ACADEMIC AND OPERATIONAL POLICIES

Graduate Program in
Pharmacology and Toxicology

Revised, November, 2015
DISCLAIMER

This Program information booklet is not intended as a formal publication of the University of Texas Medical Branch. It is for Departmental and Program use only and, as such, should not be relied upon as the sole source of information regarding the Graduate Program. Refer to the Graduate School of Biomedical Sciences at Galveston Policies and Operations Manual for specific policy details and to the UTMB General Catalog for general information and a brief overview of the Pharmacology and Toxicology Graduate Program.

While every effort has been made to assure accuracy and timeliness of this Policy and Procedures, the University of Texas Medical Branch at Galveston is not responsible for any misrepresentation which might arise through error or its' preparation or through failure to give notice of changes in requirements, policies, tuition and fees, course offerings and other matters affecting students or applicants. The provisions of this booklet do not constitute an irrevocable contract between any student or applicant for admission and the University of Texas Medical Branch at Galveston.

The University reserves the right to withdraw courses at any time, to change fees and tuition, academic calendars, curricula, degree requirements, graduate procedures and any other requirement affecting students. Changes will become effective whenever the proper authorities so determine and will apply to both prospective students and those already enrolled.
# TABLE OF CONTENTS

I. Organizational Framework 4  
A. Pharmacology and Toxicology Program Faculty 4  
B. Program Director 4  
C. Meetings 5  
D. Policy Decisions 5  
E. Standing Committees 5  
1. Election 5  
2. Executive Committee 5  
3. Admissions and Recruitment Committee 6  
4. Curriculum and Advisory 6  
5. The Credentials committee 6  
6. Examination committee 6  
7. Ad Hoc committees 7  

II. Admissions Policy 7  

III. Course of Study for the Pharmacology and Toxicology Graduate Program 8  
A. Performance 8  
B. Curriculum 8  
C. Courses and additional requirements for the Master of Science degree 9  
D. Research Rotations/ Research/ Thesis/ Dissertation 9  
E. Seminars 9  
F. Examinations 10  
1. Qualifying Examination for the Ph.D. student 10  
G. Guidelines for Dissertation Supervisory Professors (mentors) 11  
H. Guidelines for Oral Qualifying Examination 11  
I. Candidacy 12  
J. Final Oral Examination (Defense of Dissertation or Thesis) 13  

IV. Specific Student Concerns 13  
A. Stipends 13  
B. Performance 13  
C. Supervisory Professor 14  
D. Languages 14  
E. Teaching 14  

V. Training in Conjunction with the M.D.-Ph.D. Program 14
I. Organizational Framework

A. Pharmacology and Toxicology Graduate Program Faculty

1. The Pharmacology and Toxicology Graduate Program is the responsibility of the Pharmacology and Toxicology Graduate Program Faculty.

2. Membership in the Pharmacology and Toxicology Graduate Program requires:
   a. Membership in the Graduate Faculty of the University of Texas Medical Branch Graduate School of Biomedical Sciences.
   b. Willingness and capability to supervise Ph.D. candidates
   c. Participation in teaching graduate courses in the Program.
   d. Willingness to participate on Program committees.

3. Faculty interested in becoming a member of the Program will submit their curriculum vitae and a cover letter summarizing their credentials and potential contributions to the Program to the Credentials Committee. A public seminar is then scheduled where the applicant presents a talk on their area of research/expertise. In the case of senior investigators, however, the requirement for scheduled seminar presentation can be waived at the discretion of the Program Director and the Chair of the credentials committee. The Credentials Committee will subsequently review the applicant’s credentials and recommend the individual for full or associate membership to the Program Faculty. Associate members are generally junior faculty with limited teaching and/or mentoring experience. Associate members have no voting rights, and if an Associate member wishes to mentor a student a full member must co-mentor the student. The individual will be admitted as a full or associate member after a simple majority of the Faculty vote positively. Final approval is given by the Dean of the Graduate School of Biomedical Sciences.

4. Other faculty may participate in the Program as Special Members of the Graduate Faculty at the discretion of the Credentials Committee and the Program Director. Special members are appointed to serve on dissertation committees or, in some cases, mentor students within the Program. Special Members have no voting rights and are not obligated to contribute to teaching or service within the Program.

5. Specific responsibilities of the Graduate Program Faculty include:
   a. Recommendations concerning membership.
   b. Recommendation of students for admission to the Program.
   c. Qualifying exams and recommendations for admission of students to candidacy.
   d. Recommendations for changes in graduate courses.
   e. Designation of responsibilities for dissertations.
   f. Recommendations for dismissal of students from the Program.
   g. Service on Program committees.

B. Graduate Program Director

1. The Pharmacology and Toxicology Graduate Program Administrative Officer will be the Pharmacology and Toxicology Graduate Program Director.

2. The Program Director will be elected by the Pharmacology and Toxicology Graduate Program Faculty from a slate of candidates submitted by the Graduate Dean. The candidates will be selected by the Graduate Dean from nominees solicited by the Dean. The Director will serve a two-year term and may be re-elected.

3. The responsibilities of the graduate Program Director include:
a. General administration of the Program, including *ex officio* membership on the Program committees.
b. The development of the Program.
c. All matters pertaining to the advising of graduate students in the Program with the assistance of the Curriculum and Advisory or Executive Committees, if necessary.
d. In conjunction with the Examinations Committee, maintaining archival records of student performance during and for some reasonable time after their tenure in the Program.
e. In conjunction with the Curriculum and Advisory Committee, monitoring the progress of each student during the first several terms to ensure early detection of problems.
f. In conjunction with the Admissions Committee, aid in the recruitment, selection, and enrollment of new graduate students.
g. Coordination of the review of the Program, as requested by the Graduate Dean.

4. In the absence of the Program Director, the Executive Committee will appoint an Acting Program Director.

C. Meetings

1. Meetings of the Pharmacology and Toxicology Graduate Program Faculty will be called by the Program Director, either on his/her initiative or at the request of a Committee Chairman. A quorum will consist of 1/3rd of the membership plus 1.

2. Two student representatives will be chosen by their classmates to attend Pharmacology and Toxicology Graduate Program Faculty meetings. These students should include 1 pre-candidate (before taking the Qualifying Exam) and 1 post-candidate. Student representatives will be asked to leave the meeting when the business-at-hand may be construed as a conflict of interest for the student representatives; such cases would include consideration of student applicants to the Program, academic performance of students and application of faculty to the

D. Policy Decisions

Policy matters will be decided by the Pharmacology and Toxicology Graduate Program Faculty. Proposals for policy changes may be made by the Program Director, committees, individual members, or students. Normally, policy proposals should be acted on first by the appropriate committee; often this committee will be asked to review the proposal and then make a recommendation to the full Faculty. Written notification of the proposed policy change(s) will be provided to the Program Faculty at least two weeks before the meeting at which the change is to be voted upon. These policies can be changed by a two-thirds majority vote of a quorum of the Program Faculty. Alternatively, policies can be changed by a two-thirds majority vote of a quorum by email ballot.

E. Standing Committees

1. **Elections**

   Elections for membership on all standing committees will occur every two years (same year as election of the Program Director), and the term for each member is two years. Only members of the Pharmacology and Toxicology Graduate Program Faculty may serve on or vote for membership on standing committees of the program.

2. **Executive Committee**

   The Executive Committee coordinates the activities of each of the standing committees and route policy proposals to the appropriate committee for their recommendation.
   a. Serve as the Nominating committee once every two years.
   b. Coordinate votes on policies and membership and call meetings of the full Faculty, as needed.
3. Admissions Committee
The Admissions Committee will consist of at least five members, one of which will serve as Chair of the committee. The Admissions Committee will:

a. Comprehensively review all applications to the GSBS and make recommendations for admission to the PHTO.
b. Interview applicants by phone and, when possible, in person.
c. Actively recruit applicants offered admission to the Program, with assistance of the Program Director.

4. Curriculum and Advisory Committee
The Curriculum and Advisory Committee will consist of at least five members, one of whom will serve as Chair of the committee. The Curriculum and Advisory Committee will:

a. Elect a volunteer member to serve as a PHTO representative to the BBSC Curriculum Committee.
b. Elect a volunteer member to serve as a PHTO representative to the GSBS Curriculum Committee.
c. Make recommendations concerning development and approval of new courses.
d. Monitor and evaluate courses, using student and faculty feedback.
e. Make recommendations for modifications or deletions of courses.
f. Be responsible for the Student Seminar Program or delegate someone to be responsible.

5. The Credentials Committee
The Credentials Committee will consist of at least three members including, one of which will serve as Chair of the committee. The Credentials committee will:

a. Review the credentials of candidates for the Program Faculty and recommend them for full, associate, or special membership.
b. Actively seek investigators who will be an asset to our program and recruit them to membership.
c. Arrange for a seminar by the faculty candidate to the PHTO faculty and Senior Investigators, with a well-established record of extramural funding and mentoring students, who are being recruited to the program, will be encouraged to give a seminar but will not be required to give a seminar.
d. The PHTO faculty will finally be requested to vote on the acceptance of the candidate as a member of the PHTO faculty, based on the recommendations of the committee. A three-fourths majority vote to accept, by the required quorum for the program (1/3 of all faculty members), will be required to accept the faculty candidate as a member of PHTO faculty.
e. The program director will convey the final outcome of the vote to the candidates, PHTO faculty and the Graduate School Dean’s candidate, PHTO faculty, and the office of the Dean of the Graduate School.

6. Examination Committee

a. The Chair of the Examination Committee will be recruited by the Program Director and/or the Nominating committee. Directors of required courses in the PHTO program will serve as members of this committee. The Committee members will recruit 2 examiners for each student who is either, 1) presenting or submitting their dissertation proposal as part of the Academic Skills course (in the fall semester of the second year, or 2) who is submitting their proposal as part of their written exam for candidacy purposes (usually before end of year 2 in the graduate program). The examiners will be chosen based upon their expertise in the topic covered in the examination by members of the committee, with the assistance of the Program Director. The Examiners recruited for grading the oral and written performance of students in the
Academic skills course will grade as per the format provided to them by the program coordinator, specific for this course. Examiners recruited for examining the proposals submitted by the students for candidacy purposes will:

1. Provide an NIH-style written critique and score of the examination.
2. Discuss the examination at a study section meeting with the Examination committee.
3. Determine whether the student passed the examination and provide recommendations for revision (if any).
4. When deemed necessary, review the revised examination.
5. Provide recommendation to the student’s Oral Examination committee (consisting of primary mentor and supervisory committee).

7. **Ad HOC Committees**
   The Pharmacology and Toxicology Graduate Program Director will appoint the Chair of the Ad Hoc Committees, formed for specific purposes and for limited terms.
   
   a. One Ad Hoc Committee is the Nominating Committee. The purpose of the Nominating Committee will be to propose a slate of candidates for the standing committees. The Program Director will recruit and appoint active members to the Nominating Committee, who will be encouraged to become Chairs/members of specific committees.
   b. Other Ad Hoc Committees may be formed at the discretion of the Program Director to assist in making specific recommendations in response to the needs of individual students, especially during their early phases in the Graduate Program when there is no functioning Supervisory Committee. Such a Committee may be formed to help a student on academic probation or to examine a student who has not performed satisfactorily on the first phase of the Qualifying Examinations.
   c. Ad Hoc Committees concerned with reviewing and improving the structure and function of the Graduate Program may also be formed, as needed, at the discretion of the Program Director.

II. **Admissions Policy**
There are two mechanisms for a student to gain admittance to the PHTO (both of which require a completed application to be submitted to the GSBS and approval of the Admissions Committee):

1. Direct admittance into the PHTO program (U.S. citizen or permanent residents only). The first year of study is funded by the GSBS while the student finds an appropriate laboratory to perform dissertation research.
2. Direct admittance into a funded laboratory (both U.S. and foreign applicants). All costs, including stipend, are funded by a pre-identified mentor. Alternatively, an applicant can choose to pay all costs associated with their first year of study if GSBS funds are unavailable.

For students with an advanced degree (MS, or Medical Doctoral degree, not Bachelor of Medicine) application procedures are the same as for other students. However, those students with an M.D. degree may be able to substitute for GRE scores with MCAT or USMLE scores (at the discretion of the GSBS and the PHTO Program Director). If admitted, the transcripts will be evaluated for courses equivalent to the required BBSC and PHTO courses and appropriate courses waived. The required 6 hours of elective courses, 1 hour credit for seminars, and 4 hours of Advanced Academic Skills course will not be waived, unless appropriate courses (or experience) can be identified. Students will be required to take and pass the Qualifying examination and Proposal defense, to be admitted to Candidacy, and will be required to defend their Dissertation.
III. Course of Study for the Pharmacology and Toxicology Graduate Program

A. Performance

1. The student must obtain a B or better on all courses in order to maintain acceptable standing in the Graduate Program. A GPA below a B average (3.0) will cause the student to be placed on academic probation. This deficiency must be removed during the next semester, or the student will be dismissed from the Graduate School.
2. A student must receive a B or better in all Pharmacology and Toxicology and Biomedical Basic Science Curriculum (BBSC) core courses. A grade of C or below may require that the student retake the course.

B. Curriculum

The number of credit hours a student takes/year while enrolled in PHTO, will vary from 9-15 hours. At least 9 hours must be taken in order to qualify as full-time student and obtain and maintain a State-funded stipend.

The curriculum emphasizes the development of research, teaching and communication skills. The didactic curriculum is expected to be completed by the end of Fall semester in year 2 of study.

YEAR 1 REQUIRED COURSES

All students are expected to take the following courses (with the exception of those listed as optional):

Basic Biomedical Sciences Curriculum
MEHU 6101 Ethics of Scientific Research
BBSC 6401 Biochemistry (fall term)
BBSC 6403 Molecular Biology and Genetics (spring term)
BBSC 6302 Principles of Drug Action (spring term)
BBSC 6042 Laboratory Rotations (three rotations must be taken, two of which must be in different labs)
(Students may choose other electives from other programs or the BBSC to total the 6 required hours)
(Recommended electives are:---)

PHARMACOLOGY AND TOXICOLOGY CURRICULUM
PHTO 6008 Lab Rotations (2-4 maximum)
PHTO 6097 Research (for students who have chosen the laboratory for dissertation research)
PHTO 6195 Seminar (must be taken every term until candidacy)

YEAR 2 REQUIRED COURSES
PHTO 6312 Autonomic, Cardiovascular and Central Nervous System (ACC) Pharmacology
PHTO 6214 Endocrine, Chemotherapeutics, and Toxicology (ECT)
PHTO 6195 Seminar (must be taken every term until candidacy)
PHTO 6099 Dissertation (expected to be in candidacy before fall of year 3)

Electives PHTO 6223 (Neuropharmacology), PHTO 6126 (Neuronal Transmission), Molecular Toxicology (PHTO 6214), Hormone Action and Cancer Cell Biology (HBCG 6222), Smoking Caused Diseases (6119), Genes, Environment and Disease (BBSC 6213), Basic Human Pathology (PATH 6276),

Students must complete six hours of electives before admission to candidacy. Additional electives may be taken as needed to strengthen areas of weakness or to provide background for research or teaching. The written and oral examination will generally be completed by the end of year 2, but preferably by the summer term begins.

Additional electives or systems modules offered by other programs may be taken with the permission of the instructor and the program director. If taken after admission to candidacy, the student’s research advisor must also agree.
C. Courses and additional requirements for the Master of Science degree

The program will not consider the application of student seeking an M.S. degree. The M.S. degree in Pharmacology and Toxicology is only for those individuals who, for academic or personal reasons, will not be able to finish the Ph.D. program. A decision about a terminal MS degree would normally be made before the end of the fall term in year 2, but could be made at any time the graduate faculty makes a majority decision that the student will not be able to complete a dissertation project suitable for a Ph.D. degree. Performance on the Ph.D. qualifying examination, as well as on the proposed research project will be considered by the graduate faculty in making this decision. A terminal M.S. student must take at least 9 hours of Thesis and successfully defend a research proposal as well as a completed research project. A first author manuscript may be accepted in lieu of a thesis.

D. Research Rotations/ Research/ Thesis/ Dissertation

The following required assessments are to be utilized each term by the mentor(s) and/or the members of the supervisory committee members to assist in determining a grade for the students. The Pharmacology and Toxicology Graduate Program, as well as the GSBS, require that students write a one-page summary of the research activities they pursued during each term, whether enrolled for Laboratory Rotation (PHTO 6008), Research (PHTO 6097), Thesis (PHTO 6098) or Dissertation (PHTO 6099). This description of research should be typed and include the following:

1. A brief statement of the objectives of the work or the problem studied
2. A description of the methods employed
3. A short statement on background and significance of the work
4. A description of the results obtained and any difficulties encountered
5. A brief closing discussion of the relevance of the findings and/or future plans

The student’s research mentor may ask the student for a more in depth description of the research progress for publication purposes in PHTO 6097, PHTO 6098 or PHTO 6099, but this may not be used as a requirement for PHTO 6008.

**Mentors** must submit a report each semester detailing the progress made by the student during the semester and the quality of progress. The mentor must also supply a grade. The grade will be posted as S (Satisfactory)/U (Unsatisfactory); one of the following designations must be made under the S grade

**Satisfactory Grade Scale: Very Satisfactory, Satisfactory or Marginal**

Students will receive a grade of NR (Not Reported/Incomplete) if the mentor does not submit an adequate progress report.

Both progress reports (from the student and Mentor) must be turned in to the Program Director. After approval by the Program Director, the grade is returned to the Graduate Dean.

E. Seminars

The objectives of this course are to expose students to a wide range of current research topics in Pharmacology and Toxicology, and to allow students to organize and present seminars in their own fields of interest. With the exception noted above, all Pharmacology and Toxicology Graduate Program students must register for seminar every term irrespective of degree status. The class will be graded S/U. Specific expectations for achieving a grade of satisfactory are as follows:
1. All students are required to attend all PHTO student oral presentations (either as seminars or for qualifying exams) and oral defense presentations. There will be a sign-up sheet to record attendance. Excuses will only be granted with pre-approval of the course director and/or Program Director. Failure to attend a seminar without an excuse will result in an unsatisfactory (U) grade.

2. All students are expected to attend seminars presented by local and invited speakers on a regular basis. Those students in pre-candidacy are required to attend a total of 12 seminars per term (which can include all the student seminars attended by the students). Attendance of a seminar (student or invited speaker or faculty at UTMB) needs to be reported to the program coordinator with date, time, speaker, and title of the seminar by email for documentation purposes. The program coordinator will maintain a file for each student in which seminar attendance will be recorded and conveyed to the seminar course director and the program director.

3. Students in candidacy are expected to present their research once per year. This may be coordinated with a committee meeting. Presentation dates and times should be provided to the program coordinator. For students in candidacy, while seminar attendance is still an essential part of your training as a doctoral student, you are NOT required to document 12 seminars per semester or report your attendance to the program director or coordinator. Students in candidacy, however, have to attend all Cell Student oral presentations as in item 2 above.

4. Each Ph.D. student is required to register for Seminar (PHTO 6195) each term until the expected term of graduation. In the case of a student in candidacy leaving the university to follow his or her mentor to another university, the student will not be required to register for PHTO 6195.

F. Examinations

1. Qualifying Examination for the Ph.D. student.

a. Background and Format of the Qualifying Exam.

The qualifying exam is an important landmark for graduate student education. This exam is designed to determine each student’s basic understanding of scientific concepts, as well as their ability to integrate information and formulate hypotheses pertinent to their research area. As such the written and oral components of a qualifying exam enable graduate students to develop a diverse set of skills that are considered essential for scientific success.

The Qualifying Exam is typically offered annually during the spring and summer terms of Year II. Students are eligible for the exam after successfully completing (B or better) the first year curriculum and PHTO 6312 (ACC Pharmacology) and PHTO 6213 (ECT Pharmacology). The qualifying exam format involves the preparation of a grant proposal. Students will be asked to submit a written (eight page maximum) research grant proposal on any pharmacologically-related topic that may include the area related to their individual dissertation research. The proposal should include the following sections: a) background, b) significance, c) innovation, d) experimental approach, e) specific aims and f) preliminary data (if any). The expectation is that students will 1) develop the proposal independently without the involvement of the student’s mentor, and 2) continue to be research active during this time, unless granted leave by their mentors. For each proposal, three reviewers (selected from the faculty in the PHTO graduate program) will be assigned to provide a written critique the proposal. The proposal will be run through a program to check for plagiarism.

b. Guidelines for Written Qualifying Examination Committee Members:

The Written Examination Committee is charged with maintaining a consistent standard in evaluating the quality of writing in all of the proposals. Emphasis should be placed on evaluating the logic, clarity and organization of
the writing. Each proposal will be reviewed by at least two faculty members with expertise in the field who will be recruited by the Examination committee with assistance from the Program Director if required. All reviewers are given equal importance and will critique the proposal independently of the others. A written critique will be prepared by each reviewer and these reviews will be discussed at a full committee meeting. There are three possible outcomes of the committee meeting:

1. Accept without revisions
2. Accept with minor revisions (which will be re-reviewed only by the Chair of the examination committee and the Program Director)
3. Major revisions (requires re-review by the committee and submission of an introduction as described below)
4. Fail

Upon receipt of a proposal that required major revisions, the reviewers will review the revision, write a second critique, and make recommendations to the full examination committee with regards to advancing the student to the Oral Qualifying Examination. If the proposal is deemed satisfactory, the student will then prepare an oral presentation of the revised research proposal within six weeks after approval. All faculty members present will meet after the presentation and vote either pass or fail.

All students must successfully pass the written qualifying exam by majority vote of the Examination Committee members in order to advance to the Oral Exam Committee. Students who do not successfully pass the written exam will be referred to the Program Director, who will then make the ultimate decision regarding the student’s advancement to the oral examination. Failure to receive a passing grade in either the written or oral component will constitute non-fulfillment of the qualifying exam requirements. Unsuccessful completion of the qualifying exam will constitute failure to meet the candidacy requirements and result in termination from the doctoral graduate program in Pharmacology and Toxicology.

G. Guidelines for Dissertation Supervisory Professors (mentors):

The dissertation supervisory professor may review the proposal and make comments to the student on all aspects of the proposal such as the hypothesis, experimental methods etc. However, they are not to write, edit or rewrite the proposal. It should be evident to the Reviewers and the Examination Committee that the student was sole writer of the grant proposal and that the appropriate credit/references were given for unpublished preliminary data.

H. Guidelines for Oral Qualifying Examination

The Oral Qualifying exam will be scheduled after the written proposal has been reviewed and approved by the reviewers and the Examination Committee. The Oral Qualifying Examination Committee will be formed by the student with the help of the dissertation supervisory professor, and approved by the Program Director. It is suggested that the Oral Qualifying Examination Committee also be the supervisory committee/dissertation committee, consisting minimally of three PHTO faculty (including the mentor), one UTMB faculty member who is not in the PHTO, and one faculty member from outside the university who is an expert on the subject of the dissertation proposal. Optimally, the Oral Qualifying examination should be completed by the end of the spring term, but not later that the end of the summer term in year 2.

A majority affirmative vote of the Supervisory Committee is needed to recommend that the student can be advanced to candidacy. If the vote is affirmative, the recommendation that the student be advanced to candidacy will be forwarded to the Program Director, who will then forward the recommendation to the Graduate Dean. The student must complete the form Application for Ph.D. candidacy for signature by the Program Director. The original Application for Ph.D. Candidacy and a copy of the completed/revised dissertation proposal will be given to the coordinator within 1 month of the date of the oral exam for submission to the GSBS. At this time, the program director will also list the names of the individuals on the Ad Hoc Committee who have agreed to serve on the student's Supervisory Committee. After the Graduate Dean has ascertained that all of these members agree to serve (and approve of the student's proposal), a letter will then
be issued from the Dean’s office announcing advancement to candidacy. At this time the members of the Supervisory Committee will be publicized.

If the performance at the oral qualifying exam is not satisfactory, the student is asked to revise the proposal according to the suggestions of the Ad Hoc supervisory committee. Another proposal defense is then scheduled; this decision is left to the discretion of the Chair of the Ad Hoc Committee.

Finally, if a minority of Committee members does not approve the proposal, or portions thereof, their vote will be officially recorded with the Dean's office unless the student makes the needed changes before advancement to candidacy is announced. Usually, these problems are settled more informally at the student's proposal defense, or in private meetings with individual members of the Committee.

Faculty will grade the written proposal by writing a formal memorandum to the student, the advisory professor, and the program director, using the subject line: Dissertation Assessment – Written Qualifying exam. Faculty will grade the oral examination using an appropriately titled form supplied by the chair of the examination committee. These forms will be evaluated by the chair of the examination committee, and the results given to the coordinator as soon as possible after the examination process.

I. Candidacy

Passing grades for the written and oral components of the qualifying exam fulfills the qualifying requirements for the Pharmacology and Toxicology Program. A list of faculty who will serve on the Dissertation Supervisory Committee must be submitted with the Application for Ph.D. Candidacy. The Dissertation Committee should include: the research advisor, two other members of the UTMB faculty in the Pharmacology and Toxicology Program, one graduate school faculty member who is in an area of research vastly different from that of the Research Advisor (preferably faculty from a different program) and an external examiner who is selected by the student with input from the student’s research advisor. The student will be advanced to Ph.D. candidacy for the Doctoral Degree following the recommendation of the Director of the Pharmacology and Toxicology program and the completion of the necessary paperwork by the Graduate School Office. A letter of confirmation is then sent to the student directly from the Dean of the Graduate School.

After admission to candidacy, the Ph.D. student must register for Dissertation and the M.S. student must register for Thesis. A dissertation is required of all Ph.D. students and a thesis or equivalent publication, is required of all M.S. students. In both cases, the work must be an original contribution to the literature based on independent scientific investigation. The student is encouraged to publish their Dissertation findings in one or more peer-reviewed, scholarly journals. As a Ph.D. candidate, the student must meet with their Supervisory dissertation Committee at least once each year to review progress. A brief written report and/or PowerPoint presentation of progress, proposed work and plans for publications is prepared by the student before each of these meetings and distributed to the Program Coordinator and members of the Supervisory Committee at least on week prior to the date of each meeting. Submitted manuscripts and abstracts submitted for presentation at International meetings should also be distributed. The Supervisory Committee should continue to guide the student's research and assess their progress. The Chair of the Supervisory Committee (ordinarily the primary mentor), will summarize the results of each meeting in writing to the Program Director within 1 week of the meeting. The summary will include student progress, a summary of committee responses, remaining proposed requirements and a timeline for graduation using the form: Ongoing Research Assessment. This form must be completed by the attending Supervisory Committee members at each of the yearly Dissertation Committee meetings and turned into the Program Director with the Meeting report.

As a Ph.D. candidate, the student must meet with their Supervisory dissertation Committee at least once each year to review progress. A brief written report and/or PowerPoint presentation of progress, proposed work and plans for publications is prepared by the student before each of these meetings and distributed to the Program Coordinator and members of the Supervisory Committee at least on week prior to the date of each meeting. Submitted manuscripts and abstracts submitted for presentation at International meetings should also be distributed. The Supervisory Committee should continue to guide the student's research and assess their progress. The Chair of the Supervisory Committee (ordinarily the primary mentor), will summarize the results of each meeting in writing to the Program Director within 1 week of the meeting. The
summary will include student progress, a summary of committee responses, remaining proposed requirements and a timeline for graduation using the form: **Ongoing Research Assessment**. This form must be completed by the attending Supervisory Committee members at each of the yearly Dissertation Committee meetings and turned into the Program Director with the Meeting report.

**J. Final Oral Examination (Defense of Dissertation or Thesis)**

a. The dissertation must be written in a format acceptable to the Graduate School of Biomedical Sciences. The dissertation is a scholarly work that documents the student’s novel research accomplishments, independence and critical thinking skills.

b. Copies of the dissertation or thesis will be made available to the Supervisory Committee in sufficient time prior to the final oral examination to enable the members of the Supervisory Committee to evaluate the contents. This time is normally 10 working days to 1 month.

c. As a part of the final oral examination, the candidate will present a formal, public seminar on his/her completed Dissertation research to faculty members, postdoctoral fellows and the scientific community.

d. Members of the students Supervisory Committee are responsible for reading, discussing and approving the Dissertation in the context of novel and significant scientific content, clarity of writing, and the student’s ability to demonstrate critical thinking skills. Successful completion of the defense is indicated by signatures of the Supervisory Committee on the signature page of the dissertation or thesis and the report of the final oral examination. The forms: **Dissertation Assessment – Written** and **Dissertation Defense – Oral** must be submitted by each member of the Dissertation Committee to the Supervisory Professor who will give them to the Program Director.

e. Before graduation, final approval of the dissertation or thesis is made after scrutiny in the office of the Graduate Dean. Therefore, if the goal is to graduate in the ceremony in the spring (May), careful attention must be made to deadlines and dates so that there is ample time for correction of the dissertation or thesis. It is worthwhile to consult the Graduate Office for help as the document is prepared to ensure that all standards are met.

**IV. Specific Student Concerns**

**A. Stipends**

State-funded stipends will normally be awarded as they are available at the time of admission and continued throughout the first 12 months of a student’s program, provided that the student makes satisfactory progress. Following the first year, the Supervisory Professor will be responsible for obtaining the student’s stipend and tuition from grants or another source. Students are encouraged to apply for fellowships from Institutional training grants or independent fellowships from NIH and other sources.

**B. Performance**

The student must maintain a B or better average (3.0) in all semesters in order to be in satisfactory standing in the Pharmacology and Toxicology Graduate Program. An overall average of B or better must be achieved before the student can be admitted to candidacy and before the student can graduate. Failure to maintain a 3.0 average for one semester places the student on academic probation. Failure to achieve a 3.0 average for two semesters is grounds for dismissal from the Pharmacology and Toxicology Program and the Graduate School.
C. Supervisory Professor

A student selects a Supervisory Professor as he/she is admitted to candidacy. To assist in selecting an appropriate mentor, the students are encouraged to spend time in the laboratories of different faculty. A close working relationship lasting for 2-3 years, and thus, the choice should be made carefully. Factors to consider in making the choice, in addition to the mentor, are the availability of a supportive network of staff and expertise. The Supervisory Professor must be a member (or Special Member) of the Graduate Program in Pharmacology and Toxicology and must communicate his/her willingness to serve in the role. He/she must also support the student’s proposed research plan. A student may change his/her Supervisory Professor without prejudice to his/her standing in the Program.

D. Languages

No foreign language will be required. The Program reserves the right to require those deficient in the English language to take courses or tutoring. Because communication in both the verbal and written form is vital to the success of academicians, efforts will be made to train the student by exposing him/her to many opportunities to speak and write.

E. Teaching and communications skills

Upon completion of this graduate program, many students will enter a career in which experience in both teaching and research will be important. Training in the presentation of basic scientific information and research findings are essential for a successful career. Therefore, students will be expected to gain experience in communicating scientific ideas through core course work, journal clubs and experiences in the laboratories and scientific meetings, where students will give talks and present posters describing their work.

V. Training in Conjunction with the M.D.-Ph.D. Program

A. The Pharmacology and Toxicology Graduate Program welcomes the opportunity to train students in the M.D.-Ph.D. combined degree program who wish to pursue doctoral work in Pharmacology and Toxicology. It is anticipated that they will enter the Ph.D. portion fulltime after the first 2 years of Medical School. A research rotation will be taken in the spring of the first year of Medical School (during the break between semesters) to accelerate their choice of mentors. It is anticipated that the time required for the Ph.D. degree will be 24-36 months from the time they enter fulltime graduate studies.

B. After entering our program the M.D., Ph.D. student should take

Year 1
1. Seminar
2. Laboratory Rotations/Research
3. Electives and modules as needed to fulfill track requirements (total 6 hrs).

Year 2
1. Seminar
2. Academic Skills
3. Qualifying Exam
4. Research

C. Upon being admitted to candidacy, the M.D.-Ph.D. student should be able to focus on the dissertation research and complete the research and dissertation during years 3 and 4 in the Pharmacology and Toxicology Program.