

Pharmacotherapy Guide to Graduate Study

**The University of Texas at Austin
(Last Reviewed: July, 2020)**

This "Pharmacotherapy Guide to Graduate Study" from the College of Pharmacy is intended to act as an informative supplement and is not intended to supersede University policy on graduate studies or the Guide to Graduate Study, the College of Pharmacy

Certification Page

Required by all Pharmacotherapy students at the time of matriculation into the graduate program:

“I certify that I have read, understand, and agree to, the entire contents of the Pharmacotherapy Guide to Graduate Study. ”

Signature: _____ **Date:** _____

I. INTRODUCTION

The objective of the graduate program in Pharmacotherapy is to prepare the student for the numerous opportunities in advanced practice and clinical sciences research positions related to pharmacy. The program is designed to meet the specific needs and objectives of the student in addition to providing a foundation of course work which is required of every graduate student seeking the degree. The program is designed to encourage the student to select an area of specialization within clinical pharmacy, thereby focusing their efforts to develop the expertise needed for advanced pharmacy practice and/or a career in clinical sciences research.

II. THE DOCTOR OF PHILOSOPHY DEGREE

A. Background

The Doctor of Philosophy (Ph.D) is a research degree designed to prepare students to discover, integrate, and apply knowledge as well as to communicate and disseminate it. The degree emphasizes development of the capacity to make significant original contributions to knowledge within the context of free inquiry and expression. The student pursuing this degree is expected to develop the ability to understand and to evaluate the literature of his or her field and to apply appropriate principles and procedures to the recognition, evaluation, interpretation, and understanding of issues at the frontiers of knowledge.

B. Ph.D in Pharmaceutical Sciences

The mission of this graduate program in Pharmacotherapy at the College of Pharmacy is to produce an individual educated and trained to conduct translational research integrating both science and practice. The graduate will be able to independently engage in the discovery, dissemination, and application of pharmaceutical and biomedical knowledge to improve the health status of society.

C. Graduate Competencies

There exists an increasing need in academia, pharmaceutical industry, private research corporations, and public health and governmental agencies for pharmacy scientists who have a strong comprehension of the basic sciences, understand the fundamentals of clinical research, and are able to develop hypotheses and conduct research that bridges the two. The graduate with a PhD. in Pharmaceutical Sciences (Pharmacotherapy) will be:

1. Skilled as a scientist. He or she should be able to observe phenomenon, propose research questions, generate hypotheses, conduct systematic experimentation and data collection, and revise models to reflect increased understanding;
2. Able to conduct independent research in pharmacotherapeutics and the biomedical sciences;
3. Clinically competent in a specialty area of pharmacy practice which complements their research focus;
4. Capable of communicating, at the appropriate level, research and clinical findings to pharmaceutical, medical, and basic science audiences, and

5. Capable of competing successfully for peer-reviewed grants.

D. Program of Work

See **Appendix B** as an example of the Program of Work.

E. Qualifying Examination and Committee

1. Guidelines

The intent is for all Ph.D students to be able to enter candidacy by the end of their second year. By this time, the student should have completed the bulk (>75%) of essential course work that would allow them to initiate the qualifying exam process. Your Major professor and Division Graduate Advisor need to be informed of your intentions and can help verify that essential course work has been completed. The minimum number of hours required for a Ph.D degree is 72 hours.

2. Procedure

At the beginning of the semester in which qualification examinations will be undertaken, the student, with the approval of their Major professor, should notify the College of Pharmacy Graduate Coordinator that candidacy is approaching

3. Qualifying Exam Committee

An examining committee will be formed, consisting of the student's Major Professor, at least two other College of Pharmacy faculty who are Graduate Studies Committee members, and an additional member who is outside the College (for a total of 4+) (selected by the student in consultation with his/her Major Professor, the Pharmacotherapy Division Graduate Adviser) (**Appendix A**). At the time of committee formation, a memo must be submitted to the Pharmacotherapy Graduate Adviser and the Division Head. The Major Professor serves as the committee chair.

4. Qualifying Exam Procedures

There are two parts to the exam. The first part is a written exam with questions set by members of the Qualifying Committee. Each exam is designed to test the student's general pharmacotherapy background in the form of assignments. One of the questions could be to prepare a grant proposal (related to your field but not your specific research project) that should not exceed 12 pages. Another question will involve a mini-review (background and introduction) related to your specific research topic. Two additional questions will also be provided and will include items such as, but not limited to, data analysis exercises, abstract writing, or patent application writing. Up to three months can be given to complete the written section. Upon the successful completion of the written section, the student will advance to the second oral part. The written part should be able to be completed in a one month time frame.

The second part of the exam is oral. The student will prepare an oral presentation of their dissertation proposal. The intent is to deliver preliminary explanation of a proposed dissertation project. This preliminary explanation will need to be defended later in front of the student's dissertation committee (Note: the members of the qualifying exam and dissertation committees can be different). This should include background, methods, and proposed analysis. Students are expected to utilize a power point (or similar) presentation to present their proposal. The committee will evaluate the proposal for creative thought, understanding of the chosen scientific problem, clarity and organization of presentation, and thoroughness and accuracy of experimental design. Although no specific amount of time is required for this section of the exam, it is typically one – two hours in length. Any changes requested should become part of the final, formal written proposal which will be required once student enters candidacy. If at the time of the qualifying exam, the student has a final written proposal, the formal oral (with the submitted written document)

presentation of the thesis project can also count as the second part of the qualifying exam in addition to the formal proposal presentation.

5. Outcomes

A student may be allowed to repeat the written and oral qualifying exam sections, at the discretion of a majority of committee members. However, a student is only allowed one re-examination. The decision to allow the student to transfer to a terminal master's program may also be made at this time or at a subsequent meeting. If the qualifying examinations are not passed, the examining committee may:

1. Recommend that the student be allowed to retake the examination(s)
2. Require that the student take further coursework for better preparation; or
3. Recommend that the student be terminated from the graduate program.

6. Entrance to Candidacy, Documentation, and Notification

After the qualification examination, specific paperwork and attendance at an Administration Subcommittee (ASC) meeting (held in May, August, and December) for review of candidacy will be required before the student can officially advance to doctoral candidacy. The student should also complete the Intellectual Property (Copyright) Tutorial Certification and Statement of Research with Human Participants form and complete any other training requirements (IACUC training, Biosafety, etc.). Specific information on each can be found on the University of Texas Graduate School website at <http://www.utexas.edu/ogs/pdn/>. The candidacy application is electronic. All non-Graduate Studies Committee members must submit a copy of their vita; a letter of non-remuneration also is required from non-University of Texas at Austin members. The Pharmacotherapy Division Graduate Advisor and the College of Pharmacy Graduate Coordinator will help the student to properly meet these requirements.

The satisfactory completion of these requirements, along with a B or better in all required didactic courses, will allow the student to apply to enter Ph.D. candidacy. A student may progress to candidacy fewer than 25% of outstanding required coursework and only with prior approval of the Pharmacotherapy Division Graduate Advisor. Candidacy is formally approved by the Graduate School following application to the Administrative Subcommittee of the Graduate Studies Committee. The Graduate Coordinator will assist the student with the formal application procedures to enter candidacy. Additionally, an update to the checklist must be made at the time of entrance to candidacy.

7. Dissertation Supervisory Committee

The application for candidacy includes specification of the members of the Dissertation Supervisory Committee (this committee may be the same as the qualifying committee, but does not have to be). The committee will consist of the student's Major Professor, at least 2 other Pharmacy faculty who are Graduate Studies Committee members, and an additional member who is outside the College (for a total of at least 4) (**Appendix A**). The student consults with their Major Professor and the Academic Advisor concerning the composition of this committee. At the time of the committee formation, a memo must be submitted to the Pharmacotherapy Graduate Advisor. The College Graduate Advisor nominates these members to the Graduate Dean Based upon the Graduate Advisor's nomination, the Graduate Dean appoints the committee, which then serves to guide the student in the pursuit of the research problem and in the writing of the dissertation itself. The non-UT College of Pharmacy member of the committee must provide a copy of their CV and a letter stating they will serve on the committee at no cost to UT Austin.

8. Formal Proposal

Once in candidacy, the student will make all appropriate modifications and corrections to their oral presentation and create a formal written dissertation proposal. This proposal will go to their dissertation

supervisory committee for approval. Once this written proposal is approved, the student can then complete their research and prepare for their dissertation defense.

9. **Dissertation Defense (Final Oral Examination)**

Approximately 14 days before the thesis defense, the members of the dissertation supervisory committee are provided with a copy of the dissertation. When, in the opinion of the committee, the student has completed the dissertation, the final oral examination is scheduled. This is accomplished by submitting the form *Request for Final Oral Examination*, which must be printed on pink paper, to the Graduate School a minimum of two weeks prior to the date of the examination. The form must be accompanied by one copy of each of the dissertation abstract, the *vita*, title page, and Committee Certification of Approved Version (unsigned) for a format check. The abstract must be approved by the supervisory committee before it is sent to the Office of Graduate Studies. The abstract will be published in *Dissertation Abstracts International*. The committee's decision to approve a dissertation (written and oral presentation) must be approved by a majority a majority of the committee (one dissenting vote is allowed).

10. **Timetable for Progression to Ph.D. Candidacy and 99-hour Rule**

The guidelines stated above are intended to keep students on track to receive their Ph.D. degree within 5 years after entering our program (considered a minimum standard). The faculty understands that there may be delays for individual students at various steps along the progression to candidacy. However, all students are ultimately responsible for insuring that they are making appropriate progress in their degree program. Students who have not successfully entered Ph.D. candidacy by the end of their 3rd year in graduate school may not be allowed to proceed into candidacy, but may be transferred to a terminal master's degree program if that is deemed appropriate by the student's academic advisers.

No official time limit has been imposed on acquiring the doctoral degree; however, all completed course work that is included in a student's degree program at the time of admission into candidacy must have been taken within the previous five years (exclusive of a maximum of three years of military service). All doctoral work is subject to review by the Graduate Studies Committee of the College, if the student has not completed the degree within three years from the date of admission to candidacy. In addition, all work is subject to review by the Graduate Dean. Students should be aware that the Texas Legislature has required charging out-of-state tuition for all graduate students who have accumulated more than 99 hours of doctoral level credit. For more information on the official Graduate School policy on the 99-hour rule, see the web site maintained by the Office of Graduate Studies (<http://www.utexas.edu/ogs/publications/index.html>).

11. **Commencement Exercises and Diploma**

The doctorate is awarded at the Commencement exercises following the successful completion (on time) of all requirements of the degree. The diploma is sent within three to six months after graduation. Degrees are awarded at the end of the Fall and Spring semesters and the Summer session. Formal commencement exercises are held only at the end of the Spring semester.

III. **THE MASTER OF SCIENCE DEGREE**

A. **Background**

While the primary responsibility of pharmacy education is to prepare competent entry-level practitioners, an equally important societal and professional need is the development of programs to educate and train a small

cadre of advanced clinical practitioners drawn to science and academia in Pharmacy. The Millis and Pew Commission Reports clearly identified the need for Pharmacy to develop programs that would train young men and women in the science and practice of pharmacy. There is a growing need for advanced practice pharmacists with a firm grounding in scientific research and evidence-based practice. The MS program is designed to be the appropriate 'terminal' degree for the advanced practice clinician who brings science to practice. The maturation of clinical pharmacy and the widespread adoption of pharmaceutical care as the cornerstone of pharmacy practice are evidenced by changes in standards and regulations. Collaborative drug therapy practice in Texas and in over 30 other states, allows pharmacists to assume primary care responsibilities for patients (e.g., disease management and the ordering of medications and laboratory tests). Pharmacotherapy practitioners provide patient care responsibilities at the specialist level, apply science to practice, and contribute to the body of pharmacotherapeutic knowledge through scholarship and services innovation.

The Pharmacotherapy Division of the College of Pharmacy, University of Texas at Austin, has developed a Masters Degree (Pharmacy) with thesis, which is offered alone or concurrently with a specialty practice residency. This unique program capitalizes on San Antonio Faculty strengths in both science and practice, and results in a uniquely qualified graduate capable of making significant contributions to pharmacy practice, research, and education.

B. Masters of Science (MS) (Pharmacotherapy)

The mission of the MS graduate program in Pharmacotherapy at the College of Pharmacy is to produce an individual educated and trained to provide advanced practice pharmaceutical care at a level commensurate with Board Certification. Moreover, the graduate will be prepared to successfully assume roles as a collaborator and investigator capable of developing research strategies that bring science to practice. The capability of graduates to engage in the discovery, dissemination, and application of pharmaceutical and biomedical knowledge to improve the health status of society will distinguish our graduates from individuals completing traditional residency programs. This is generally a 2-year program with a minimum of 42 hours needed for degree.

C. Graduate Competencies

Graduates of this program are expected to:

1. Make significant contributions to improving health outcomes in patients by bringing science to practice. They should be able to integrate patient-specific characteristics with an evidence-based approach in providing pharmaceutical care for patients.
2. Become skilled collaborators/investigators who observe phenomenon, propose research questions, generate hypotheses, conduct systematic experimentation and data collection, and revise practice and treatment models to reflect new knowledge. They should engage in creative processes and scholarship, ranging from practice based descriptive research to bench top inquiries.
3. Develop clinical competence in a specialty area of pharmacy practice, which complements their research focus.
4. Communicate at the appropriate level, research and clinical findings to pharmaceutical, medical and basic science audiences.
5. Provide compassionate and individualized pharmaceutical care to patients requiring treatment. They should be able to develop, maintain, and evaluate pharmaceutical services that lead to improved

patient care, and should be dedicated to providing exemplary patient care while maintaining a commitment to the highest ethical standards.

6. Become actively involved in learned societies and in professional organizations.
7. Demonstrate the desire for life-long learning and improvement.

D. Major Professor

Incoming students generally will choose a Major Professor by the end of the first fall semester. During this time, each new graduate is expected to talk with Pharmacotherapy Division faculty to aid in making this decision. Upon choosing an area of specialization, the student should approach and obtain approval from a faculty member within the division to serve as their Major Professor (**Appendix A**). If the Major Professor is not a member of the Graduate Studies Committee (GSC), then a co-Major Professor who is a member of the GSC must be identified (**Appendix A**).

In consultation with the Major Professor, Pharmacotherapy Graduate Adviser, and Division Head, students are permitted to change Major Professors during the course of their program if this will enhance their progress toward a degree (**Appendix A**). This change should occur before the student enters candidacy. Changes after candidacy are possible, but are likely to substantially slow a student's progress in meeting their degree requirements.

E. Supervising Committee

Each master's degree program is developed under the guidance of a Supervising Committee composed of a minimum of 3 members (two members of the GSC), one of who is designated as supervisor. In addition, one or more additional members (faculty or outside faculty/non-faculty), who may or may not be a member of the GSC can be named to the committee. The Major Professor or at least one of the co-Major Professors must be a member of the GSC in the major area (Pharmacotherapy). The Supervising Committee is responsible for the quality, depth, and balance of the student's educational experience. The student, working with their Major Professor, selects committee members (**Appendix A**). Students must obtain approval from prospective committee members to serve on their Supervising Committee. The student and Major Professor are encouraged to name faculty from other divisions within the College of Pharmacy when their addition to the committee will enhance the quality and breadth of the student's work. The Supervising Committee needs to review and approve the student's research project. Non-UT Austin members of a committee must provide a copy of their CV and a letter stating they will serve on the committee at no cost to UT Austin.

Documentation of all committee meetings must be provided by the Major Professor to the Pharmacotherapy Division Graduate Advisor; a copy of this documentation will be kept with the student file held by the Division.

F. Program of Work

Each program must include at least forty-two semester hours of graduate-level course work, including the thesis (see Master's Checklist for specific coursework requirements). The thesis is prepared under the direction of the Major Professor; it is subject to the approval of the Committee and ultimately to the approval of the Graduate Dean. A minimum of six semester hours of credit are granted for research and writing the thesis. Course 698A (research project) must precede course 698B (writing period); 698A may not be repeated. Both 698A and 698B must be taken on a letter-grade basis. The student must register for 698B the

semester he or she intends to graduate (this course can be repeated, if necessary). The thesis cannot be accepted before the semester in which the student applies for graduation.

The program of work includes four critical components:

1. The completion and defense of a thesis project;
2. The completion of didactic coursework (**See Appendices B and C**);
3. The completion of structured experiential components containing structured opportunities for skills development and scholarship (**See Appendix E**) or other elective course making up the minor
4. The completion of supporting coursework in an area of specialization within advanced practice and science (see below).

Additionally, and separate from the degree's program of work, is the expectation that a majority of students will complete a concurrent specialty practice residency.

G. Graduation Guidelines

At the beginning of the semester of intended graduation and by the deadline established by the Graduate School, the candidate must submit the Master's Graduation Application Form online. The online Master's Graduation Application Form automatically routes first to your departmental graduate adviser for approval and then to a degree evaluator in the Graduate School for final approval. The Master's Graduation Application Form is valid for one semester only and a new application must be submitted if your semester of graduation changes.

H. Oral Defense

An oral defense of the thesis is required. A complete draft of the thesis (including the title page, abstract, table of contents, text, references, tables, and appendices) must be submitted to each member of the Committee at least two weeks before the defense date. University-wide formatting guidelines must be followed. Theses must follow the guidelines of the Graduate School format booklet, *Format for the Master's Thesis and Report*. A format check for either electronic or print versions is recommended before turning in your completed work. If the format check is not done prior to submission of your completed work, one will be done at that time. The defense date must be set to allow ample time for revisions. Non-committee Pharmacotherapy Division faculty and graduate students may be invited by the Major Professor to attend the defense as observers.

If the student does not pass the oral thesis defense, a second opportunity will be given after an appropriate period to allow for further preparation. If the student does not pass the oral thesis defense after repeating it, the student will be dropped from the graduate program.

Once the oral thesis defense is successfully completed and revisions to the thesis have been made, the student must submit the thesis to the Graduate School by the deadline.

I. M.S. Graduation Procedures

To graduate, candidates must:

1. Be registered in PHR 698B (Thesis) in the semester or summer session in which they plan to graduate.
2. Pass the oral thesis defense.
3. File the Master's Graduation Application Form, **See Appendix D**, including the Program of Work, with the Office of Graduate Studies. This on-line application must be filed early in the graduation semester. It will trigger automatic submission of the final M.S. Program of Work.
4. Submit the thesis to the Supervising Committee by the deadline the committee establishes.
5. Submit the thesis to the Office of Graduate Studies for final approval by the Graduate Dean no later than the published deadline. The thesis may be submitted in electronic format (a pdf file on a CD) or printed format (the traditionally bound version printed on cotton paper) but the format must follow the guidelines published online. Either format requires additional printed copy of the following pages to be submitted separately from the thesis: title page, signature page (with original signatures of your supervising committee as listed on your Master's Graduation Application Form), and your abstract.

Note: It is the student's responsibility with input from their Major Professor, if a bound copy of the final version of their thesis is to be given to each member of the Supervising Committee. At the beginning of the semester during which the thesis will be completed, the student should check with the College of Pharmacy Graduate Coordinator regarding the cost of thesis binding.

IV. OTHER IMPORTANT INFORMATION

A. Keys

Keys for the Pharmacotherapy graduate student offices will be provided. Do not lend your keys to anyone. To minimize theft of personal property such as computers, books, or purses, the graduate student offices should be locked at all times. The main pharmacy office will be locked on weekends and after 5:00 PM on weekdays.

Each graduate student will receive an access card to enter the McDermott Clinical Sciences Building on holidays, weekends, and evenings.

B. Photocopying, Office Supplies, Phone, and Mail

The Pharmacotherapy Division photocopier may be used for research and TA-related uses. The Division is charged for each copy made; thus, you are asked not to make personal copies on the copy machine. Do not use the copy machine to copy books or course packets. Doing so is a potential violation of copyright law and an unnecessary expense to the division. Please use these resources wisely and do not abuse your access to the copy machine, library copy cards and office supplies.

Telephones and fax machines in the Pharmacotherapy Division are for business purposes. The graduate student should not make or receive personal telephone calls, except on a very limited basis. No long distance personal phone calls may be charged to the Division. Long distance calls involving University business

require an access code that can be obtained from your Major Professor, Division Graduate Adviser, or Division Head. This code is confidential and must not be given to others. The phone number for the graduate student offices is (210) 567-8355.

Your mailing address at the university is:

Your Name
Pharmacotherapy Education and Research Center
University of Texas Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 6220
San Antonio, TX 78229-3990

For University of Texas at Austin campus mail, the Pharmacotherapy Division mail code is A1945.

C. Mail

Each graduate student and faculty member has a mailbox in the Pharmacotherapy offices. Please check your mailbox and e-mail at least every other day. Material that is routed to all graduate students will have a routing slip attached to it. After reading the routed material, check your name off of the list and put it in the mailbox of the next person on the list.

D. Computers

Students are required to have a personal computer capable of running the software used in this program.

A variety of computers and printers are located in the student computer laboratory. Please use them appropriately; do not keep your personal files on the hard drives and clean up the computer area when you are finished.

E. Absence Records

You must fill out the on-line Absence Record prior to any travel on university-related business or personal travel during your normal business hours. In addition, you must fill out the Graduate Program Leave form and have it signed by supervising faculty and your DGA. Prior to taking any leave from the University (personal time or travel to Austin), you must first ask permission and get approval from your supervising professor if on research time, or for Master's students and during a clinical rotation, you must first seek approval from Dr. Hand (who will clear the leave with the specific preceptor). After approvals are received and Graduate Leave form filled out and signed by your supervising professor or Dr. Hand, the form then must go to the DGA (Prof., Koeller), who will sign and place in your file. Because TA and RA appointments extend over the break between semesters, you must complete an Absence Record if you travel (personal or university-related) during the break between semesters. This form is necessary for insurance purposes and provides the division with an emergency telephone number. Graduate Program Leave forms are available from Prof., Koeller.

F. Teaching Assistant Assignments

A variety of Teaching Assistantships (TA's) are available for Pharmacotherapy graduate students. Selection of students for TA assignments is based on the needs of the College and the qualifications of the student.

G. Performance Evaluation

The performance of Teaching Assistants will be evaluated by the course supervisor each semester. The performance of Research Assistants will be evaluated by the research supervisor on an annual basis. These performance evaluations will be discussed with the TA/RA and will be forwarded to the Division Head.

The Pharmacotherapy faculty will evaluate each student's progress in the program each Fall and Spring semester. The evaluation will consider performance based on: 1) coursework; 2) projects; and 3) teaching and research assistantships. Each student will be required to complete a progress report each semester (**Appendix F**). Based on these evaluations, faculty will rate the student's progress as either satisfactory or unsatisfactory. These ratings will be used as a tool to: 1) provide constructive feedback (e.g., assignment of new student objectives and a schedule for completion) to ensure timely progression in the program; and 2) recommend whether or not a student should continue in the program.

H. Outside Employment

Graduate students are not prohibited from involvement in off-campus activities or employment, as long as these outside activities do not interfere with coursework or divisional responsibilities. Part-time employment on weekends and some evenings is allowable. However, each graduate student during the summer and long semesters is considered a full-time student (and you are registered as one...), so we expect students to be on campus in the division office during normal working hours. In addition, as TA's, those duties also must be fulfilled during the normal course of the day. Outside employment during normal business time (M – F; 9am – 5pm) is discouraged.

I. Seminar

All graduate students must register for and attend the Pharmacotherapy seminar classes as offered in the curriculum and listed in the Plan of Work in **Appendix B & D**. These seminars are intensive interactive sessions focusing on principles of evidence-based practice, leadership skills and training, professional affairs and ethics, scientific breakthroughs, and other topics of timely and topical interest.

J. Membership in Professional Associations

Graduate students are encouraged to join and participate actively in professional pharmacy organizations such as the American Society of Health-System Pharmacists, American Pharmaceutical Association, American Association of Colleges of Pharmacy, and American College of Clinical Pharmacy. In most cases, reduced membership dues are available for individuals in educational and training programs. Membership in organizations (local, state, or national); familiarity with their publications; and attendance at their meetings, conferences, and conventions can help a student make valuable professional contacts and gain knowledge in current issues related to pharmacy and pharmacotherapy.

L. Authorship

Professor and peer collaboration on projects leads to questions about authorship of presentations and publications. Discuss and decide on authorship before writing an abstract or manuscript. **Do not submit either an abstract or manuscript without the knowledge and approval of your co-authors (Appendix G).** At his/her discretion, the Major Professor may require you to complete and submit a manuscript based on your thesis or dissertation before signing your graduation forms.

Appendix A

SUPERVISING COMMITTEE
(Qualifying Dissertation)

- Master of Science in Pharmacy (Pharmacotherapy)*
 - Doctor of Philosophy in Pharmacy (Pharmacotherapy)*
- The University of Texas at Austin, Pharmacotherapy Division

Name: _____

Division: _____

Signature / Date

Supervising Professor: _____ / _____
(printed)

Co-Supervising Professor: _____ / _____
(if needed) (printed)

Committee: _____ Signature / Date

_____ / _____
(printed)

_____ / _____
(printed)

_____ / _____
(printed)

_____ / _____
(printed)

Request to Amend Graduate Student Research Program

- Master of Science in Pharmacy (Pharmacotherapy)*
- Doctor of Philosophy in Pharmacy (Pharmacotherapy)*

The University of Texas at Austin, Pharmacotherapy Division

Student Name: _____ Date _____
(print)

Request to change:

Major Professor

Current Major Professor: _____
(print)

Proposed Major Professor: _____
(print)

Is the proposed Supervising Professor a member of the College's Graduate Faculty?

- yes no

Supervising Committee

Current Supervising Committee: _____
(please print names)

Proposed Supervising Committee: _____
(please print names)

Research Project

A request to change an approved research project should be accompanied by a copy of the revised research proposal.

Appendix B. Sample Curriculum - Ph.D (Pharmacotherapy) Program of Study

Summer Year 1

| Course | | Hrs |
|----------|--|-----|
| PGS 182W | °Ethics in Science and Clinical Practice | 1 |
| PGS 185D | °Responsible Conduct of Science | 1 |
| PGS 190R | Special problems | 1 |

Fall Year 1

| Course | | Hrs |
|----------|------------------------------|-----|
| PGS 196S | °Seminar in Pharmacy | 1 |
| PGS 398T | °Supervised Teaching | 3 |
| PGS 292E | °Clinical Research Methods I | 2 |
| *PGS | Elective | 3 |

Spring Year 1

| Course | | Hrs |
|----------|---------------------------------|-----|
| PGS 196S | °Seminar in Pharmacy | 1 |
| PGS 383Q | °Stats in Translational Science | 3 |
| PGS 292F | °Clinical Research Methods II | 2 |
| *PGS | Elective | 3 |

Summer Year 2

| Course | | Hrs |
|----------|------------------------------|-----|
| PGS 381V | °Communication Skills for TS | 3 |

Fall Year 2

| Course | | Hrs |
|----------|----------------------|-----|
| PGS 196S | °Seminar in Pharmacy | 1 |
| *PGS | Elective | 2-3 |
| *PGS | Elective | 2-3 |
| *PGS | Elective | 2-3 |

Spring Year 2

| Course | | Hrs |
|----------|----------------------|-----|
| PHR 196S | °Seminar in Pharmacy | 1 |
| *PGS | Elective | 2-3 |
| *PGS | Elective | 2-3 |
| *PGS | Elective | 2-3 |

- ***Based on the curricular track of the student, these elective courses are meant to support the student's area of research.**
- **°Denotes a core division/College course. In the rare instance where an alternative course would be substituted, permission of the major professor and graduate advisor is needed.**

- **+Note: For students who are admitted into the TS Ph.D program, a separate course of instruction is required (see the specific graduate guide)**

Appendix C. Sample Curriculum - MS (Pharmacotherapy) Program of Study

Year 1 – Summer

| | Course | Hrs |
|----------|--|-----|
| PGS 182W | °Ethics in Science and Clinical Practice | 1 |
| PGS 185D | °Responsible Conduct of Science | 1 |
| PGS 190R | Special Problems | 1 |

Year 1 – Fall

| | Course | Hrs |
|----------|---------------------------------|-----|
| PGS 196S | °Seminar in Pharmacy | 1 |
| PGS 292E | °Clinical Research Methods I | 2 |
| PGS 398T | °Supervised Teaching | 3 |
| PGS 293U | °Pharmacoth Master’s Mentorship | 2 |
| PGS XXX | Elective | 1 |

Year 1 – Spring

| | Course | Hrs |
|----------|--|-----|
| PGS 196S | °Seminar in Pharmacy (Pharmacotherapy) | 1 |
| PGS 292F | °Clinical Research Methods II | 2 |
| PGS 383Q | °Stats in Translational Science | 3 |
| PGS 293U | °Pharmacoth Master’s Mentorship | 2 |
| PGSxxxx | Elective | 1 |

Year 2 - Summer

| | Course | Hrs |
|----------|------------------------------|-----|
| PGS 381V | °Communication Skills for TS | 3 |

Year 2 – Fall

| | Course | Hrs |
|----------|--|-----|
| PGS 196S | °Seminar in Pharmacy (Pharmacotherapy) | 1 |
| PGS 698A | °Thesis | 3 |
| PGS 293U | °Pharmacoth Master’s Mentorship | 2 |
| PGS XXX | Electives | 3 |

Year 2 – Spring

| | Course | Hrs |
|----------|--|-----|
| PGS 196S | °Seminar in Pharmacy (Pharmacotherapy) | 1 |
| PGS 698B | °Thesis | 3 |
| PGS | Electives | 5 |

°Denotes a core Division/College course. In the rare instance where an alternative course is to be substituted, permission of the Major Professor and Graduate Advisor is needed.

+For a student enrolled in a concurrent residency, the student would need to take the Pharmacotherapy Master's Mentorship course PGS 293U the first fall and spring semesters and the second year fall semester .

Elective Choices:

Note: This list is not all-inclusive

PGS 185J, 285J & 385J Advanced Pharmacotherapy Laboratory Research 1-3 (credits)
PGS 190G, 290G, Advanced Pharmacotherapeutics of Human Diseases
390G Diseases and Illnesses (Topics) 1-4 (credits)
PGS 293U Pharmacotherapy Master's Mentorship (students on rotation must take each long semester X 3)
PGS 282J/K, Advanced Pharmacotherapy Seminar I/II (fall/spring)
PGS 291E/F, Advanced Hematology and Oncology seminars I/II
PGS 190R, 290R, 390R Special Problems Course (used for UTHSCSA supporting work) HSC Elective
PGS 384T Advanced Epidemiology

Other elective courses such as Epidemiology and 381W Molecular and Pharmacological Basis of Therapeutics (Lam) can be taken

++Note: For Masters students not enrolled in a concurrent residency, these Mentorship's will be substituted with elective courses that can count toward the student's minor

Based on the curricular track of the student, electives will be selected with permission of Major Professor and the Division Graduate Advisor.

**Pharmacotherapy Division:
Master's & Ph.D Degrees Coursework Checklists**

Core Courses: (20 hours - MS & Ph.D)

- PGS S182W (Ethics in Science and Clinical Practice)
- PGS 185D (Responsible Conduct of Science)
- PGS 398T (Supervised Teaching)
- PGS 381V (Communication Skills in Translation Science)
- PGS 191Q (Pharmacy and its Disciplines)
- PGS 292E (Clinical Research Methods I)
- PGS 282F (Clinical Research Methods II)
- PGS 383Q (Stats in Translational Science)
- PGS 196S (Seminars in Pharmacotherapy) (taken each full semester X 4)

(Substitution by approval of Major Professor and Graduate Advisor only)

Elective Courses:

- PGS 292J (Advanced Pharmacotherapy Seminar)
- PGS 381W (Molecular & Pharmacologic Basis of Therapeutics)
- PGS 292 E/F (Advanced Hematology and Oncology Seminar I/II)
- PGS 1-390G (Advanced Pharmacotherapeutics of Human Diseases)
- PGS 1-390R (Special Problems Courses)
- PGS 384S (Pharmacoepidemiology)
- PGS 293U (Pharmacotherapy Master's Mentorship)
- Other: 384T Advanced Epidemiology _____
- Other: _____
- Other: _____
- Other: _____

Research Courses:

- PGS 1-385J (Advanced Pharmacotherapy Laboratory Research)
- PGS 1-385R (Special Problems Course)
- Other: _____

Minor Area: (minimum of 6 credit hours for Master's & Ph.D)

Thesis/Dissertation:

- For Masters must have 698 A/B (698B must taken semester of completion)
- Dissertation (R & W hours)

**Appendix D: Application for Master’s Degree Candidacy
Pharmacotherapy Division
(Revised 11/21/10)**

TO THE CANDIDATE: Submit the following materials to the Graduate Studies Office in the UT-Austin College of Pharmacy (PHR 2.222, MC: A1900): Application for Master’s Degree Candidacy form; Brief description of your thesis project (signed by you and your thesis supervisor(s), Checklist for the Pharmacy Therapy Division. With the assistance of the Graduate Adviser of the Pharmacotherapy Division, you should enter the courses, including PHR 698b (thesis) that must be taken in order to complete the Master’s Degree requirements.

Student’s name (last, first): _____

Student UT EID: _____

Student’s e-mail address: _____

Previous degrees earned by candidacy applicant: _____

Degree Sought: Master of Science in Pharmacy

Title: _____

Date degree completion is expected (semester and year): _____

[You must be enrolled in PHR 698b (thesis) during the semester in which you expect to graduate]

Type the names of the individuals who will serve on your thesis committee. In addition to your Supervisor, a minimum of two and a maximum of three committee members should be listed. The supervisor of your thesis committee must be a member of the Graduate Studies Committee (GSC) for the UT-Austin College of Pharmacy but a non-GSC member may serve as a co-supervisor or as a reader. Please attach a short (2-3 pages) curriculum vita for any non-GSC members who will serve on your thesis committee.

| Name of Supervisor (or Co-Supervisor if applicable) | Department Rank | GSC status |
|---|-----------------|------------|
|---|-----------------|------------|

| Name of co-supervisor (if applicable) or reader | Department Rank | GSC status |
|---|-----------------|------------|
|---|-----------------|------------|

| Name of reader | Department Rank | GSC status |
|----------------|-----------------|------------|
|----------------|-----------------|------------|

| Name of reader | Department Rank | GSC status |
|----------------|-----------------|------------|
|----------------|-----------------|------------|

Appendix E. PGS 293U Clinical Science Experiential Laboratory (Unique Number Specific to the MS Program)

These MS required courses are considered a core component of the MS Program and are distinguished from clinical residency experiential components by possessing the following attributes:

1. Increased level of faculty supervision of the graduate student in these experiential environments, with a syllabus for the course clearly delineating expected behavioral and educational outcomes.
2. Higher level of performance expectations including: a) increased depth and scope for topic and project-related discussions, and b) defined project or scholarly activity requirements to be completed for each laboratory.
3. Performance will be evaluated on a letter grade basis.
4. Additionally, dependent on the clinical science environment selected by the student, one of the following sets of evaluation requirements (or similar) will also apply:

If the laboratory is principally a clinical experiential component

1. An emphasis on evidence-based pharmaceutical care will result in substantial literature review, synthesis of therapeutic best practice guidelines, and integration with patient-specific characteristics to arrive at optimal drug therapy and outcomes.
2. The practice environment will be conducive to clinical training by a) requiring active participation in drug therapy decisions, b) providing the student with appropriate clinical privileges, and c) providing enough structure to maximize the student's opportunity for development of skills and acquisition of knowledge.
3. A final evaluation will include an assessment of the student's knowledge, skills, and competence to deliver pharmaceutical care.
4. The course will result in one of the following outcomes: a) the formal presentation of a case including literature evaluation and synthesis, critique of care, and recommendations for optimizing therapies, or at the discretion of the faculty either b) a written report (case series report, therapeutics review, or disease management paper) submitted for publication in a peer reviewed journal, or c) evidence of the design and execution of investigations/experiments resulting in pilot data for the student's Master's thesis work.

If the laboratory is principally a 'bench' experience

1. An emphasis on understanding the scientific basis and rationale for the experimental design, data collection, and observations obtained or analyzed during the rotation will result in the skills necessary to develop hypothesis and experimental designs, which address clinically relevant issues.
2. The laboratory experience will be conducive to the development of proficiency in performing quantitative methods, statistical approaches to managing observations and data, and arriving at evidence-based interpretations of the results.

3. A final evaluation will include an assessment of the student's knowledge, skills, and competence to interpret, quantify or analyze biological samples, databases, or other experimental observations
4. The course will result in one of the following outcomes: a) a formal presentation of research data, including literature evaluation and synthesis, hypotheses, statistical considerations, results, and a discussion of the results; or at the discretion of the faculty, either b) a written report delineating novel techniques of analysis or the results of an analysis (e.g., biological samples, clinical observations submitted for publication in a peer reviewed journal; or c) evidence of the design and execution of investigations/experiments resulting in pilot data towards the student's Masters thesis work.

Requirements may vary depending on the specialty practice area selected. The Residency Learning System (RLS) developed by ASHP is the preferred assessment tool.

Appendix F

Instructions for completion of the **Semi-annual Graduate Student Evaluation**

Master of Science in Pharmacy (Pharmacotherapy)
Doctor of Philosophy in Pharmacy (Pharmacotherapy)
The University of Texas at Austin, Pharmacotherapy Division

First, the student should complete Sections 1-3 of this document (the *MS Semi-Annual Student Evaluation Form*) and forward an electronic copy to the Major Professor. The Major Professor should complete Section 4 after reading/approving all student entries in Sections 1-3; approval is documented by providing initials in the boxes at the beginning of each Section. The student and mentor should then meet to discuss the completed form that should be signed and dated by both the student and the mentor.



Second, the student is responsible for circulating the completed (signed) *Semi-Annual Graduate Student Evaluation Form* to all members of his/her Supervising Committee as well as for scheduling a meeting with this group. Optimally, this should be a meeting of the entire group in order to gain the benefit of a group discussion of student progress. However, under special circumstances, the student may meet individually with each member of their Supervising Committee; in this case, a memo should be provided by the Major Professor to describe the special circumstances which prevent a group meeting. Signatures of all members of the Student Supervising Committee should be obtained on the *Student Progress Report Form* of the Graduate Student Supervising Committee (the last page of this document).



Finally, the original (signed) *Student Progress Report Form* of the Graduate Student Supervising Committee together with the original (signed) *MS Semi-Annual Student Evaluation Form* should be submitted to the Pharmacotherapy Division Graduate Advisor. The Pharmacotherapy Faculty will then consider these documents.

SEMI-ANNUAL GRADUATE STUDENT EVALUATION

Master of Science in Pharmacy (Pharmacotherapy)
Doctor of Philosophy in Pharmacy (Pharmacotherapy)
The University of Texas at Austin, Pharmacotherapy Division

Name: _____

Review Date: _____

Major Professor: _____

Supervising Committee:

Goals of the semi-annual review process are to:

- A. Encourage a candid conversation between research mentor(s) and student.
- B. Create a document for review by the student's supervising committee and by the Pharmacotherapy Faculty.
- C. Provide the student with a critique of past six months performance and accomplishments.
- D. Establish concrete goals to clarify performance expectations.
- E. Identify research and career development options.

Sections 1-3 to be completed by the student and read/initialed by the mentor(s) in the boxes provided.
Sections 4-5 to be completed by the Major Professor. This form must be signed by student and mentor.

○ Section 1. Student Self-Assessment

Brief overview of your research project and major accomplishments in the past 6 months (~1/2 page):

○ **Section 1 (cont.). Student Self-Assessment** (use additional sheets as necessary)

| | Yes | No |
|---|--------------------------|--------------------------|
| • Publications in past 6 months (number = _____) If yes, please list (with complete detail of authors, title, journal, pagination) | <input type="checkbox"/> | <input type="checkbox"/> |
| • Presentations at Local/National/International Meetings: If yes, please list (meeting, date, presentation title): | <input type="checkbox"/> | <input type="checkbox"/> |
| • Seminar Presentations (Local/National/International): If yes, please list (where, when, presentation title): | <input type="checkbox"/> | <input type="checkbox"/> |
| • Honors/Awards: If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |
| • Intra- or Extramural Funding If yes, please list: (include submitted and/or funded applications) | <input type="checkbox"/> | <input type="checkbox"/> |
| • Patents: If yes, please list: | <input type="checkbox"/> | <input type="checkbox"/> |
| • New areas of research or technical expertise acquired in past 6 months: If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |
| • Supervisory activity: If yes, please describe, <i>i.e.</i> , oversight of graduate/undergraduate or summer student (name, academic level, project title): | <input type="checkbox"/> | <input type="checkbox"/> |
| • Teaching If yes, please describe, <i>i.e.</i> , lectures or lab sessions, amount (department, course name, section title): | <input type="checkbox"/> | <input type="checkbox"/> |
| • Clinical activity (if applicable): If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |
| • Committee or other service activity (indicate if you held an office): If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other professional activities not identified above: If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other activities (community, etc.) with professional relevance: If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |
| • Are there any obstacles to your research productivity? If yes, please describe: | <input type="checkbox"/> | <input type="checkbox"/> |

○ **Section 2. Student Research and Other Training Plans for the Coming 6 Months**

- Research project and professional development goals (brief paragraph):
- Anticipated publications (indicate projected authors, titles, and journal):
- Anticipated meeting(s) or workshop(s) to be attended:
- Fellowship or other grant applications planned (indicate funding agency, type of award and application date):
- Other professional training (*e.g.*, course work):

○ **Section 3. Student Career Goals**

- Describe your long-term career goals?
- Describe what further research activity or other training is needed before it is appropriate to begin your job search?
- When will your job search be initiated?
- Please indicate if there are other issues that will affect your job search (*e.g.*, relocation constraints, an international trainee with an assured position in home country):

Section 4. Major Professor's Assessment of Student's Performance

Rate performance in the following areas:

| | Expectations Not Achieved | Meets Expectations | Exceeds Expectations | Distinguished | Cannot Assess |
|---|---------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Overall Knowledge of: | | | | | |
| Project | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Literature | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Methods/lab techniques/equipment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Productivity/Quality of Work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lab techniques | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Data: | | | | | |
| Management (<i>e.g.</i> lab records) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Analysis | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interpretation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Application of data/extension of findings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Teaching/Mentoring/Supervisory skills | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Problem solving/Critical thinking skills | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Innovation/original ideas | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Independence: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Communication: | | | | | |
| Oral | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Written | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

OVERALL ASSESSMENT

Would you recommend student for continuation?

Yes

No

What is the next level for this student (*e.g.*, job, additional training in this lab, additional training in another lab)?

What does the student need to do to reach the next level? What are plans to achieve this transition?

Additional comments (additional pages may be added as necessary):

Section 5. Signatures. Signed by both student and mentor to acknowledge this semi-annual evaluation.

Student _____

Date _____

Major Professor _____

Date _____

MANUSCRIPT APPROVAL FORM

SUPERVISING COMMITTEE

Master of Science in Pharmacy (Pharmacotherapy)
Doctor of Philosophy in Pharmacy (Pharmacotherapy)
The University of Texas at Austin, Pharmacotherapy Division

Student Name: _____
(printed)

Manuscript Title: _____

Authors (complete listing in order of appearance): _____

Journal: _____

Submission Date: _____

Signatures below affirm that the student manuscript has been reviewed/approved and, if published, will represent a significant contribution to the literature.

Major Professor: _____ / _____
(printed)

Supervising Committee _____ / _____
(printed) _____ / _____
(printed) _____ / _____
_____ / _____

(printed)