50 and 5V51. Students are evaluated by the Principal Investigator in whose lab they rotate, according to criteria outlined in **Appendix B**

2.4 Other Courses

2.4.1 General Electives

A Ph.D. student is required to take a minimum of four general elective courses, for a minimum of 9 SCH. Letter grades are assigned in all General Electives. Students should consult with their advisor in choosing the courses most appropriate for their studies. However, BIOL6V31 (Molecular Genetics), BIOL6356 (Eukaryotic Molecular and Cell Biology), BIOL6352 (General Biochemistry I), and BIOL6353 (General Biology II) are not to be taken as electives for the graduate degree. Rather, these courses are intended as remedial courses for students whose background is determined to be lacking in one or more of these critical areas of

study. Students unsure as to whether an elective will count toward their graduate degree should consult with the Graduate Advisor prior to registering.

2.4.2 Special Electives

These are colloquium courses for small groups, in which the research of faculty and students and recent literature are analyzed and discussed. Participation in these courses is particularly important for Ph.D. students.

2.4.3 General Courses

2.4.3.1 Research in Molecular Biology BIOL8V01

Supervised research in one or more laboratories where the student acquires specific skills and performs work on which the dissertation is usually based. These courses are offered throughout the year, including summer terms, and are usually taken by students who have satisfied core course requirements.

2.4.3.2 Colloquium in Molecular Biology BIOL6193

Molecular and Cell Biology professors introduce themselves and acquaint first-year students with their interests and current research work. This provides information to assist students in the choice of a laboratory and supervisor for thesis and dissertation work.

2.4.3.3 The Art of Scientific Presentation BIOL6V02

Students learn how to give an effective seminar by reading scientific articles on a central theme in biology and then delivering a presentation to their classmates and to the Molecular and Cell Biology faculty and students. While learning the focused theme, students acquire skill sets in critical reading of scientific literature and oral presentation.

2.4.3.4 Dissertation BIOL8V99

Three hours are the minimum and twenty-four accumulated credit hours are the maximum permitted. Once a student registers for Dissertation, enrollment must be continuous until graduation. Consult the graduate catalog for additional details.

2.5 Teaching requirement

All Ph.D. students must serve as teaching assistants for a minimum of two semesters. This is intended as an educational, as well as professional experience. The department considers teaching experience to be an integral part of the graduate program. It is essential that students perform all of their duties as TA's. Failure to do so will result in the immediate termination of their stipends.

2.6 Evaluation of First Year Students

2.6.1 Students who have completed the 8 mandatory core courses, including a minimum "B" grade in each of the four core lecture courses (BIOL5410, 5420, 5430, and 5440),

are evaluated by the Faculty in May following the first year. Students who have completed the core classes over a period of greater than one year may also be considered, but must submit a request to the Graduate Advisor for such consideration. The evaluation meeting is typically held on the Friday following the deadline for submission of Spring course grades (which is typically on a Wednesday).

2.6.2 The faculty will evaluate aspects of the student's first year that include, but are not limited to, the following::

1. **Core course performance.** Self-explanatory.

2. **Laboratory Rotations.** During the first year at UTD, all students admitted to the Ph.D. program will rotate in one lab each semester. Research is the main focus of graduate study at UTD. To gain exposure to diverse research environments, students rotate through two different laboratories during their first nine months in the program. They participate in the formulation, execution and analysis of scientific work being conducted in the host laboratory. These rotations may provide a basis for selection of a thesis advisor and dissertation topic. Each advisor will provide a written evaluation of the student's performance during the rotation and of their research potential.

3. **Performance as teaching assistants.** Teaching evaluations and overall performance as TA's will be considered during the first year evaluation. Some students will not have served as TAs during the first year.

2.6.3 Students will be ranked by faculty vote; rank will be based upon the number of pass votes received by each student. Priority for stipend support is then established based upon the faculty ranking of the students.. Stipends cannot be guaranteed for all students. Those at the bottom of the list may or may not be supported by the department. Students that do not receive a Teaching Assistantship can be supported with a Research Assistantship if the student is accepted by a faculty member who has such funds available.

2.7 **Faculty Guidelines for Evaluation of Graduate Students After the First Year**

2.7.1 Overview. Students who have completed the first year core classes will be ranked following the Spring semester. A special faculty meeting will be scheduled at the end of the Spring semester for this purpose. Ranking will be accomplished by a simple "pass" or "fail" vote, and a student's status and priority for stipend support will depend upon the proportion of tenured and tenure-track faculty voting in favor (pass vote). At least two-thirds of the voting Faculty must be present for the meeting to proceed. Faculty absent from the meeting may submit a brief memo prior to the faculty meeting if they feel they have information appropriate to the discussion of individual students; however, absent faculty are not eligible to vote in the ranking of students.

2.7.2 In order to be ranked at the May meeting, students must have earned a minimum "B" grade in the four core lecture classes (Molecular Biology; Biochemistry; Cell Biology; Physical Chemistry). In those cases where graduate Biochemistry has been waived in lieu of "B" or better grades in undergraduate Biochemistry I & II, the average of these two classes will be considered as a single grade (if the grades are A and B, the "average" is considered to be "B").

2.7.3 Faculty will consider core class performance, written laboratory rotation evaluations, teaching evaluations (where students have served as Teaching Assistants), and oral student presentations in BIOL6V02 in evaluating students. At the special faculty meeting, each eligible student will be discussed. It is especially important for faculty who acted as instructors in the core classes, those in whose lab a student has rotated, and those for whom a student has acted as a Teaching Assistant, to participate in the discussion of appropriate students.

2.7.4 Once all students have been discussed, a single “pass/fail” vote will be taken by secret ballot. Faculty will vote “pass” if, based upon items in 2.7.3, they feel that a student has made appropriate progress during the first year and is on track to take the Qualifying Exam following the second year. That is to say, has student demonstrated the potential expected of a Ph.D. candidate? A “pass” vote indicates that the Faculty member agrees that the student should be allowed to proceed toward the Qualifying Exam **with the recommendation for stipend support**. Faculty who have had no or minimal contact with a given student during the first year are requested to refrain from voting for that student (that is, no vote is recorded for that particular student).

2.7.5 In order to pass the evaluation, students must receive a majority of “pass” votes [the total number of votes equals the sum of pass, fail, and abstain votes; “no votes” are not counted in the total]. On occasion, a faculty member may choose to write in an “abstain” vote (typically indicating he/she is unsure about a student). Abstain votes are counted as “fail” votes in the final tally. Ranking for stipend support will be determined by the number of pass votes. However, in order to receive stipend support, eligible students must be registered as full-time students and be actively engaged in laboratory research. Eligible students who cannot find a laboratory in which to begin their dissertation research cannot receive stipend support. Students who fail the first year evaluation may repeat the evaluation process one additional time, typically in May of the following year. Under unusual circumstances (to be approved by the Graduate Education Committee) a repeat evaluation may be scheduled in December.

2.7.6 **Use of the “abstain” vote.** Faculty should avoid using the abstain vote at this meeting and consider simply not voting on a particular student. However, as noted above, a write-in “abstain” vote will be counted as a “fail” vote.

2.8 **Supervising committee.** Students accepted into laboratories for dissertation research will, in consultation with their thesis advisor, select a thesis committee consisting of three additional faculty members (by mutual agreement with the particular faculty members). Prior to September 1 of the second year, the student will submit to the Graduate Advisor the appropriate form (available in the graduate secretary’s office) listing the faculty who have agreed to be on their thesis committee. All thesis committees must receive approval by the Graduate Education Committee.

2.9. **Qualifying Examination**

2.9.1 According to general UTD academic regulations, a Ph.D. student is required to pass a Qualifying Examination (QE) before admission to Ph.D. candidacy. The QE in the Department of Molecular and Cell Biology consists of a detailed written research proposal on the subject of the student’s dissertation topic and an oral defense of the research proposal.

2.9.2 The QE will normally be taken in May of the student’s second year. The exams are typically held in the week following the deadline for submission of final Spring grades. Exam

dates may be changed to accommodate absences and other scheduling problems provided all parties agree to the change. Because of anticipated tight scheduling, such changes will be rare. A student who fails to take the exam on their assigned date will be considered to have failed the exam.

2.9.3 The QE examining committee consists of three Biology faculty who are members of the supervisory (thesis) committee (excluding the supervising professor) plus three additional Biology faculty chosen at random [*from a pool that includes all faculty, regardless of dissertation committee assignments*]; one of the randomly-selected Faculty members will chair the QE exam. The selection process, which will take place before the end of the Fall semester, is typically performed by a member(s) of the GEC in the presence of a graduate student representative. At the QE exam, the student's supervising professor is expected to attend as an observer, to respond to questions of clarification on the research proposal **at the request of members of the examining committee**, and to contribute to deliberations before the vote. Supervising professors who do not follow the above procedures may be asked to leave the QE exam by the chair of the examining committee. The supervising professor is not a voting member of the committee. If for any reason one of the designated examining committee cannot be present, the exam will be postponed unless a substitute can be found to take the absent member's place (usually a GEC member). However, if the absent member is also a member of the supervisory committee, the preference will be to reschedule the exam. Other faculty members may also attend the exam as non-voting participants.

2.9.4 The length of the written proposal for the QE should be no more than 12 double-spaced pages (excluding the references, figures and tables) in 12 point type with top, bottom and side margins of no less than 0.75 inches. The proposal should be written in clear and concise English. The format for the proposal will be similar to that used for NIH grants and should contain six parts:

1. **Specific aims.** This part should begin with a paragraph summarizing the overall objectives of the research project followed by a brief description of the specific aims of the proposal. Typically, there should be two to four specific aims that can be accomplished within the time frame of a graduate student career. A suggested length for the specific aims is one page.
2. **Background and significance.** This part should concisely explain the background literature and introduce the topic of the proposal sufficient for an understanding of the significance of the proposed work. Suggested length is two to three pages.
3. **Preliminary results.** This section should contain data generated by the student that is pertinent to the specific aims of the proposal. One to three pages of text should suffice, noting that figures and tables will be in a later section. (It might occur that a student has collected significant data on a project that is unrelated to the topic finally chosen for the QE proposal. Should the student and advisor consider it important to present such preliminary data as evidence of productivity, these data can be attached as a brief (1-3 page) appendix to the written proposal and not count against the page total of the proposal.
4. **Research design and methods.** This section should explain the experimental design and methods used to accomplish the specific aims. It should be clear why an experiment is being done and how it is being done, but judgment should be exercised not to dwell on common methods and procedures that will be familiar to members of the examining committee. The use of figures is encouraged to help explain complicated experimental

protocols. It is extremely important to discuss the possible results of an experiment and how those results might be interpreted. The student should also consider how potential results would accomplish the specific aims.

5. **References.** References should be cited as needed in all parts of the proposal. The citations should be complete including titles of the papers, chapters, or books. Be careful not to over-cite; that is, it is usually unnecessary to cite every paper that supports a particular statement or point, but cite the major paper or perhaps a review article. As a general guide, more than 40 references are probably too many.

6. **Figures and tables.** The text should be supported with figures and tables as needed to present data and clarify complicated issues. Tables and figures should be numbered in the order as referred to in the text and have appropriate legends. As a general suggestion, five to ten total figures and tables should be sufficient.

2.9.5 In preparing the proposal, the student and advisor should discuss and outline the contents of the written proposal and the student will then *independently* write the first complete draft of the proposal. This first draft is an important milestone in the exam process and is intended to convey to the examining committee what the student regards as the final product. Beyond initial discussions of ideas and organization, **it is not permitted that the supervisor assist in the actual writing of the first draft or provide feedback from reading the draft** prior to completion. The first draft for all students taking the exam will be distributed to all members of the examining committee on or before **1 April**.

2.9.6 By **14 April**, members of the student's examining committee will have communicated to the student-required revisions of the written proposal. The supervisor and student will then together revise the first draft as appropriate. The final draft of the proposal should be given to all members of the examining committee by **1 May**. A copy of the final proposal must also be given to the Program office and it is the responsibility of the student to turn in the Program copy.

2.9.7 During the oral exam, the student will give a presentation of the proposal that should take 20 to 30 minutes without interruption. *It is permitted, and even encouraged, that the supervisor practices with the student to refine the presentation before the actual exam.* During the exam, members of the examining committee may (and usually will) interrupt with questions at any time. After the defense of the proposal is completed, the chair of the exam will specifically open the floor to any general questions the examining committee may have about general breadth and background knowledge not necessarily related to the proposal. This part of the exam is to give the committee an opportunity to assess general research knowledge of the candidate.

2.9.8 After the exam, the candidate will be asked to leave the room and the committee will discuss the defense and vote by secret ballot whether the student has passed the exam. There are two responses a member of the examining committee may make: P for pass or F for fail. Abstain votes are not allowed, and will be counted as a Fail. At least four of the six voting members of the examining committee must vote in favor of passing for the student to pass.

2.9.9 A student who fails the QE may retake the exam **one** time if recommended by the committee. A recommendation to retake requires four of the six-committee members to vote in favor of a retake. Conditions of a retake may vary depending on the recommendations of the committee. For example, the committee may recommend that only the written part be retaken, that only the oral part be retaken, or that the complete exam be retaken. The date of the retake

will be set by the committee and, in any case, must take place prior to the following Fall semester. A student who does not retake a failed QE within the time designated by the committee will have their stipend suspended until the exam is retaken. A pass will reinstate the stipend for the following semester. A second fail dismisses the student from the Ph.D. program.

2.9.10 Graduate students who have passed the QE apply for graduation and receive the M.S. degree in Biology in the following semester.

2.10 **Further Requirements for the Ph.D. degree**

After passing the Qualifying Examination, the student continues formal dissertation work, with the guidance of the Supervising Committee.

All students are required to present one paper per year, on a topic unrelated to their main area of research, during the department's journal club meetings.

All students will present their research progress once a year during the department's research discussion meetings. Following the presentation, the Supervising Committee meets formally with the student to discuss his/her progress in detail and then transmits a Supervisory Committee Report to the Program Head and the Graduate Dean. The Committee decides when the student's research achievements are adequate for a dissertation.

See **Appendix A** for guidelines for setting the oral defense and completion of the dissertation.

After acceptance of the Ph.D. dissertation in its final form, the Biology Program Office, the Graduate Dean's Office, and the Supervising Professor must each be furnished with a bound copy of the dissertation.

The dissertation title should be as short as **feasible** and should fit the spine of the bound copies.

Students should be aware of the fact that the average time required for preparation of a dissertation exceeds one semester.

Information about general UTD requirements for the Ph.D. degree can be found in the graduate catalog.

2.11 **Publication requirement**

The standards for granting of the Ph.D. degree from the Department of Molecular and Cell Biology include a requirement that all students have, either in press or published, a manuscript based upon their thesis work.

1. Students who have a manuscript either published or in press, in a peer-reviewed journal, may defend their dissertation at a time deemed appropriate by the advisor and the student's Supervising Committee. The student's contribution to the manuscript should be significant, and first authorship is preferred. However, second authorship is appropriate as long as the student has contributed significantly to the work and the work comprises a

significant portion of the student's dissertation. For the granting of the Ph.D. degree, manuscripts do not include review articles. A member of the dissertation committee may anonymously request a review by the GEC in cases where authorship and/or significance of contribution is unclear.

2. Students who have submitted a manuscript, which is not accepted for publication by the time of the defense, may request a review of the manuscript by the combined Supervising and Graduate Education Committees. If two-thirds of the combined committees [in effect, six out of eight votes (in cases where no member of the GEC is a member of the thesis committee)] agree that the manuscript represents a publishable contribution to the field, the student will be allowed to proceed with the thesis defense.

3. Students who have not submitted a manuscript may not defend their dissertation. These cases should be rare. Individual students in this position may petition the GEC to meet with the Supervising Committee to discuss the student's situation. Resolution of these situations requires approval by a vote of the combined committees as described above.

3 TYPICAL CURRICULA FOR M.S. STUDENTS

3.1 Classification

A student entering the program with intent to work for a Master's degree, or a student not passing the first-year student evaluation will be classified as an M.S. student.

3.2 M.S. Laboratory Research Thesis

Required graduate-level courses:

16	credit hours in Core Courses (BIOL410, 5420, 5430, 5440)
1	credit hour in BIOL6193 (Colloquium)
6	credit hours (minimum) in graded General Electives
10	credit hours in BIOL8V01 (Research in Molecular Biology)
3	credit hours in BIOL8398 (Thesis)

36 credit hours in total Biology courses

3.3 Non-thesis M.S. degree

M.S. students who seek instruction in biology for expansion of their professional background, may obtain the M.S. degree without a thesis if they satisfactorily complete the following graduate courses with a minimum of 36 credit hours:

16	credit hours in Core Courses (BIOL410, 5420, 5430, 5440)
9-12	credit hours in graded General Electives (minimum of 4 courses)
8-11	credit hours in General Electives or other appropriate courses (P/F or graded)*

36 credit hours in total.

*With approval of the Graduate Advisor and the Program Head other courses appropriate to the student's major interest can be taken. Up to 8 SCH may be taken as research (BIOL8V01).

3.4 Core Courses

The following core courses are mandatory for all M.S. students:

BIOL5410	Biochemistry of Proteins and Nucleic Acids
BIOL5420	Molecular Biology
BIOL5430	Macromolecular Physical Chemistry
BIOL5440	Cell Biology

Letter grades are given in all core courses. The GPA in these four core courses, as well as the overall GPA, must be 3.0 (minimum). No more than one "C" grade is allowed in the core.

3.5 Other Courses

3.5.1 **General Electives.** Selection among these courses will depend upon the student's interest. However, BIOL6V31 (Molecular Genetics), BIOL6356 (Eukaryotic Molecular

aned Cell Biology), BIOL6352 (General Biochemistry I), and BIOL6353 (General Biology II) are not to be taken as electives (general or otherwise) for the graduate degree. Rather, these courses are intended as remedial courses for students whose background is determined to be lacking in one or more of these critical areas of study.

3.5.2 Research in Molecular Biology, BIOL8V01

Supervised experimental research on which the M.S. thesis may be based. This course is offered throughout the year, including summer terms, and is usually taken by students who have satisfied core course requirements.

3.6 Supervising Committee (See Section 5).

3.7 Thesis

The thesis will be based on experimental work. Students should be aware of the fact that the average time taken to prepare an M.S. thesis exceeds three months. Formatting guidelines are available from the Graduate Dean's office.

After acceptance of the thesis in its final form, the Biology Program Office and, on request, the Supervising Professor must be furnished with a bound copy of the thesis in addition to the requirements specified in the Catalog. The thesis title should be concise and should fit the spine of the bound copies.

3.8 Continuation to Ph.D.

Students who have obtained a terminal M.S. degree may later wish to pursue a Ph.D. degree. In this case, students must re-apply for admission to the Ph.D. program. While we can use the student's prior file submitted for admission to the M.S. program, students are encouraged to provide additional information to her/his file. This information includes, but is not limited to, a new narrative indicating the rationale for continuing to the Ph.D. degree, and additional references from MCB Faculty members. If accepted, the student must still pass the First Year Student Evaluation and the Qualifying Examination.

4. **FINANCIAL SUPPORT FOR GRADUATE STUDENTS**

4.1 **Conditions and Responsibilities**

4.1.1 A number of assistantships are available for full-time students, primarily from the following two sources:

State funds for teaching (teaching assistantships):
Federal and private research funds (research assistantships).

Each student awarded an assistantship is paid for working 50% of the official working time as an assistant. (The figure of 50% is the minimum time fraction necessary to make students eligible for insurance and other benefits such as workmen's compensation to which full-time (100%) employees are entitled. It also permits out-of-state students to become eligible for the lower in-state tuition fee.)

A graduate assistant may not engage in other employment or perform other services for payment while holding an assistantship.

4.1.2 **Research assistantships** are awarded for assisting faculty members in research.

4.1.3 **Teaching assistantships** are awarded to help instructors in the conduct of laboratory and lecture courses.

4.1.4 All students are entitled to take official holidays (as regularly published by the University). Time off may be taken at other times in place of these days, as compensatory time. Leave at other than scheduled holidays must be approved by the supervisor. Students with assistantships do not accumulate holidays or vacation time. For students with assistantships, a travel authorization must be submitted to the Biology Program Office prior to leave for travel at other than scheduled holidays. No time off is permitted for Teaching Assistants during scheduled class sessions. For teaching assistants, travel must be approved by the course instructor and graduate advisor; for research assistants, travel must be approved by the research supervisor.

4.1.5 Students receiving an assistantship are required to register for at least 12 semester credit hours during the fall and spring semesters of the first year, and 9 semester credit hours in all subsequent semesters (the credit requirement for summer registration will vary). Some of these credit hours may be obtained by registration in other programs if the educational goal of the student justifies this and if prior approval of the Supervisory Committee and Graduate Advisor has been obtained.

4.2 **Eligibility for Assistantships**

4.2.1 Upon entry into the Graduate program, the eligibility of a student for support through an assistantship, and the award of an assistantship for a specified time, are determined by the Graduate Education Committee on or before registration on the basis of the student's individual qualifications, which include GRE scores, academic GPA and letters of reference.

All first-year students who are awarded an assistantship with their admission letter and register as full-time students will be assured of support at the level committed at entry during the first two semesters, as long as they maintain good academic standing and a commitment to pursue

a Ph.D. degree.

Students who do not receive assistantships for the Fall semester may be eligible for support the following Spring, depending upon the student's performance in the prior semesters and the availability of funds.

In later semesters, merit is determined according to the following guidelines: All students who register fulltime and have passed the first year student review will have top priority, and will typically receive support (either as Research Assistants or Teaching Assistants) up to the end of the second year. Support after that time will require the student to have passed the Qualifying Examination. Beyond the second year, students are expected to be supported as RAs from funds provided through individual Faculty members.

4.2.2 In order to make the most economical use of funds, it is necessary to set conditions and limit the duration of support.

Continuation of an assistantship depends upon maintenance of a satisfactory academic record. For first-year students, continuation requires satisfactory performance in the core courses. For other students, continuation requires a specific recommendation by the Supervising Committee each semester, stating in their report that an assistantship for the next semester is justified. Support will be withdrawn from students who are not benefiting adequately from the Program, are neglecting their assistantship duties, or who intend to leave the program before completing their dissertation.

4.2.3 Limitations of the period over which assistantships will be paid are as follows (summer long-term is counted as one semester):

Support from all funds is limited to 141 SCH (42 SCH Masters, 99 SCH Ph.D.), which is typically five years (fifteen semesters) for full-time Ph.D. students. Support from Organized Research Funds for students beyond fifteen full-time semesters is at the discretion of the Supervising Professor. M.S. students are typically not supported as teaching assistants.

Students awarded support will be notified by letter or by the Supervising Committee of the termination date of support.

5 THESIS AND DISSERTATION SUPERVISION

5.1 Thesis or Dissertation Sponsor

Students who have satisfactorily completed all required core courses must become associated with a sponsor who will supervise their work for the M.S. (with thesis) or Ph.D. degree. This association is arranged by mutual agreement between the student and faculty member, subject to limitations of laboratory space and facilities, and competition with other students for the same faculty member's time.

Thus, after their first two semesters of full-time study, students should discuss with each faculty member in whose research they have an interest, the possibility of undertaking thesis or dissertation work. The faculty member cannot make commitments following these inquiries, but should inform students of any expected circumstances (such as extended absence from the campus), which might affect the student's choice of a supervisor.

5.2 Supervising Committee

The Supervising Professor serves as chairman of the student's Supervising Committee. .

For Master's degree students (with thesis), the Supervising Committee consists of the Supervising Professor plus two additional Biology Faculty members.

For Ph.D. Students, the Supervising Committee ordinarily consists of the Supervising Professor plus three additional Biology Faculty members, and there may be additional members with special expertise from another department or academic institution.

Requests for all committees must be submitted on the required form, to the Graduate Advisor for approval by the GEC. Formal appointment, according to University rules, is made by the Graduate Dean

Ph.D. students will present their research progress once a year during the department's research discussion meetings. Master's students are also encouraged to present their work at a research discussion. After this the Supervising Committee meets formally with the student, wherein the student discusses his/her progress in detail and then transmits a Supervisory Committee Report to the Program Head and the Graduate Dean. The Committee decides when the student's research achievements are adequate for a dissertation.

5.2.1 If a committee member is absent for an extended period, an alternate member may be chosen; a revised committee form must also be submitted to the graduate advisor.

5.2.2 Detailed instructions for preparing theses and dissertations are available in the Graduate Dean's office or at <http://utdallas.edu/dept/graddean/dgFormat.htm>.

6. PARTICIPATION OF STUDENTS AND STUDENT REPRESENTATIVES IN THE CONDUCT OF THE PROGRAM

6.1 Biology graduate students are encouraged to develop and maintain their own organization, including student meetings and election of representatives.

6.2 Student representatives are invited to attend meetings (or parts of meetings) of both the Biology Faculty and the Graduate Education Committee when student matters are being discussed. They are expected to participate actively, presenting their opinions, and arguing the issues. They do not generally vote (except, for example, on new Faculty hires). The designated representatives receive written agendas for faculty meetings at the same time as faculty members. Items for which student participation is appropriate are placed first on the agenda. Similarly, student representatives receive an agenda (or if there is no written agenda, are otherwise informed) for meetings of the Graduate Education Committee.

6.3 The graduate students evaluate courses and the quality of teaching in them at the end of each semester in which they are offered. Evaluations of instructors are submitted anonymously on forms to be distributed and completed at the end of each semester.

6.4 The students should feel free to communicate, either formally or informally, to the Program Head or Graduate Advisor their opinions about any problem that they feel significantly affects their progress.

6.5 Any student may request specific action on any issue by petition to the Department Head or graduate advisor.

APPENDIX A

GUIDELINES FOR SETTING THE ORAL DEFENSE AND COMPLETING THE DISSERTATION

1. **SUBMISSION OF DISSERTATION DRAFT TO THE COMMITTEE** - a draft of the dissertation which is satisfactory to both student and supervisor is submitted to each committee member. Figures in these preliminary drafts should be of high quality and clear with respect to content, but they need not be the “final” figures.

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3 weeks (less than 3 weeks may be allowed, but only if agreed to by *all* committee members)

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2. **COMMITTEE FEEDBACK: RETURN OF CRITIQUE** Committee members return dissertation to the student, with overall evaluation and general or specific corrections. Each committee member should make one of the following **general** evaluations:

UNACCEPTABLE
ACCEPTABLE WITH MAJOR REVISIONS
ACCEPTABLE WITH MINOR REVISIONS
ACCEPTABLE NO REVISIONS

If the dissertation is deemed unacceptable by one or more committee members, then the student must return to STEP 1, otherwise the student proceeds to the next step.

If the dissertation is deemed acceptable with corrections necessary then the student and supervisor must decide whether corrections can be made and returned to committee members within 1-2 weeks. If yes, the committee may allow the student to set the date for an oral defense. Prompt return of the dissertation is intended to keep the critiquing process fresh in the minds of committee members. If longer than two weeks is required for the student to make corrections then the committee members must each agree to grant additional time or designate a new target date for return of the corrected dissertation.

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1-2 weeks or longer if granted

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3. **SETTING OF THE ORAL DEFENSE** - At this time each committee member has received a draft of the dissertation, which has incorporated either general or specific changes which were called for in the originally submitted draft or some form of clarification of any misunderstandings which lead to the calling for specific changes. Criteria for the publication requirement must also have been met prior to scheduling of the oral defense.

A request for final oral examination may now be made through the Office for Graduate Studies. This request includes a form, which must be signed by a majority of committee members agreeing that the dissertation is in satisfactory form for the purpose of final examination (this form can be obtained from the Office for Graduate Studies). In addition, a final draft of the dissertation and two copies of the dissertation abstract are submitted to the Office of Graduate Studies, these documents must be in compliance with UTD regulations for proper style and format of the doctoral dissertation. In addition, the publication requirement must be satisfied at

this time (section 2.11)

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2 weeks

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4. THE ORAL DEFENSE - The following is essentially a restatement of the policy set forth by The Office of Graduate Studies. The latest revised instructions for the preparation of Masters theses and Doctoral dissertations states that the thesis/dissertation "should demonstrate the student's 'independent research competence' in his/her field 'at the level appropriate to the degree being sought'. The successful final defense of the thesis/dissertation confirms this competence...". There are four possible outcomes of the final oral defense:

ACCEPTED
ACCEPTED PENDING SPECIFIED REVISIONS
ACCEPTED PENDING MAJOR REVISIONS
FAILED

If accepted, the student has maximum of 30 days to submit final version copies to The Office of Graduate Student Studies, and must do so prior to the semester deadline date specified by The Office for Graduate Studies.

If accepted pending SPECIFIED revisions, the student has until the end of the following semester to submit a final version.

If accepted pending MAJOR revisions, the student has 12 months to submit a final version.

If failed, see the specific rules outlined by The Office of Graduate Studies.

The final version must be approved by and carry the original signatures of a majority of committee members.

According to the Office of Graduate Studies, the calling for major revisions at the time of the oral defense, by the committee, is due to something that occurs during the course of the defense itself. If, for example, the student being tested should show a significant deficiency in his/her field of presumed expertise, the student may be required to do further literature research and demonstrate the proper addition to their lack of knowledge by revision, alteration, or additions to the dissertation. Another example, if during the presentation of data it becomes apparent that certain results reported in the dissertation were not properly interpreted or not sufficiently commented on, then revision is justified. However, it is not in the spirit of the rules, as they were written, that one or more committee members enter the oral defense already fixed on the decision to call for revision, unless the revision is of a grammatical or technical nature.

APPENDIX B. Outline of rotation evaluation criteria

First-year Rotation Evaluation

Student's Name _____ **Semester** _____
PI _____

Specific aims of the student's project.

Summary of project accomplishments.

Please comment on the following:

Understanding of project objectives, experimental design, and laboratory techniques.

Ability to plan/execute experiments, analyze/interpret data.

Drive, dedication, perseverance.

Ability to interact with other laboratory members.

Oral and/or written presentation skills.

What are the student's greatest strengths?

What are the student's greatest weaknesses?

Overall evaluation.

Signature _____ **Date** _____