



College of Pharmacy

**GRADUATE PROGRAM IN
PHARMACEUTICAL SCIENCES**

**STUDENT HANDBOOK
2017 / 2018**

**Revised 2017
Approved**



Graduate Program in Pharmaceutical Sciences 2017 / 2018 Student Handbook

MISSION STATEMENT

Mission of the Graduate Program in Pharmaceutical Sciences: to produce graduates for teaching, research, and clinical careers in academia, industry, health care, and other public and private institutions dedicated to the promotion of human health and wellness. We utilize multi-disciplinary basic and translational research approaches to 1) understand mechanisms of disease, 2) identify novel therapeutic targets, 3) develop and optimize pharmaceutical treatment approaches, and 4) promote the prevention and management of chronic diseases. Pharmacology, pharmacotherapeutics, biopharmaceutics, and pharmacogenomics are emphasized in the curriculum. Particular areas of focus are: Drug Discovery, Translational Pharmacology, and Cancer Biology. We strive to prepare students to become independent and creative problem solvers who will develop into leaders in their respective fields.

Program Outcomes

The assessment plan for the Graduate Program in Pharmaceutical Sciences addresses the following programmatic outcomes:

Objective A: To prepare graduates for careers as successful professionals in academia, industry, health care, and private institutions dedicated to the promotion of human health and wellness.

A-1. Achieve mastery of knowledge in the general field of Pharmaceutical Sciences.

A-2. Develop the expertise to use appropriate methodologies to solve novel and emerging problems related to the field of Pharmaceutical Sciences.

A-3. Disseminate research findings to local, regional, national, and international audiences primarily through publication in peer-reviewed journals and presentations at conferences.

A-4. Participate in professional organizations, including becoming members, attending meetings, and taking leadership roles where appropriate.

A-5. Participate in teaching, internships, fellowships, workshops, credentialing and grant applications to enhance competitiveness for career opportunities as appropriate.

Objective B: To prepare students to be effective and innovative researchers in the fields appropriate to Pharmaceutical Science.

B-1. Train students in critical, integrative, and evaluative thinking at the highest levels of rigor.

B-2. Develop advanced written and oral communication skills.

B-3. Become independent, self-motivated researchers with the ability to identify specific problems in their field of expertise and to formulate solutions to these problems.

B-4. Develop a comprehensive knowledge of previous and current research in their field of expertise and be able to demonstrate that knowledge capability in a review of the literature at a level that is potentially publishable.

B-5. Generate innovative questions within their field of expertise and pose hypotheses related to those questions.

B-6. Apply sound methodological approaches to test hypotheses related to specific research questions and describe the methods effectively.

B-7. Perform statistical analyses of research data and present the results in a way that clearly describes the data.

Objective C: To enhance visibility of the Graduate Program in Pharmaceutical Sciences nationally and internationally.

C-1. Attract and retain high-quality graduate students.

C-2. Provide effective mentoring that encourages students to graduate in a timely manner.

C-3. Attract, retain, and support nationally- and internationally-recognized research-active faculty who contribute to Graduate Program in Pharmaceutical Sciences.



PROLOGUE FROM THE GRADUATE PROGRAM DIRECTOR

Welcome to the Washington State University (WSU) Graduate Program in Pharmaceutical Sciences. We are pleased that you have chosen to pursue your graduate degree in pharmaceutical research in our program. The goal of our program is to develop scientific leaders who will advance the understanding of mechanisms, actions, and safety of existing and new therapeutic agents to improve human health. You will be undertaking work in an exciting and constantly evolving biomedical research field. Our program has the facilities, resources, faculty, staff, and inter- and intra-professional networks to help you achieve your career goals.

Pursuing a PhD in pharmaceutical sciences offers a wide variety of career options, ranging from academia to pharmaceutical industry to regulatory agencies and beyond. Regardless of your career path, the demands on biomedical scientists extend beyond the lab, requiring exceptional skills in critical thinking and interpretation, oral presentations, scientific writing and time management. Our program will provide you a foundation in translational research and challenge you to develop the essential skills that will serve you on a daily basis in your career.

In addition to our state-of-the-art research facilities, you will have the unique opportunity to engage with colleagues from other healthcare graduate and professional programs here at WSU Spokane, including the College of Nursing and Elson S. Floyd College of Medicine. The relationships we have developed with these programs have helped us build outstanding basic and translational research opportunities for our faculty and students.

Your tenure in our program, while both challenging and rewarding, will undoubtedly be one of the most worthwhile experiences in your life. The successful student will be self-motivated, dedicated, inquisitive, forward-thinking, resilient and collaborative. You will gain not only advanced training in the pharmaceutical sciences, but also a strong community of colleagues, mentors and friends that will last well past your years in the program. Our faculty and staff are committed to helping you achieve your professional goals while in the program and beyond.

Best wishes for a successful graduate experience.

Susan A. Marsh, PhD
Graduate Program Director

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QUICK CONTACT INFORMATION

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GRADUATE STUDENT ESTIMATED ACADEMIC FEES, PER SEMESTER

(for resident, or with non-resident tuition waiver, for Fall and Spring)

Operating tuition	\$5,445.00
Student activity fee	\$285.50
Building fee	\$167.00
Total:	\$5897.50
Less tuition waiver	-\$5445.00
<i>Student pays:</i>	<i>\$452.50</i>
Health & Wellness fee	\$92.50
<i>Total paid by student</i>	<i>\$545.00</i>

Non-Resident students should note that the Financial Aid Office awards all graduate students initially with resident tuition rates as most non-resident graduate students on graduate assistantships, including international students, will be receiving a tuition waiver. If this is not the case for you, please file a revision request form to have your budget increased to the non-resident cost at <http://finaid.wsu.edu/your-award/revision-requests/>. This budget is based on 10-18 credits per term. The cost for resident students is \$598.95 per credit and \$1,270.55 per credit for non-residents.

All assistantships in the College of Pharmacy *include* a tuition waiver, health insurance, and monthly stipend. When you enroll for classes, you **do not** need to sign up for health insurance. If you sign up for it, you will have to pay for that insurance. Student fees may be paid through payroll deduction; see next page.

SUMMARY OF BENEFITS FOR STUDENTS RECEIVING ASSISTANTSHIPS

Information regarding Insurance Benefits can be found at the following link:

<https://gradschool.wsu.edu/graduate-assistant-medical-insurance/>

Information regarding Medical and Dental Benefits can be found by navigating the appropriate links, beginning with the following link:

<https://studentinsurance.wsu.edu/graduate-assistants/>

PAYROLL DEDUCTION

There are fees that you have to pay as graduate students. Payroll deduction allows the fees to be deducted a little at a time from each pay period instead of all at once. You can also go online to myWSU and sign up for payroll deduction. You **must** apply for payroll deduction by the third Friday of classes, and the first deduction will be from your September 25 paycheck.

Direct deposit is available and can be arranged with payroll services and your bank. Your check will automatically be deposited on the 10th and 25th of each month and you will not have to wait for it to come in the mail. You can sign up for direct deposit online at <http://www.wsu.edu/payroll/fspay/directdep/enroll.htm>

INSURANCE FOR SPOUSE/DOMESTIC PARTNER AND DEPENDENTS

Washington State University (WSU) offers coverage for dependents of graduate students receiving an assistantship so that any student can purchase coverage for their spouse/domestic partner and dependents. Further information can be found at the following web sites:

For graduate students on an assistantship:
<http://studentinsurance.wsu.edu/graduate-assistants/>

For international graduate students not on assistantships (e.g., Fulbright scholars):
<http://studentinsurance.wsu.edu/international-students/>

GRADUATE STUDENT SAFETY

WSU has made a commitment to maintaining a safe and secure environment for all students and as such, has created a campus-wide, integrated safety program to address potential safety issues students may encounter during their time at WSU. This proactive approach partners University infrastructure, University policies, and formal safety training for students to become aware of potential dangers, know how to protect themselves, and to know where to access safety information. It will be your responsibility as a student to complete required training, stay well informed regarding safety issues, educate yourself when faced with job specific hazards, follow University safety policies, and use prudent judgment in unanticipated situations.

The Office of Emergency Management website, <http://oem.wsu.edu/> contains important safety information as well as instructions for you to register your contact information for emergency notifications. It is highly recommended that you register as soon as you arrive. Please familiarize yourself with locations of safety equipment, emergency exits, and evacuation procedures for every building you will work in.

Most scientific research laboratories have a number of workplace hazards specifically associated with the materials and equipment involved in the projects. Each laboratory is required to follow University safety policies and procedures which address the safe handling and personal protection from these hazards. However, certain procedures or techniques may be specific to your laboratory projects, so it is expected that you will familiarize yourself with these hazards

and follow all policies for the appropriate handling, storage, and disposal of any materials or products considered hazardous by the University.

STIPENDS AND RESPONSIBILITIES

Students may receive assistantships for research (RA) or teaching (TA), or externally funded fellowships. To receive assistantships or fellowships, students must be enrolled full-time and register for a minimum 10 credit hours per semester. Assistantship appointments are for the semester (August 16–Dec. 31; Jan. 1–May 15) and may be renewed if the student is making satisfactory progress toward his/her degree. These appointments are always half-time, reflecting the fact that students are enrolled in courses during the semester. Support for the summer months is typically available, usually for twelve weeks. The table below shows *monthly* assistantship salaries for half-time appointees who have been awarded in-state tuition waivers. Appointments at the higher level are for those who have successfully passed their Preliminary examination (increase starts at beginning of the **next** semester after passing the Preliminary examination).

TA or RA (<i>prior to prelim examination</i>)	\$1,978/month
TA or RA (<i>semester following successful completion of Ph.D. preliminary examination</i>)	\$2,207/month

***Students must establish Washington State residency by the end of their first year.
Out-of-state tuition is only waived for one year.***

Students receiving assistantships are expected to devote 20 hours per week to their college responsibilities (teaching and/or research). In addition to this commitment, students who register for independent study, thesis research, and/or doctoral research (PharmSci 600, 700, 800) must devote sufficient time to accomplish the goals that have been set forth by the student, advisor, and the student's research committee. If a student withdraws, does not complete the semester or otherwise fails to uphold their duties, the student may be responsible for repayment of all or a portion of the tuition waiver. <https://gradschool.wsu.edu/assistantships/>

Students who are supported on assistantships and/or fellowships are strongly discouraged from working additional hours beyond their required 20 hours per week (i.e. additional employment either at WSU or with an external employer). If students are considering such employment, the additional work should ideally add to their professional development or support their specific career goals. If a student plans to work more than 5 additional hours per week of work at WSU, the Graduate Program Director should review and approve the additional work in writing and routinely screen the student to ensure that he/she is making good progress in the program. The following should be considered in the review process: (1) the student's current status in the program (performance and longevity); (2) the student's timeline for degree completion; and (3) how the work involved contributes to the student's academic work and progress. The Program Director must ensure, in a written memo to the Dean of the Graduate School, that if the student does not complete the degree requirements in a timely manner, the college will continue to fund them until they do.

Full-time students *must* make satisfactory progress toward their degree. All graded course work for the degree should be completed within the student's first 2 years at WSU. Credit hours for students receiving a Graduate Student assistantship must not fall below the minimum of 10 credits. If a student falls below 10 credits, the assistantship is canceled and the student may be responsible for repayment of all or a portion of the tuition waiver.

Assistantships are granted on a semester basis, unless specifically stated otherwise in a written letter of offer, and are renewed each semester at the discretion of the Graduate School and the Graduate Program. Reasons for non-renewal may include, but are not limited to, academic deficiency. Graduate assistants will receive a written reminder thirty (30) calendar days prior to the end of the current semester if an assistantship will not be renewed for the following semester. However, notice is not required.

M.S. STUDENT SUPPORT

Students wishing to obtain their M.S. degree in the Graduate Program in Pharmaceutical Sciences are normally not eligible for direct stipend support. M.S. students will not be expected or required to perform research rotations. Instead, they must identify an investigator willing to work with them on their M.S. degree who can support their research and research costs.

FELLOWSHIPS

The Program strongly encourages students to write proposals for extramural fellowships. Common sources of funding for fellowships can be found at the following sites:

1. Office of Grant and Research Development (OGRD)
(<http://informer.ogrd.wsu.edu/CollatedOpportunityList.aspx?ID=9>)
2. Pharmaceutical Research and Manufacturers of America Foundation (www.phrma.org)
3. American Foundation of Pharmaceutical Education (<http://www.afpenet.org/>)
4. National Research Service Awards through the National Institutes of Health
(<http://grants.nih.gov/training/nrsa.htm>)
5. Howard Hughes Medical Institute (www.hhmi.org)
6. National Science Foundation (www.nsf.gov)
7. Congressionally Directed Medical Research Programs associated with the Department of Defense (<http://cdmrp.army.mil/search.aspx>)
8. The Achievement Rewards for College Scientists (ARCS) Foundation
(<http://www.tgs.northwestern.edu/financial-aid/fello-schola-grants/university-fello/arcs/index.html>)
9. The Alcohol and Drug Abuse Research Program (ADRP)
(<http://public.wsu.edu/~adap/Funding.html>)
10. American Heart Association (<http://my.americanheart.org/>)

It is essential that you talk to your Research Advisor/Mentor before submitting applications for any of these fellowships. Most applications must be submitted through the WSU Office of Grant and Research Development (www.ogrd.wsu.edu).

SOCIETY MEMBERSHIPS

Students are highly encouraged to join and participate in a professional society (e.g., ASPET, APS). These societies frequently offer travel fellowships or other financial support to their members.

GRADUATE SCHOOL ASSISTANTSHIP LEAVE POLICY

1. During the term of their appointments, all graduate student service appointees hold quasi-faculty status and are expected to be at work each normal workday, including periods when the University is not in session.
2. All University holidays are published in the WSU Week and posted at <http://www.hrs.wsu.edu/>
3. Graduate students on appointment do not earn annual leave or sick leave.

ADDITIONAL LEAVE GUIDELINES SPECIFIC TO THE GRADUATE PROGRAM IN PHARMACEUTICAL SCIENCES FOR ASSISTANTSHIPS

1. It is expected that graduate students will be present on campus during normal university working days. University policy does not provide for vacation time for graduate students; however, the Graduate Program in Pharmaceutical Sciences guidelines provide students at least 10 working days of paid leave per fiscal year (July 1st through June 30th), to be used for vacation, illness, or any other situation(s) in which the student is absent from work. **The use and amount of leave time is to be negotiated between the student and the student's Research Advisor/Mentor, or with the program director for students who have not yet selected a Research Advisor/Mentor.**
2. All planned and unplanned absences require approval from the student's Research Advisor/Mentor. Teaching Assistants must have approval of all professors for whom s/he serves as a TA if the planned absence is during the time that classes are in session.

GRADUATE LEAVE OF ABSENCE

Graduate leave status is granted for individuals who must be away from their studies for one or more semesters for personal, family, job, financial, military or Peace Corps service, or other compelling reasons. ***Only graduate leave for medical reasons [Emergency Family/Medical Leave (EFML)], military service, and Peace Corps service is available to doctoral students in***

continuous doctoral status. Students should consult the WSU Graduate School Policies and Procedures manual for information regarding the types of leave available.

1. Students must apply for graduate leave through the Graduate School by completing the graduate leave form at the following link:
<https://gradschool.wsu.edu/documents/2014/12/graduate-leave-status-form.pdf>
2. The leave must be approved by the student's Advisor/Mentor, Graduate Program Director, International Programs (for international F-1/J-1 students only) and Dean of the Graduate School. A student may be on graduate leave for a total of up to one calendar year during their studies, but leave time may be extended for special circumstances (e.g., for military or Peace Corps service). *Graduate leave beyond one calendar year during a student's studies is not guaranteed.*
3. Graduate leave entitles students to maintain access to library services if needed. At the end of the leave, the student will be able to reenroll for credits without completing the reenrollment form or paying the reenrollment fee. International students must submit information on their finances to the Graduate School if they require issuance of new immigration documents (Form I-20/DS-2019).

SELECTION OF ADVISORS/MENTORS, ADMINISTRATIVE CHAIRS, AND COMMITTEES

SELECTION OF LABORATORY ROTATION ADVISOR(S)

Students will be advised by the Graduate Program Coordinator and/or the Program Director during "Orientation Week." During Orientation, students will have the opportunity to learn about each of the faculty members regarding their research and will be asked to select a first, second and third choice for their rotation lab. The faculty members will meet individually with interested students, and make their selection(s). The Graduate Program Director will make the final determination of assignments based on the faculty requests and students will be notified of their assignments.

Graduate Program in Pharmaceutical Sciences students must participate in research rotations. A rotation contract (**APPENDIX 1**) will be submitted once a rotation has been assigned. Students are expected to select a permanent Research Advisor/Mentor upon completion of their first or second research rotation. At the end of each semester, rotation students will be reviewed (**APPENDIX 2**).

SELECTION OF A PERMANENT ADVISOR/MENTOR

I. Advising Agreement

Once a student and a faculty member have reached a mutual understanding that the student will pursue their dissertation work in that faculty member's lab, an internal Graduate Program in Pharmaceutical Sciences form "Permanent Advisor/Mentor and Initial Program Of Study Agreement Form" (**APPENDIX 3**) will be filled out and signed by the student, advisor, and

Graduate Program Director. This form will list the tentative coursework that the student will be taking to fulfill degree requirements, as a prelude to eventual completion of the Program of Study. It will represent a written agreement between the student and their advisor and will become a permanent part of the student's file. Before signing the form, the Graduate Program Director will confer as necessary with the Chair of the Department of Pharmaceutical Sciences and the Dean of the College of Pharmacy to establish that there is the potential for continued funding of the student's research.

The Research Advisor/Mentor must be an active member of the Pharmaceutical Sciences graduate faculty who can potentially fund the student's stipend. Affiliate faculty from another college can serve as the Research Advisor/Mentor for graduate students, with the permission of the Dean of the College of Pharmacy along with the other Dean involved. A Memorandum of Understanding (MOU) will be developed for each student mentored by an affiliate faculty member, providing details concerning financial support of the student's stipend. This MOU will be signed by both Deans. There are limitations on the roles that can be held by graduate faculty who do not hold doctoral degrees. **It is the student's responsibility to select a permanent Research Advisor/Mentor and other committee members for his/her program. Note that WSU faculty have the right to decline to serve on any specific student's committee.** Students must make a concerted effort to identify a suitable Research Advisor/Mentor through rotations. Students who are struggling to identify a suitable Research Advisor/Mentor should meet with the Graduate Program Director to discuss their research interests. Students who fail to make sufficient effort towards identifying a Research Advisor/Mentor within the first year and do not submit the Research Advisor/Mentor Agreement Form (**see APPENDIX 3**) by the end of their second semester will be required to meet with the Graduate Program Director to discuss their progress toward their degree. A third and final rotation can be undertaken in the summer following the first year, with permission of the Graduate Program Director. Failure of a student to make normal progress toward their degree could result in disenrollment in the graduate program.

Responsibilities of Permanent Research Advisor/Mentor

1. In capacity as academic advisor, assist the graduate student in planning the program of study, referring the student to the Graduate Program Director as appropriate.
2. Assist with dissertation committee selection.
3. Provide guidance to the graduate student for the student's examinations.
4. Provide the student with a secure environment (facilities, laboratory, financial) that allows the student to achieve program outcomes.
5. Mentor the student on the research process, including experimental design and performance, statistical analysis, review of the literature, writing up papers, preparing grant proposals, and preparing seminars. Encourage early steps toward the development of independence.
6. Mentor the student in the financial and administrative conduct of research.
7. Evaluate the graduate student's performance on an annual basis in conjunction with the administrative chair of the student's committee, and provide regular feedback to the student regarding progress.
8. Support the student's efforts to develop career-related skills (e.g., mentoring of more junior students; outreach activities; writing and reviewing experience).

9. Assist the student in the pursuit of the student's future career by providing letters of reference.

2. Dissolution of Advising Agreement

On occasion, it will be necessary to dissolve the advising agreement. For example, the Research Advisor/Mentor may move to another institution, or there may be a decision made that the student would be most successful working with another advisor. In this case, the student and advisor will complete the form provided in **APPENDIX 4**, after consultation with the Graduate Program Director. The form will be signed by the student, advisor, and the Graduate Program Director.

3. Change of Advisor Agreement

On occasion, a student may need to change the student's Research Advisor/Mentor. After completion of the Dissolution of Advising Agreement, the student and new advisor will complete a Memorandum of Understanding that lays out the expectations for the student's performance. The memorandum will be signed by the student, the new Research Advisor/Mentor, and the Graduate Program Director. The following elements need to be addressed in this memo:

- a. If the change occurs in the middle of an academic semester, how will the student's grade for research credits be determined at the end of the semester?
- b. How long will the student work with the new advisor before a new Advising Agreement is completed? Will the student need to meet certain expectations before this agreement is completed?
- c. When will the student be expected to complete their new Program of Study?
- d. When will the student be expected to defend their Preliminary Exam?

SELECTION OF DISSERTATION (PH.D.) COMMITTEE

By the end of the first semester of the second year, students should choose and be accepted by their committee members, and file their Program of Study:

<http://gradschool.wsu.edu/Documents/DOC/PhDProgramofStudy-Revised.docx>

SELECTION OF ADMINISTRATIVE CHAIR

The Student, Research Advisor/Mentor, and Program Director will confer on the selection of an Administrative Chair, who will subsequently be appointed by the Graduate Program Director for the student's committee. The Administrative Chair of a student's committee shall be an active Graduate Program in Pharmaceutical Sciences graduate faculty member, at or above the level of Associate Professor, and cannot be the student's Research Advisor/Mentor. Note that the Administrative Chair is an internal requirement only for students in the Graduate Program in Pharmaceutical Sciences; all official documents to be submitted to the Graduate School must list the Research Advisor/Mentor as Chair.

Responsibilities of the Administrative Chair

1. Responsible for all administrative aspects associated with the graduate student's committee including committee composition and readiness for preliminary exam or doctoral defense.
2. Where necessary, assist with mentoring the student when the student's Research Advisor/Mentor is an Assistant Professor.
3. Resolves any conflict issues, in consultation with the Program Director.
4. Evaluates the graduate student's performance on an annual basis in conjunction with the student's Research Advisor/Mentor.

SELECTION OF ADDITIONAL COMMITTEE MEMBERS

Additional committee members should be determined jointly by the student, the Research Advisor/Mentor and the Administrative Chair.

1. Committees are comprised of a minimum of four faculty members, including the Research Advisor/Mentor and the Administrative Chair.
2. At least three of the members must be members of the graduate faculty at WSU. At least 50% of the committee membership must be from the Graduate Program in Pharmaceutical Sciences graduate faculty.
3. Final approval of the committee membership is at the discretion of the Graduate Program Director.
4. The Graduate Program Director must sign the necessary Graduate School forms on behalf of the Graduate Program in Pharmaceutical Sciences and this must be coordinated through the Program Coordinator.
5. The initial selection of or subsequent changes to, a graduate student's committee shall be determined jointly by the student, Administrative Chair and Research Advisor/Mentor with final approval of the Graduate Program Director.
6. In accordance with the *Graduate School Policies and Procedures Manual at WSU*, graduate students are not permitted to serve on the committees of other graduate students.

ROLE OF DISSERTATION COMMITTEE

1. Monitor progress of student.
2. Approve advancement of student to take preliminary and final exam.
3. Provide advice and guidance with respect to research direction and degree completion.

SELECTION OF THESIS (M.S.) COMMITTEE

All students seeking the M.S. degree must select their Research Advisor/Mentor and committee by the end of the first semester after the decision is made to pursue an MS.

1. The selection of the student's committee should be determined jointly by the student and the Research Advisor/Mentor according to the guidelines and time frame established by the *Graduate School Policy and Procedures Manual*.
2. Committees are comprised of a minimum of three faculty members.
3. At least three of the members must be members of the graduate faculty at WSU. At least 50% of the committee membership must be from the Graduate Program in Pharmaceutical Sciences graduate faculty.
4. Final approval of the committee membership is at the discretion of the Graduate Program Director.
5. The Graduate Program Director must sign the necessary Graduate School forms on behalf of the Graduate Program in Pharmaceutical Sciences and this must be coordinated through the Program Coordinator.
7. The initial selection of or subsequent changes to, a graduate student's committee shall be determined jointly by the student and Research Advisor/Mentor with final approval of the Graduate Program Director.
6. In accordance with the Policies and Procedures of the Graduate School at WSU, graduate students are not permitted to serve on the committees of other graduate students.

Graduate students are expected to make satisfactory progress in their studies and are responsible for meeting the Graduate School's continuous enrollment policy, general academic requirements, and the specific requirements associated with their degree as well as those outlined in this Student Handbook. Program faculty recognizes that circumstances and the specific training desired by students may change after students enter the program. Students may, therefore, change their Research Advisor/Mentor, committee members including Administrative Chair, and programs of study without prejudice as long as adequate funding is available for the student and the student's project, and time to degree completion is deemed reasonable. The student and new permanent Research Advisor/Mentor must notify the Program Coordinator and the Graduate Program Director in writing as soon as the decision to change the committee has been made. A new Program of Study must be approved by the Graduate Program Director and by the Graduate School.

SUBMISSION OF THE PROGRAM OF STUDY

The Program of Study (<http://gradschool.wsu.edu/Documents/DOC/PhDProgramofStudy-Revised.docx>) is an official form documenting the student's plan for courses to take towards the student's degree. Once determined, the Program of Study should be submitted to the Graduate School as soon as possible, but no later than the beginning of the semester preceding the anticipated semester of graduation for master's students and by the end of the third semester of study for doctoral students (October 1st deadline for fall; March 1st deadline for spring). It is the responsibility of the student to prepare and submit the Program of Study, in consultation with the Research Advisor/Mentor and the doctoral or thesis committee. The Program of Study must be signed by the Graduate Program Director and submitted to the Program Coordinator, who will forward it to the Graduate School for approval, which can take as long as six weeks. Once approved, the Program of Study becomes the basis of the requirements for the degree. Note that final examinations for M.S. students and Preliminary Exams for Ph.D. students cannot be scheduled until the Program of Study is approved by the Graduate School.

AFFILIATION

When Graduate Program in Pharmaceutical Sciences graduate students author or co-author scholarly work, (e.g., a scientific paper or abstract, posters, etc.) or receive awards that are announced to the news media, the address or location of the authors or recipients should include "Graduate Program in Pharmaceutical Sciences, Washington State University." Such recognition of the Program is an important source of promotion of the program to the public. It should be done in accordance with any applicable WSU graphic identity guidelines (see: <http://brand.wsu.edu/>). When the advisor is a co-author, both the advisor's department and the Graduate Program in Pharmaceutical Sciences should appear in the affiliation.

TERMINATION OF ENROLLMENT

Graduate students must have cumulative GPA of 3.0 in order to be considered in good academic standing. The enrollment of a graduate student will be terminated under any one of the following conditions:

1. If s/he has a cumulative GPA below 2.75 at the end of the first semester of study.
2. If s/he fails to establish and maintain a cumulative GPA of 3.0 or above after more than one semester of study.
3. If s/he has failed a preliminary or final exam for a second time.
4. If s/he has earned a U grade for research credits (600, 700, 800) for two semesters (including the summer term).

Other reasons for termination might include failure to make normal progress toward degree completion (such as failure to complete coursework on time or multiple incompletes), failure to maintain continuous enrollment, failure to identify a mentor after three research rotations, issues

related to academic integrity or student conduct, etc. Only the Dean of the Graduate School or the University Conduct Board has the authority to terminate a student's enrollment.

If the student becomes academically deficient because of two U grades for research credits, the student must meet with the Graduate Program Director, who upon favorable recommendation, may petition the Dean of the Graduate School for approval to reinstate the student. The Graduate Program Director must identify the conditions for continuation of study in the petition request. If approval to continue is granted, the student will have one semester or summer session to improve his/her research progress.

Graduate Program in Pharmaceutical Sciences graduate students receiving a notice of termination should contact the Program Coordinator to arrange a meeting with the Graduate Program Director if they desire reinstatement. The student must present a strong case in writing to the Graduate Program Director for reinstatement, which should include an explanation of the reasons they were terminated and a specific plan for overcoming their deficiencies.

ANNUAL REVIEW

At the conclusion of the academic year, all graduate students enrolled in the Graduate Program in Pharmaceutical Sciences are reviewed by their Research Advisor/Mentor. The review (**APPENDIX 5**) is initiated by the Graduate Program Coordinator, who will provide an electronic form to each student; students who do not receive a review form should contact the Graduate Program Coordinator. It is the student's responsibility to distribute the form to the student's Research Advisor/Mentor, and it is incumbent upon the Research Advisor/Mentor to incorporate any input from the student's committee members. The evaluation of the students will be conducted according to the provisions stated in the Graduate School's Policy and Procedures Manual. Students in the Graduate Program in Pharmaceutical Sciences will be evaluated according to following components:

1. Students will write a self-evaluation of their research progress and TA performance (where applicable).
2. The Research Advisor/Mentor also will write an assessment of student's research progress and accomplishments.
3. Evaluation of TA performance will be provided by TA supervisor (where applicable)

FOR STUDENTS WHO HAVE NOT CHOSEN A PERMANENT RESEARCH ADVISOR/MENTOR

The Program Director will evaluate first year students who have not yet chosen a permanent Research Advisor/Mentor by the Spring at the end of their first academic year, for the purpose of evaluating the potential of the students to complete their chosen degree. It is the students' responsibility to provide the Program Director with the evaluation forms. The students will give the original signed documents to the Graduate Program Coordinator upon completion of the Evaluation Forms. This evaluation will be based on:

1. Course grades (minimum 3.0 GPA);

2. Evaluations of research rotations (if applicable); and
3. Student's performance in the graduate seminar.

Based on this evaluation, a student may be continued in the program with support, continued without financial support, or, in the extreme case, dropped from the program.

STUDENTS WITH A PERMANENT RESEARCH ADVISOR/MENTOR

Coursework, research progress, accomplishments, strengths and weaknesses, and areas for improvement will be evaluated for each student by their Research Advisor/Mentor in consultation with the student's permanent committee members. The student will also be evaluated by the faculty members supervising them as TAs. The evaluation forms will be sent to the student by the Graduate Program Coordinator. It is the student's responsibility to provide their Research Advisor/Mentor with the evaluation forms. The student will submit the original signed documents to the Graduate Program Coordinator upon completion of the evaluation forms.

FOR ALL STUDENTS

- a. The Graduate Program Coordinator will then schedule a meeting with the Graduate Program Director and the student to discuss the review.
- b. Faculty members who supervised the student as a TA will not be required to meet with the student unless the evaluation is considered poor. In cases of poor TA evaluations, the student will meet with the faculty member(s) with whom he/she was a TA, the student's Administrative Chair (Ph.D.) or Research Advisor (M.S.) and the Graduate Program Director.
- c. The original written review will be submitted to the Graduate Program Director to review and will be placed in the student's graduate file. **The WSU Graduate School will also receive a copy if the progress is unsatisfactory.**

DOCTOR OF PHILOSOPHY (PH.D.) PHARMACEUTICAL SCIENCES CURRICULUM

Consult the *Graduate School Policies & Procedures Manual* for general requirements for the Ph.D. degree (<http://www.gradschool.wsu.edu/currentstudents/PoliciesAndProcedures/>) (Total required graded credits: 15)

WSU GRADUATE SCHOOL DEGREE REQUIREMENTS (PH. D.)

The following are general degree requirements for all graduate students at WSU.

Program requirements for graduation are those in effect at the time the graduate student files his/her Program of Study:

- 72 hours minimum total credits
- 15 hours minimum from graded graduate-level (500-level) courses
- 20 hours minimum 800-level research credits
- 9 hours maximum of non-graduate courses
- An audit cannot be used for the Program of Study

Any course graded S/F or P/F may not be used as graded course work. Any course listed on the student's Program of Study in which a grade of "C-" or below is earned must be repeated for graded credit. Courses for audit may not be used for the program of study.

PHARMACEUTICAL SCIENCES DEGREE REQUIREMENTS (PH.D.)

The following are specific degree requirements for students in Pharmaceutical Sciences. They meet the general Graduate School requirements stated above.

REQUIRED CORE COURSES

PharmSci 577	Responsible Conduct in Biomedical Research	3 credits
PharmSci 578	Applied Biostatistics	3 credits
PharmSci 597	College of Pharmacy Graduate Seminar (each semester)	1 credit (S/F)
PharmSci 600	Special Projects or Independent Research (prior to selection of permanent mentor)	Variable; minimum of 1 hr per semester prior to selection of permanent mentor
PharmSci 800	Doctoral Research, Dissertation and/or Examination	Variable; 20 hrs minimum

REQUIRED ELECTIVES (A MINIMUM OF 6 CREDITS FROM THE FOLLOWING):

PharmSci 512	Topics in Pharmacology	3 credits
PharmSci 520	Foundations of Molecular Regulation	3 credits
PharmSci 530	Foundations of Cellular Regulation	3 credits
PharmSci 540	Fundamentals of Chronopharmacology	3 credits
PharmSci 560	Molecular and Cellular Methods in Bioedical Sciences	3 credits
PharmSci 565	Drug Delivery	3 credits
PharmSci 571	Computer-Aided Drug Design	3 credits
PharmSci 572	Fundamentals of Oncology	3 credits
PharmSci 573	Principles of Pharmacokinetics and Toxicokinetics	3 credits
PharmSci 575	Receptor-ligand Interactions	3 credits
PharmSci 576	Biophysical methods	3 credits
PharmSci 579	Advances in Pharmaceutical Sciences	3 credits
PharmSci 581	Stem Cell Biology, Therapeutics and Regenerative Medicine	3 credits

APPROVED OTHER SUGGESTED ELECTIVES:

MBioS 503	Molecular Biology 1	3 credits
MBioS 504	Molecular Biology 2	3 credits
MBioS 513	General Biochemistry	3 credits
MBioS 514	General Biochemistry 2	3 credits
MBioS 548	Selected Topics in Immunology & Virology	1 credit
MBioS 549	Selected Topics in Immunology	1 credit (may be taken twice for credit)
MBioS 561	Biochemical Signaling	2 credits
MBioS 566	Physical Biochemistry	3 credits
MBioS 574	Protein Biotechnology	3 credits
MBioS 578	Bioinformatics	3 credits
Neuro 520	Functional Neuroscience	4 credits
Psych 577	Behavioral Pharmacology	3 credits
UNIV 590	Preparation for College Teaching	2 credits (S/F)
Univ 597	Preparing the Future Professoriate	2 credits (S/F)
VPh 529	Cellular and Molecular Neurobiology	4 credits
VM 545	Pathology 1	3 credits
Zool 557	Advanced Mammalian Physiology	4 credits
Phil 530	Bioethics	2 credits
Transfer Courses	Course transferred from another institution must be approved by the students advisor, Graduate Program Director and the Graduate School.	Variable credits

In addition to fulfilling the required courses, students are allowed to develop an academic program that best relates to their scholarly and research needs by taking **approved** courses offered at WSU. The student must consult with their temporary or permanent advisor before enrolling in courses. Their course enrollment will also be audited by the Graduate Program Director.

Note: All full-time doctoral degree students who have selected a permanent Research Advisor/Mentor must register for at least one research credit of PharmSci 800 each semester (excluding summers) to track faculty advisor effort. Students taking PharmSci 600 (research rotation) do not have to register for PharmSci 800.

Students transferring to WSU from another institution must meet additional requirements. While some credit can be transferred, with permission of the Graduate School, at least half of the graded credits must be taken at WSU. The minimum of 20 hours of 800 credit must still be met.

The student may petition the Graduate Program Director to substitute appropriate courses from other departments that do not appear on the “Approved Other Suggested Electives” list. In selecting elective courses, the student and Research Advisor/Mentor should consider the student's area of emphasis in the program and consult the recommendations of his/her committee for a Program of Study in that area. The student must have approval from his/her committee to substitute courses before petitioning the Graduate Program Director so that proper forms are completed and recorded in the student's graduate file (please see description under "Petitions").

Students will be advised each semester during their first two years in the program, and thereafter as needed. Students will be advised by the Graduate Program Director until they have selected their permanent Research Advisor/Mentor, who will then perform advising. Advising in the first semester will provide information on available courses and mentors for rotations, along with general WSU information. Advising in the second semester will focus on the student's progress in identifying a permanent Research Advisor/Mentor, and on extramural graduate fellowship opportunities. Advising in the third semester will focus on filing of the Program of Study, and preparation for the preliminary exam. Advising in the fourth semester will largely concern the logistics of the preliminary exam, to ensure that deadlines are met.

RESEARCH ROTATIONS

The aim of the rotation program is to provide an opportunity for incoming graduate students to familiarize themselves with the research interests, laboratory procedures and instrumentation of the Graduate Program in Pharmaceutical Sciences faculty and their research laboratories. The rotation program also creates an opportunity for new students to interact with other graduate students and staff. The ultimate goal of the rotation program is to help new students make the best decision regarding which faculty Research Advisor/Mentor and research setting to select for the pursuit of their graduate studies. This program also provides the graduate program faculty with an opportunity to become acquainted with new graduate students. Finally, performing more than one rotation offers an avenue for learning a variety of research methods and experimental approaches, which expands the breadth and depth of knowledge acquired while in graduate school.

PARTICIPATION REQUIREMENT

All incoming doctoral students are required to participate in the rotation program. Students are required to perform a minimum of one rotation and no more than three. Review and approval by the Graduate Program Director is required for a third rotation. Expectations for the rotation with a particular faculty member will be defined in the Research Rotation Contract (**See APPENDIX 1**) and will form the basis for the grade in the Research Rotation course (PharmSci 600).

Rotation Duration

During their first academic year, students are required to perform one to two consecutive semester-long rotations. The student is expected to declare a Research Advisor/Mentor and join the Research Advisor/Mentor's research after the 2nd rotation. A 3rd rotation maybe undertaken (e.g., in the summer after the 1st year) if necessary and only with approval by the Graduate Program Director. The student is required to declare a Research Advisor/Mentor by the end of the 3rd rotation.

Rotation Schedule

First year graduate students are to enroll in the 600-level research course for their individual rotations.

Within one week after starting a rotation the student and rotation advisor must submit a rotation contract to the Program Coordinator. (**APPENDIX 1**) The rotation contract form can also be obtained from the Program Coordinator.

Rotation Expectations

The purpose of a Research Rotation is to:

1. Have an opportunity to experience different research environments.
2. Identify a suitable mentor and area of research.
3. Give potential mentors an opportunity to evaluate you as a trainee in their research program.
4. Develop research skills including the generation of a high quality laboratory notebook that documents daily progress in the candidate's research project.
5. Perform research that will contribute to the productivity of the lab and may result in a publication.

As a student you will generally be expected to work semi-independently on a rotation project. This does not necessarily mean that you will be required to generate a hypothesis, test it and interpret the data on your own. What it does mean is that you will be expected to do the following:

1. Take the initiative to learn, which includes asking questions, reading, talking to other researchers, and thinking on your own.
2. Communicate your plans and the times you will be available for your research rotation.

3. Attend research-related meetings, seminars and journal clubs if the professor requests you do so.

During the academic year, it is reasonable to spend a *minimum* of 15 hrs./week on your rotation project. You cannot learn about a research environment or hope to conduct experiments and answer a particular question if you dedicate less than this minimum time to a project.

Rules Pertaining to Rotations

1. Time in Laboratory (For Laboratory-based Rotations)

The formula of 1 credit = 3 hours per week for laboratory courses does not apply to rotations. First-year students will register for at least 1 credit of PharmSci 600 for each Fall and Spring semester, the latter only if a Research Advisor/Mentor was not identified during the first rotation. The expectation of research degree graduate students is that when a student is not in class or fulfilling their TA duties, they are in the laboratory. Students on TA appointments are to spend 10 hours per week as a teaching assistant, and 10 hours per week as a research assistant in their mentor's lab.

2. Rotation Contract

The faculty member, *in consultation with the student*, will provide the following information for each rotation:

- a. The name of faculty member supervising the rotation.
- b. Beginning and ending dates of the rotation.
- c. Title, general outline of the project, and agreed upon expectations.

The above information is to be given to the Graduate Program Coordinator *during the first week that the rotation begins.* This information (**APPENDIX 1**) will be reviewed by the Graduate Program Director and placed in each student's file.

Rotation Evaluation

At the end of each rotation, the student and rotation advisor will complete the Graduate Student Research Rotation Review Form (**See APPENDIX 2**). This review will be the basis of the grade received by the student. The Graduate Program Coordinator will provide the student with the electronic form. All reviews must be submitted to the Graduate Program Coordinator no later than one week after the rotation ends.

MASTER OF SCIENCE (M.S.) DEGREE PHARMACEUTICAL SCIENCES

The Pharmaceutical Sciences Graduate Program does not admit students into a Master of Science degree; however, this degree is available as an alternative for students in the Ph.D. program that do not complete the requirements for the PhD. A student in the Pharmaceutical Sciences Graduate Program who is in good academic standing and who wishes to pursue a Master of Science Degree in Pharmaceutical Sciences must submit a petition to the Graduate Program Director. The Graduate Program Director will make the final decision. Students pursuing this degree are required to have a minimum of 30 hours of total graded credits and to take the Core Courses required for the Ph.D. program in Pharmaceutical Sciences with the exception of PharmSci 600 and 800 (PharmSci 700 is to be used for M.S. students' research credits). Students

completing an M.S. degree are not normally eligible for a graduate stipend or tuition waiver. For other requirements associated with the Master of Science degree consult the *Graduate School Policies & Procedures Manual* for general requirements for the M.S. degree:

<http://gradschool.wsu.edu/CurrentStudents/PoliciesAndProcedures/PoliciesAndProceduresManual2014-2015.pdf>

The Pharmaceutical Sciences program offers only an M.S. degree with thesis. A Final Oral Examination is required of all master's candidates. This examination is intended to test the candidate's ability to integrate and interpret material in the major and supporting fields with emphasis on the work presented in the candidate's written thesis. This is a pass/fail examination. The examination is open to the public, and should not exceed two-and-one-half hours (including the student's seminar presentation. Details are provided in the *WSU Graduate School Policies and Procedures Manual*:

<http://gradschool.wsu.edu/CurrentStudents/PoliciesAndProcedures/PoliciesAndProceduresManual2014-2015.pdf>

EXAMINATIONS

PREPARATION FOR THE EXAMINATIONS

In collaboration with the Research Advisor/Mentor and Administrative Chair (for Ph.D.), the student must declare his/her intention in writing to the Graduate School to take the Preliminary or Final examination. The deadlines for submission of the required forms to the Graduate School are provided as a download from the Graduate School website:

<https://gradschool.wsu.edu/deadlines/> Note that completion and submission of these forms must be authorized by the Program Coordinator and that no forms can be submitted to the Graduate School without the Graduate Program Director's approval and signature.

DOCTORAL DEGREE

The Preliminary and Final Examinations are required by the Graduate School and are described in the *Graduate School Policies and Procedures Manual*.

PRELIMINARY EXAMINATION

“The preliminary doctoral examination is designed to determine the fitness of the student for pursuing a doctoral program in the field in which a degree is desired. The examination is intended to cover both major and minor disciplines (if a minor is declared).”

The preliminary examination will be divided into two parts. **Part A** will consist of writing a proposal on the student's research. The objective of the proposal is to provide a mechanism that challenges the student to: 1) think at a high level of scientific maturity about the student's dissertation project and 2) become familiar with different methodologies and approaches. The student should demonstrate an understanding and familiarity of relevant literature, develop a testable hypothesis and propose well-defined aims with an appropriate experimental plan.

The student is highly encouraged while developing the proposal, experimental design and presentation to have extensive interactions with his/her advisor, laboratory members, committee members and other faculty. However, it is expected that the student will write the proposal independently and then present it to his/her advisor for approval or revision. Note that proposals must not be paraphrased versions of or copied from the advisor's grant applications or published papers.

Once approved by the advisor, the student will present the written proposal to the entire committee for approval or revision. Presentation of the written proposal does not necessarily require a meeting of the committee, since the proposal can be discussed/approved via electronic communication. Once the proposal is approved by the committee, the student can then proceed to **Part B**, the formal Preliminary Examination scheduled by the Graduate School.

The Preliminary Exam must be scheduled through the Program Coordinator by the end of the spring semester of the student's second year of graduate school according to the Graduate School's deadlines (<https://gradschool.wsu.edu/deadlines/>). Note that the scheduling process is multifaceted and can often take months as outlined below. It is the student's responsibility to begin preparations and consult with the Research Advisor/Mentor and Program Coordinator as

early as possible (ideally in the fall semester of their second year) to ensure that the following are completed: composition of the student's committee, identification of an Administrative Chair, submission and approval of the Program of Study, and coordination with all committee members to identify potential dates and times for Part B of the examination.

PART A. This will consist of the student writing a hypothesis-driven proposal modeled after an individual F31 Predoctoral NIH Ruth L. Kirschstein National Research Service Award (NRSA) Fellowship proposal. See: <http://grants1.nih.gov/grants/guide/pa-files/PA-11-111.html>

For Fellowship Application Guide see the following:

http://grants.nih.gov/grants/funding/424/SF424_RR_Guide_Fellowship_VerB.pdf

Format Details (see page I-21): Use Arial font size 11 point (a Symbol font may be used to insert a Greek letter or other special character). Use standard paper size, single spacing and one-half inch margins all around. Number each page, centered at the bottom of each page.

Proposal Details

The proposal will contain the following components:

1. Your name.
2. Descriptive title of the proposal (81 character limit).
3. Project summary/abstract (see page NIH instructions for description). This section must be no longer than 30 lines of text and conform to font and margin specifications.
4. Specific aims (see NIH instructions for description). Limited to ONE page.
5. Research strategy (see I-85 for description). Limited to EIGHT pages (two more than NRSA). The research strategy will be divided into significance and approach sections. The approach will include the research design and any preliminary results.

A majority of the committee members must approve the proposal and designate their approval by signing the scheduling form for the Preliminary Exam (see below). No modifications of the proposal will be allowed after the final version is submitted.

PART B. Once Part A is approved, the student schedules his/her formal Preliminary Examination with the Graduate School (in accordance with the Graduate School deadlines). The Preliminary Exam will consist of a one hour research seminar presentation including background, the student's research to date, and the proposed research plan. This is a pass/fail examination. The student's performance will be assessed with respect to the following outcomes:

- 1) Demonstrate mastery of knowledge in the field of study.
- 2) State the research problem in such a way that it clearly fits with the context of the literature in an area of study.
- 3) Provide a sound plan for applying appropriate research methods/tools to solving the research problem and show a good understanding of how to use the methods/tools effectively.

- 4) Provide a sound plan for analyzing and interpreting research data.
- 5) Communicate the research proposal clearly and professionally in both written and oral forms.
- 6) Demonstrate capability for independent research in the area of study and the ability to make an original contribution to the field.

The deliberations of the committee will include assessment of these outcomes (exam rubric; **APPENDIX 7**) but may also include other considerations. An exam survey (**APPENDIX 8**) will be completed and submitted to the Graduate Program Coordinator by the Administrative Chair.

The exam is intended to help the student expand the student's critical thinking skills regarding experimental design and methodological approaches, and provides a forum for interactions with dissertation committee members and other faculty for further academic development. Any member of the Graduate Program in Pharmaceutical Sciences faculty can attend the exam and question the student and vote on the student's performance. **The committee will conduct a rigorous oral examination of up to 2 hours in length (including the student's seminar presentation) and can ask questions pertaining to any aspect related to the student's training.**

Logistics

The student must schedule the examination with the Graduate School, with the assistance of the Program Coordinator. The student will provide the Graduate Program in Pharmaceutical Sciences with the date, time, location, proposal title and names of the committee members at least two weeks in advance of the exam. The student must provide a copy of the completed/approved Preliminary Exam Scheduling Form to the Graduate Program Coordinator, who will file the form with the Graduate School. The Graduate Program Director must sign the form before it is submitted to the Graduate School. For more information on the Preliminary Exam, see the Graduate School Policies and Procedures Manual or online at: <http://www.gradschool.wsu.edu/>.

The exam must be held on the WSU Spokane campus unless an exception is granted by the Graduate Program Director. All graduate faculty members of the Graduate Program in Pharmaceutical Sciences will be notified of the time and place of the examination and are entitled to attend and vote according to Graduate School regulations <http://www.gradschool.wsu.edu/>. The meeting will be chaired by the Administrative Chair of the student's Advisory Committee. All committee members **must** be in attendance for the entire examination and must vote. Any other faculty members wishing to vote must also be in attendance for the entire examination. A member of the WSU Graduate Mentor Academy may be requested to attend the Preliminary Exam by the student, committee member, or other Graduate Program in Pharmaceutical Sciences faculty members. Satisfactory completion of the Preliminary Examination will advance the student to Ph.D. candidacy.

In the event of a failed examination, a student will be re-examined for a second and final attempt. At least three months must lapse between a failed examination and a re-

examination. When scheduling for a second exam, the scheduling form must be submitted at least 15 working days in advance of the exam day. A member of the Graduate Mentor Academy will be appointed by the Graduate School and must be present for a re-examination. The entire committee must be present and vote. A student who has failed two preliminary examinations may not become a candidate for the doctorate and the student's enrollment in the Graduate School will be terminated. The only exception to this reexamination policy is if a member of the Graduate Mentor Academy (appointed by the Graduate School) presided over the student's first exam and agrees that a re-examination is not an appropriate disposition of the case.

Timeline

The Preliminary Examination will be presented and defended before the Dissertation Committee before the end of the 4th semester of study. Non-completion of the Preliminary Examination by this time may result in disenrollment from the Graduate Program in Pharmaceutical Sciences. Timelines can be altered when there are unforeseen circumstances. In such cases the Graduate Program Director must approve the exception.

Depending on Graduate School policies in effect at the time, students passing their preliminary exam may be eligible for a tuition waiver in future semesters. Paperwork regarding this waiver will be provided to the mentor at the time of the exam.

PHD DISSERTATION FORMAT

The PhD dissertation must meet the requirements of the WSU Graduate School; see <https://gradschool.wsu.edu/doctoral-degree/>. In addition, the following guidelines have been established by the Graduate Program in Pharmaceutical Sciences.

1. A PhD dissertation is a specialized document that summarizes the work performed by a student during the student's doctoral studies. It is intended to demonstrate the student's scholarly expertise in the student's field of study. The expectation of the dissertation committee and the PharmSci graduate program faculty is that the student will devote significant effort to writing the dissertation, and in preparing for its defense.
2. It is not necessary to include in a dissertation all of the work that the student has done in the course of the student's training. Rather, the goal is to prepare a cohesive document that addresses a specific area of research in a scholarly manner. Unpublished data can be, and usually are, included in a PhD dissertation.
3. To more fully reflect all of the students' publications and accomplishments, a section concerning "Other achievements/publications" can be included at the end of the introductory chapter. This section could, for example, include a list of publications generated during the PhD work but not included in the dissertation. Significant awards (e.g., NSF or NIH fellowship) could also be mentioned here.
4. The introduction to the dissertation is typically 5-10 pages in length, but may be longer. It introduces the reader to the area being researched, so that the reader can understand the chapters

that follow. The introductory chapter typically concludes with a paragraph or two explaining gaps in knowledge that were being filled, the overall hypothesis being addressed, the specific aims of the project (if appropriate) and the general approach that was taken to test the project hypothesis.

5. If the student has published review articles directly relevant to the dissertation, and the dissertation committee agrees that this material should be included in the dissertation, this material should either be incorporated into the introduction or included as a separate chapter following the introduction.
6. The dissertation is intended to be an integrated document in which the various chapters flow in logical order, with one leading to the next. This can be accomplished by adding a few lines of appropriate text to the end of a preceding chapter, and/or to the beginning of the following chapter, to provide continuity. A non-integrated document may be accepted but only with the unanimous consent of the student's committee.
7. If the student has co-authored published papers in which others performed portions of the work, the Research Advisor/Mentor must provide assurance to the dissertation committee that the majority of the work was performed by the degree candidate, and that figures from the dissertation will not be duplicated in the dissertation for any other degree candidate.
8. When published papers are included in the dissertation, they should be re-formatted (font style, reference style, etc.) to match the rest of the dissertation chapters. Portions of the text needed only to meet journal requirements (e.g., key words, corresponding author, phone numbers) should not be included in the dissertation chapter.
9. The figures in a dissertation are typically placed on a separate page immediately following the text in which they are discussed. Placing all figures at the end of the chapter makes it more difficult for the reader to interpret the work, and is not recommended. It can however be done with the approval of the dissertation committee.
10. The references are typically grouped together at the end of the dissertation, but can follow each chapter if the committee prefers this format. Grouping them together at the end avoids the unnecessary repetition of references from one chapter to the next.
11. The concluding chapter of a dissertation is extremely important and helps to prepare the student for a successful defense. This chapter, which is typically about 5 pages in length but can be longer, should briefly summarize the major findings of the dissertation. Following the summary, the student should speculate on how the work fits into the larger literature in its field, limitations of the study as presented, where this area of research is heading in the future, which aspects of the work could be addressed in the future using alternative approaches.
12. The abstract for a dissertation is a condensed summary of the dissertation work. Similar to the abstract for a manuscript, it should include a very brief introduction, mention the research approaches used in the dissertation work, and then briefly summarize the major findings of this work.

13. The dissertation committee is provided with at least two opportunities to provide feedback on the content of the dissertation. The first is in the period between the time that the draft of the dissertation is distributed to the committee and when the defense scheduling form is signed. The second is after the defense, and before the time when the final dissertation must be submitted to the Graduate School. Some committee members will ask for no revisions, while others may ask for substantial revisions. Students need to plan accordingly, so that they have time to address the concerns during the revision periods.

FINAL EXAMINATION

Scheduling the Final Defense Examination.

The completed Dissertation Acceptance/Final Examination Scheduling form must be submitted to the Graduate School at least 10 (ten) working days in advance of the examination date. Note that all of the Graduate School's requirements must be satisfied and all committee members in agreement before this paperwork can be submitted; this process can take weeks or months and it is the student's responsibility to begin preparations and consult with the Research Advisor/Mentor and Program Coordinator as early as possible, particularly to coordinate with all committee members to identify potential dates and times for the final defense. It is necessary to present an electronic or paper draft copy of the dissertation that is properly formatted at the time of submitting the Dissertation Acceptance/Final Examination Scheduling Form. The student must also submit a printed copy of the dissertation to the Graduate Program Coordinator at least five working days prior to the oral defense. This copy can serve as the public copy and be displayed at a public place designated by the Program.

The examination must be scheduled at least four months, but less than three years, after satisfactory completion of the Preliminary Examination. The Dissertation Acceptance/Final Examination Scheduling Form is to be signed by all members of the student's committee; committee signatures verify that an electronic copy of the dissertation, suitable in format and content for submission to the library, has been given preliminary approval. The Graduate Program Director must also sign the form. Responsibility (including financial) for changes in format after the Dissertation Acceptance/Final Examination scheduling form is signed rests with the graduate program rather than with the student. Content changes are always the responsibility of the student. An Application for Degree form (found at <https://gradschool.wsu.edu/facultystaff-resources/18-2/>) must be submitted to the Graduate School before a final examination may be scheduled. The graduate fee must be paid *before* submitting the Application for Degree form and prior to the final defense. All fees, including the graduation fee, the publishing/microfilming fee, and the optional copyright fee, must be paid before submitting the Application for Degree form and prior to the final defense.

The Graduate School will schedule the student's Final Examination upon receipt of the completed Dissertation Acceptance/Final Examination Scheduling Form and a properly formatted, draft copy of the dissertation, which will be returned to the student.

Final Doctoral Defense Examination

A candidate for a doctoral degree must pass a final oral examination that primarily shall be a defense of the dissertation but may cover the general fields of knowledge pertinent to the degree. The student must register for a minimum of 2 (two) hours of 800 level credits at the beginning of the semester or summer session in which the final examination is to be taken. Final examinations will include discussion of the completed dissertation (which is suitable in format and content for submission to the library). Under extraordinary circumstances, on the recommendation of the student's committee and Graduate Program Director, and upon the advice of the Graduate Studies Committee, the Dean of the Graduate School may approve alternative arrangements.

The candidate's committee is responsible for approving all aspects of the final dissertation before students may schedule the final examination. When committee members sign the Dissertation Acceptance/Final Examination Scheduling form, they indicate that an electronic dissertation, suitable in format and content for submission to the library has been given their approval; they also indicate their acceptance of the date, time, and place of the final examination. Examinations are to be held in an academic environment. Final examinations shall be held during regular working hours on the Spokane campus of WSU. If some committee members attend by video conference, at least two committee members must be physically present in the room with the student. Examinations will be held only during academic sessions. Exceptions to this policy will be made by the Dean of the Graduate School in advance, only under unusual circumstances.

The examining committee shall include the doctoral committee and any other members of the faculty in attendance. The Administrative Chair of the student's committee will chair the final examination and be responsible for its conduct. The student's advisor will be appointed by the Graduate School to serve as the Graduate School liaison regarding the examination process (balloting, etc.). A student, the Graduate Program Director, committee member, or any other concerned party may request that the Graduate School provide an independent observer from the WSU Graduate Mentor Academy to be present at any preliminary or final oral defense. This request will be held confidential. All such requests will be fulfilled by drawing upon a group of faculty, designated as the Graduate Mentor Academy, which has agreed to serve in this role and has received training to do so. All repeat examinations or defenses will have such an independent, outside representative.

All final examinations are public, and all faculty members, regardless of discipline, are particularly encouraged to attend those of interest to them. Although any member of the public at large may attend final examinations, only faculty members may ask questions and vote. All members of the doctoral committee **must** be in attendance for the entire examination and must vote. All other faculty members wishing to vote must be in attendance during the entire examination. If a faculty member wishing to vote must leave the room during the examination, the examination is to be recessed until said member returns.

The final doctoral examination should not exceed two and one-half hours (including the student's seminar presentation). There is no separation into major and minor fields; all examiners vote on the total examination. The candidate shall pass if a minimum of three-fourths of those voting so indicate (see Table of Doctoral Preliminary and Final Exam Votes below). In situations in which faculty participate over AMS or videoconference, actual signed ballots may be sent to the Graduate School liaison immediately following the exam via confidential fax or emailed as a PDF file. No other format is acceptable. The Graduate School liaison will include these ballots in the packet for the Graduate School.

In the event of a failed final examination, a second and last attempt may be scheduled after a lapse of at least three months. When scheduling for a second exam, the scheduling form must be submitted at least 15 working days in advance of the exam day. A member of the Graduate Mentor Academy will be appointed by the Graduate School and must be present for a reexamination. The entire committee must be present and vote. A student who has failed two examinations will be terminated from the Graduate School. The only exception to this reexamination policy is if a member of the Graduate Mentor Academy (appointed by the Graduate School) presided over the student's first exam and agrees that a re-examination is not an appropriate disposition of the case. Students will also be assessed according the rubric in **APPENDIX 9** and the survey in **APPENDIX 10**.

MASTER'S DEGREE

A Final Oral Examination is required of all master's candidates. This examination is intended to test the candidate's ability to integrate and interpret material in the major and supporting fields with emphasis on the work presented in the candidate's written thesis. This is a pass/fail examination. In addition, the student's strengths and weaknesses will be evaluated according to the rubric in **APPENDIX 6**. The examination is open to the public, is normally one hour in duration and is limited to one and one-half hours. The exam begins with a seminar-type presentation of the work by the candidate (**note**: the time for this seminar is not included in the 1-1.5 hour exam time). Details are provided in the WSU Graduate School Policies and Procedures Manual [https://gradschool.wsu.edu/policies-procedures/GRADUATE SCHOOL DEADLINES](https://gradschool.wsu.edu/policies-procedures/GRADUATE_SCHOOL_DEADLINES)

A listing of all graduate school deadlines is provided on the WSU Graduate School Website <https://gradschool.wsu.edu/deadlines/>. **These deadlines are firm and it is the responsibility of each graduate student to adhere to and meet these deadlines.** Failure to do so could delay progress in completion of the degree.

MANDATORY TRAINING

Mandatory training on the responsible conduct of research will be required of all graduate students. This is a web based training located at www.myresearch.wsu.edu . Students are encouraged to take this training as soon as possible. The training will need to be repeated after a five-year period. Students will not be eligible for an assistantship until after the training is completed unless otherwise noted.

International students who have not completed the training will receive a grace period of one semester to take the training. Should a student take the training late in the semester, and the assistantship is processed late, the student will be responsible for paying all late fees applied to the student's account before the waiver(s) are applied to the student account.

In addition, mandatory employee training on **discrimination and sexual harassment prevention will be required of all graduate students on assistantships**. This is a web-based training located at <http://hrs.wsu.edu/dshp>

Students are encouraged to take this training as soon as possible, but at least by the following deadlines:

- Graduate students appointed Fall semester will need to complete their training by **September 30th**.
- Graduate students appointed Spring semester will need to complete their training by **January 31st**.
- Graduate students appointed Summer semester will need to complete their training by **June 30th**.

Failure to fully complete this training may result in future ineligibility of any financial support or benefit of your appointment. All students on assistantships will be required to repeat this training every five years from the date of initial training. Questions regarding this training may be directed to Human Resources Services at 509-335-4521 or hrs@wsu.edu. Questions about sexual harassment or discrimination can be directed to the Office of Equal Opportunity (OEO) at 509-335-8288 or oeo@wsu.edu. Certain computer configurations are required by the training system. Learn about specific issues and resolve them through the browser capabilities check at <http://browser.skillport.com/>.

Student may review their completion of training by logging into their WSU online training account, selecting the "*my progress*" button from the left side menu, and selecting the "*completed*" tab for a list of their training history (**note** the date range criteria above the "*completed*" tab) and then clicking on the red ribbon icon if they would like to print a certificate of completion.

STUDENTS WITH DISABILITIES.

<https://spokane.wsu.edu/studentaffairs/disability-resources/>

Graduate students with identified disabilities should contact the Access Center, before the semester that they plan to attend, to initiate the accommodations process. Accommodations are unique for each individual and some require a significant amount of time to prepare for, so it is essential that students notify the Access Center as far in advance as possible. Students with a disability that is identified during the semester should contact the Access Center as soon as possible to arrange for an appointment and a review of their documentation by an Access advisor. All accommodations must be approved through the Access Center (Spokane: Student Affairs in the Student Academic Center, Room 130). All students requesting reasonable

accommodation must meet with the instructor prior to or during the first week of the course to review all proposed accommodations in relation to course content and requirements. Exceptions to this time frame will be granted only upon a showing of good cause.

STUDENT CONDUCT AND ACADEMIC INTEGRITY

STUDENT CONDUCT

Students enrolled in the Graduate Program in Pharmaceutical Sciences are subject to the standards summarized in this document and by the general rules and regulations of the Standards of Conduct for Students as set forth in the Washington Administrative Code and WSU's Office of Student Conduct. Students are responsible to know the Standards for Conduct for Students and may be subject to disciplinary action under the procedures outlined in this document and the procedures outlined in the Standards for Conduct for Students (available at <http://apps.leg.wa.gov/wac/default.aspx?cite=504-26>)

ACADEMIC INTEGRITY

For alleged academic integrity violations, instructors and students are required to follow WSU's Academic Integrity Policies, available at <http://apps.leg.wa.gov/WAC/default.aspx?cite=504-26-404>.

Academic dishonesty includes, but is not limited to, cheating, plagiarism, fabrication, and fraud. Definitions for these impermissible activities are contained in the WSU Student Code of Conduct (WAC 504-26-010(3)).

Plagiarism is defined as the unauthorized use of the language or thoughts of another person, and the representation of them as one's own. (Random House Webster's College Dictionary, 1991). Plagiarism is defined in the WAC regulations at 504-26-010(i): Plagiarism. Presenting the information, ideas, or phrasing of another person as the student's own work without proper acknowledgment of the source. This includes submitting a commercially prepared paper or research project or submitting for academic credit any work done by someone else. The term "plagiarism" includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

It is each student's responsibility to learn proper citation conventions for papers and journal articles. Please note that copying text from another source, even when the source is cited, is still considered plagiarism. Text that is copied from another source can be placed in quotation marks and cited. However, note that quotations are used only rarely in scientific/professional writing. Changing one or two words in a copied sentence is also considered plagiarism. Additional

information regarding this issue is available at: <http://www.wsulibs.wsu.edu/library-instruction/plagiarism>.

Academic integrity issues will be handled according to the process outlined in the WAC regulations referenced above. Because current WSU enrollment is a condition of holding an assistantship, assistantships will terminate immediately upon withdrawal or disenrollment from WSU, or a final order of suspension or expulsion as a result of a violation of the Standards of Conduct for Students. Termination of an assistantship based on disciplinary action is not subject to appeal via the Graduate and Professional Student's Grievance Procedures. The student must follow the appeal process outlined by the Office of Student Conduct.

PRELIMINARY GRIEVANCE PROCEDURES

Students are encouraged to first consult with their Research Advisor/Mentor. If the Research Advisor/Mentor advisor is unable to resolve the problem the student is encouraged to discuss the problem with the Graduate Program Director or their Administrative Chair. If the grievance cannot be resolved, the student should contact one of the Associate Deans of the Graduate School, or any person of the Graduate School designated by the Dean, to hear student grievances (the Dean's designee). The Associate Dean of the Graduate School or Dean's designee will review the grievance and, at his or her discretion, will recommend possible actions for resolution to the student as well as to the Graduate Program Director, Dean of the College of Pharmacy, and/or faculty liaison. If the student is not satisfied with the resolution, he/she may file a formal grievance.

FORMAL GRIEVANCE PROCEDURES

All students have the right to appeal any decisions by the Graduate Program Director such as those related to academic and assistantship issues (e.g. failed examinations, termination of assistantship, etc.); such an appeal can be made to the Graduate School as per the WSU Graduate School Policies and Procedures Manual

(<https://gradschool.wsu.edu/documents/2015/05/grievance-procedures.pdf>)

DISCRIMINATION AND SEXUAL HARASSMENT

Please visit <https://oeo.wsu.edu/resources-spokane/> for more information.

STATEMENT OF PURPOSE

The purpose of this document is to set forth the College of Pharmacy's (COP) commitment to and operational policy toward maintaining an environment free from all forms of harassment, particularly sexual harassment. This COP statement is set forth in accordance with WSU's discrimination and sexual harassment policy, (see <http://hrs.wsu.edu/dshp>), which states that the

University is responsible for promoting understanding and acceptance of and assuring compliance with University regulations and state and federal laws. WSU policies strictly prohibit illegal discrimination and harassment. COP will support and enforce the policy of WSU. The COP is cognizant of its moral and legal obligations to ensure that all students, faculty and staff are provided equitable opportunities to realize their goals and to function effectively within the COP environment. This statement applies to all levels of the COP, including recruitment, admissions, classroom conduct, hiring, training, discipline, promotion, demotion, transfer, layoff or termination, rates of pay or other forms of compensation and any other employment, rendering of services or educational conditions. The guidelines and procedures, which will be utilized by the COP in dealing with issues of sexual harassment, are set forth below.

DEFINITION OF SEXUAL HARASSMENT

The policy of Washington State University explicitly prohibits discrimination, including sexual harassment, as a form of unlawful sex discrimination. Sexual harassment is defined by WSU Executive Policy 15:

http://public.wsu.edu/~forms/HTML/EPM/EP15_Discrimination_Sexual_Harassment_and_Sexual_Misconduct.htm

When incidents of sexual harassment occur, it is the legal responsibility of the COP and/or WSU to take corrective action to terminate the harassment.

EXAMPLES OF SEXUAL HARASSMENT

Sexual harassment creates a hostile environment when behavior is sufficiently severe, persistent, or pervasive to interfere with an individual's work or educational performance, or creates an intimidating, hostile, or offensive work or educational environment. Examples include, but are not limited to, the following:

- Physical assault;
- Direct or implied threats that submission to sexual advances will be a condition of employment, work status, promotion, grades, work references, or letters of recommendation;
- Sexual behavior that is unwelcome. Such behavior may include, but is not limited to, the following:
 - Comments of a sexual nature;
 - Sexually explicit statements, questions, jokes, or anecdotes;
 - Unnecessary or undesirable physical contact;
 - Unwanted, offensive, and/or uninvited comments about another's physical appearance;

- Display of pictures with sexual content;
- Persistent, unwanted attempts to change a professional relationship to an amorous relationship;
- Subtle propositions for sexual activity or direct propositions of a sexual nature;
- Uninvited letters, e-mails, telephone calls, or other correspondence referring to or depicting sexual activities; and/or
- Any of the above carried out via the Internet or social media ("cyber harassment").

AMOROUS RELATIONSHIPS AFFECTING EMPLOYEES AND STUDENTS

The COP and University policy requires that all employees maintain professional relationships with students and supervisees. The COP maintains that the relationship between faculty members and students is comparable to that of other professionals and their clients. Most professional associations forbid sexual relationships between professionals and clients. While WSU policy does not currently forbid such relationships between faculty and students, they are generally deemed unwise. Likewise, amorous or sexual relationships between faculty members or COP supervisory officers and individuals for whom they bear supervisory responsibility are also deemed unwise. Executive Policy 28 prohibits faculty or anyone in a supervisory role from having supervisory responsibility over a student or subordinate with whom he or she is currently having a romantic and/or sexual relationship. This statement is stated in accordance with and reflects that policy: http://public.wsu.edu/~forms/HTML/EPM/EP28_Faculty-Student_and_Supervisor-Subordinate_Relationships.htm

Amorous relationships that might be appropriate in other circumstances are not appropriate, whether consensual or otherwise, when they occur between a teacher or officer of the COP or University and a student or employee for whom he or she has a professional supervisory responsibility. These relationships may create an environment charged with potential conflict of interest and possible use of academic or supervisory leverage to maintain or promote the relationship. Even where negative consequences to the participants do not result, such romantic liaisons may still raise questions of favoritism as well as of an exploitative abuse of trust and power, which may lead to charges of discrimination or harassment. Any employee of the COP who enters into an amorous or sexual relationship with his or her student or supervisee should appreciate that if a charge of sexual harassment were lodged, either by the student or supervisee or by an affected third party, it could be very difficult to prove immunity on the grounds that the relationship was consensual.

Discrimination

Discrimination on the basis of a protected class is prohibited by WSU [Executive Policy #15](#) (EP 15). Discrimination includes improper conduct toward a particular individual, individuals, or groups on the basis of a protected class that is sufficient severe, persistent, or pervasive that it has the purpose or effect of:

- Creating an intimidating, hostile, or offensive environment; or
- Unreasonably interfering with work, academic performance, living environment, personal security, or participation in any WSU activity.

EP 15 includes the following protected classes:

- Race
- Sex/gender
- Sexual orientation
- Gender Identity/Expression
- Religion
- Age
- Color
- Creed
- National or ethnic origin
- Physical, mental, or sensory disability, including disability requiring the use of a trained service animal
- Marital Status
- Genetic Information
- Status as an honorably discharged veteran or member of the military

Examples of behaviors that may constitute discrimination include, but are not limited to:

- Denying someone an employment or educational opportunity or benefit because of their gender, race, or disability;
- Treating individuals differently because of their national origin or age (for example, giving them less advantageous working conditions);
- Following a practice or policy that disproportionately impacts women or members of another protected class; or
- Severe, persistent, or pervasive name calling, jokes, or other verbal or physical behavior towards a person based on their sexual orientation or perceived sexual orientation.

RECORDING AND RESOLVING COMPLAINTS

The COP and University vigorously enforce their prohibitions against unlawful discrimination, including sexual harassment, and encourage those who feel they have been harassed to seek assistance to rectify problems. Internal grievance procedures are utilized to investigate and remedy violations. While observing the principles of due process, determinations of policy violations may lead to the application of disciplinary sanctions, including warning, censure,

suspension, dismissal, or in some situations, summary suspension. No one shall be penalized or retaliated against in any way by a member of the COP or University community for initiation or participation in a complaint procedure undertaken in good faith.

Any employee or student of WSU who believes that he or she has been subjected to harassment, or who believes he or she has been charged wrongfully with a complaint, may utilize these procedures by reporting an allegations of unlawful discrimination to OEO. Please review this resource for information on OEO's complaint procedure or to file a complaint:
<https://o eo.wsu.edu/file-a-complaint/>

EDUCATION AND SENSITIZATION FOR PREVENTION OF SEXUAL HARASSMENT

The COP and its administration are aware of the importance of changing individual and cultural attitudes in preventing discrimination and sexual harassment. However, it also understands that changing attitudes and culture are educational endeavors beyond the scope of the COP's mission. Consequently, the COP will focus its efforts on informing and sensitizing students and employees regarding recognition of, responding to and consequences of such behavior. All COP educational efforts will conform to University requirements and information presented will be congruent with, and conform to, general university policy.

GOALS OF HARASSMENT EDUCATION AND SENSITIZATION WITHIN THE COP

Educational and sensitization efforts regarding harassment undertaken by the COP will be designed to assure that each and every student and employee of the COP:

1. is aware of the behaviors that the university considers sexual harassment;
2. is aware of behaviors and relationships which may be perceived as discriminatory and sexually harassing by fellow employees or students;
3. is aware of personal methods for discouraging such behavior;
4. is aware of procedures and avenues available to COP students and employees for filing complaints against harassers;
5. is aware of how the COP and the University deal with harassment charges and of the consequences for harassers and those who make false accusations of harassment.

All new Graduate Program in Pharmaceutical Sciences students will be provided a copy of the College of Pharmacy's Policy on Sexual Harassment. After reading the document, students will be required to sign a statement acknowledging that they have received and read a copy of the *Graduate Program in Pharmaceutical Sciences Student Handbook* which includes this document and understand their responsibility as a COP student regarding sexual harassment and its consequences.

APPENDIX 1: RESEARCH ROTATION CONTRACT

Student's Name:

Program Entry Date:

Objectives

- 1) To introduce the student to various research programs to aid in selecting a permanent mentor.
- 2) To enable the student to develop technical expertise not present in an area of research.
- 3) To broaden the student's perspective by allowing close observation of different approaches to scientific research.

Organization

- 1) Students are required to do one rotation
- 2) Rotations usually last 8 weeks
- 3) This form is to be completed prior to starting each rotation project and then returned to the Graduate Coordinator.

Rotation Project

Advisor:

Contact phone # for rotation:

Approximate start date:

Approximate end date:

Brief description of rotation project (1 to 3 sentences):

Signatures (agreeing to scope and expectations of rotation project):

Student: _____ Date:

Advisor: _____ Date:

APPENDIX 2: GRADUATE STUDENT RESEARCH ROTATION REVIEW FORM

Graduate Students: Please complete sections A. and B., and then give this form to your Rotation Advisor to complete Section C. Once your Rotation Advisor has completed Section C., make sure the form is signed and dated by both you and your Rotation Advisor. This form must be returned to the Graduate Programs Coordinator within **two weeks** of completing the Rotation.

Section A.

Graduate Student: _____ **Student ID#:** _____
(Student Name) (WSU SID#)

Rotation Advisor: _____ **Rotation #:** First Rotation
(Advisor Name) Second Rotation
 Third Rotation

Section B.

Please describe your Research Rotation experience, and share this reflection with your Rotation Advisor before s/he begins Section C. Common items to comment on are attendance in research meetings, literature readings, techniques learned, hours devoted to the research rotation, and results obtained and their significance (or lack thereof). You may use the space below, and/or attach a separate, signed, document.

Rotation Advisors: Please complete Section C., and then return this signed and dated form to the graduate student. This form must be returned to the Graduate Programs Coordinator within **two weeks** of completing the Rotation.

Section C.

1. Graduate Student Research Rotation Evaluation:

Passing	Failing
<input type="checkbox"/> Excellent	<input type="checkbox"/> Unsatisfactory
<input type="checkbox"/> Satisfactory	
<input type="checkbox"/> Needs Improvement	

2. Please comment on the Graduate Student's research potential, demonstrated responsibility, initiative to learn, dedication to his/her research, and your written assessment of the student's performance overall of the expectations outlined in the Research Rotation Contract. If applicable, please provide an evaluation of the graduate student's research presentation. Please use the space below, and/or attach an additional signed and dated document.

By signing, the graduate student and Rotation Advisor each agree that they have read and discussed the contents of this Graduate Student Research Rotation Review Form with each other.

Graduate Student Signature: _____ **Date:** _____

Rotation Advisor Signature: _____ **Date:** _____

APPENDIX 3: PERMANENT RESEARCH ADVISOR/MENTOR AND INITIAL PROGRAM OF STUDY AGREEMENT FORM

***This form is to be completed by the Research Advisor/Mentor and graduate student, approved by the Graduate Program Director and returned to the Graduate Program Coordinator no later than two weeks following the selection of a Research Advisor/Mentor.**

Graduate Student: _____

Research Advisor/Mentor: _____

Initial Coursework Agreement (outline courses and credits to be completed prior to preliminary examination)

Course	# Credits
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
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_____	_____
_____	_____

(SIGNATURES AND ADDITIONAL AGREEMENTS ON NEXT PAGE)

All parties approve the initial program of study listed on page 1. Additionally:

The student hereby agrees to pursue the student's dissertation work under the advisor/mentor, with responsibilities as detailed in the Graduate Program in Pharmaceutical Sciences Student Handbook.

Additional Student's Comments: _____

Graduate Student Signature: _____ **Date:** _____

The advisor/mentor hereby agrees to train and support the student in the pursuit of the student's PhD degree, with responsibilities as detailed in the Graduate Program in Pharmaceutical Sciences Student Handbook.

Additional Advisor's Comments: _____

Reserach Advisor/Mentor Signature: _____ **Date:** _____

The Graduate Program Director hereby affirms that the student and advisor/mentor are active members of the College of Pharmacy's Graduate Program in Pharmaceutical Sciences, that the student is in good standing in the PhD program, and that the mentor possesses the experience and resources appropriate for training of the student.

Graduate Director Comments: _____

Graduate Director Signature: _____ **Date:** _____

APPENDIX 4: GRADUATE STUDENT-RESEARCH ADVISOR/MENTOR DISSOLUTION FORM

(To be completed by the graduate student and the Research Advisor/Mentor)

***This form is to be completed by the Reserach Advisor/Mentor and graduate student, and returned to the Graduate Program Coordinator. Signing this form acknowledges the wishes of the graduate student to select another Research Advisor/Mentor without prejudice.**

Graduate Student: _____

Research Advisor/Mentor: _____

Comments:

Graduate Student Signature: _____ **Date:** _____

Research Advisor/Mentor Signature: _____ **Date:** _____

Graduate Program Director : _____ **Date:** _____

APPENDIX 5: ANNUAL REVIEW FORM

Graduate Program in Pharmaceutical Sciences 2017-2018 Annual Review Form DEADLINE – FRIDAY MAY 18, 2018

The Graduate Program in Pharmaceutical Sciences Annual Review process is a critical element of the ongoing assessment of students' professional development as outlined in the Graduate Program Outcomes statements. The annual review is intended to evaluate students' progress towards becoming effective and innovative researchers in the fields of pharmaceutical sciences to prepare students for careers in academia, industry, health care, and private institutions dedicated to the promotion of human health and wellness.

First year students are evaluated on progress made from August 2017 to May 2018; all other students are evaluated on progress made June 2017 to May 2018.

The student is responsible for completing Sections A and B, and D (if applicable), then submitting the form to his/her Research Advisor/Mentor for completion of Section C. The student must sign the form (Section C) and ensure that the form also is signed by his/her Research Advisor/Mentor as well as the administrative chair (PhD). In addition, the student must complete a Curriculum Vitae, which shall be submitted along with the annual review form to the Graduate Program Coordinator, , PBS 323, by **5 p.m., Friday, May 18, 2018**.

THE GRADUATE PROGRAM DIRECTOR WILL REVIEW THE COMPLETED ANNUAL REVIEW DOCUMENTS AND SHARE THE FINDINGS WITH THE GRADUATE PROGRAM IN PHARMACEUTICAL SCIENCES FACULTY AS NECESSARY, WHO MAY ALSO PROVIDE ADDITIONAL COMMENTS TO THE REVIEW. THE REVIEW WILL BE PLACED IN THE STUDENT'S FILE AND COPIES WILL BE PROVIDED TO THE STUDENT, RESEARCH ADVISOR/MENTOR, AND ADMINISTRATIVE CHAIR (PHD).

YOU WILL HAVE AN OPPORTUNITY TO DISCUSS ANY ISSUES WITH THE GRADUATE PROGRAM DIRECTOR AFTER THE ANNUAL REVIEW IS COMPLETE

IF THE STUDENT'S PROGRESS IS CONSIDERED UNSATISFACTORY, THE COPY OF THE ANNUAL REVIEW ALONG WITH ANY ADDITIONAL COMMENTS PROVIDED BY THE PROGRAM DIRECTOR AND/OR MEMBERS OF THE GRADUATE FACULTY WILL BE SHARED WITH THE GRADUATE SCHOOL. PLEASE NOTE THAT THIS REVIEW MUST BE CONSISTENT WITH THE GRADES ASSIGNED TO THE STUDENT FOR RESEARCH CREDITS.

NOTE: SECTIONS TO BE FILLED OUT BY STUDENT ARE IN BLUE; SECTIONS TO BE COMPLETED BY RESEARCH MENTOR/CHAIR ARE IN RED.

A. CURRICULUM PROGRESS

1. Name: _____

2. Research Advisor/Mentor: _____

3. Year enrolled: _____

4. Working Thesis/Dissertation Title:

5. Cumulative GPA: _____

6. Other Committee Members:

Administrative Chair

Member

Member

Member

Member

Member

7. Date of Committee Meetings: Fall: _____ Spring: _____

8. Have you filed your Program of Study? _____ Date Approved: _____

9. Have you taken your Preliminary Exam? _____ Date (taken or anticipated): _____

B. EVALUATION OF RESEARCH PROGRESS

To be completed by the Student

Please evaluate your research progress towards becoming effective and innovative researchers in the field of pharmaceutical sciences. Identify your main strengths and weaknesses and address the planned course of action to improve these weaknesses. Also, comment on your progress towards goals set for the current academic year and identify research goals for 2017-2018.

Your self-assessment should address specific learning objectives outlined in the Graduate Program in Pharmaceutical Sciences outcomes statements:

Please assign a score for each goal using the following scale:

1 No Progress

2 Minimal Progress

3 Good Progress

4 Excellent Progress

5 – Exceptional Progress

- A-1. Achieve mastery of knowledge in the general field of Pharmaceutical Sciences.

Score: ____

Comment:

- A-2. Develop the expertise to use appropriate methodologies to solve novel and emerging problems related to the field of Pharmaceutical Sciences.

Score: ____

Comment:

- A-3. Disseminate research findings to local, regional, national, and international audiences primarily through publication in peer-reviewed journals and presentations at conferences.

Score: ____

Comment:

- A-4. Participate in professional organizations, including becoming members, attending meetings, and taking leadership roles where appropriate.

Score: ____

Comment:

- A-5. Participate in teaching, internships, fellowships, workshops, credentialing and grant applications to enhance competitiveness for career opportunities as appropriate.

Score: ____

Comment:

- B-1. Develop critical, integrative, and evaluative thinking at the highest levels of rigor

Score: ____

Comment:

- B-2. Develop advanced written and oral communication skills.

Score: ____

Comment:

- B-3. Become independent, self-motivated researchers with the ability to identify specific problems in their field of expertise and to formulate solutions to these problems.

Comment:

- B-4. Develop a comprehensive knowledge of previous and current research in their field of expertise and be able to demonstrate that knowledge capability in a review of the literature at a level that is potentially publishable.

Comment:

B-5. Generate innovative questions within their field of expertise and pose hypotheses related to those questions.

Score: ____

Comment:

B-6. Apply sound methodological approaches to test hypotheses related to specific research questions and describe the methods effectively.

Score: ____

Comment:

B-7. Perform statistical analyses of research data and present the results in a way that clearly describes the data.

Score: ____

Comment:

Please use as much space as you need for this part.

C. EVALUATION OF RESEARCH PROGRESS
To be completed by the Research Advisor/Mentor
in conjunction with the Administrative Chair (for PhD)

Please comment on student's accomplishments for current review period. Please address student's strengths and weaknesses, areas for improvement, results of the latest committee meeting, seminar performance, and research benchmarks for the next review period. For a first year student, please comment on his/her research potential.

Your assessment of the student's research progress should address specific learning objectives outlined in the Graduate Program in Pharmaceutical Sciences outcomes statements:

Please assign a score for each goal using the following scale:

1 No Progress 2 Minimal Progress 3 Good Progress
4 Excellent Progress 5 – Exceptional Progress

A-1. Achieve mastery of knowledge in the general field of Pharmaceutical Sciences.

Score: ____

Comment:

A-2. Develop the expertise to use appropriate methodologies to solve novel and emerging problems related to the fields of Pharmaceutical Sciences.

Score: ____

Comment:

A-3. Disseminate research findings to local, regional, national, and international audiences primarily through publication in peer-reviewed journals and presentations at conferences.

Score: ____

Comment:

A-4. Participate in professional organizations, including becoming members, attending meetings, and taking leadership roles where appropriate.

Score: ____

Comment:

A-5. Participate in teaching, internships, fellowships, workshops, credentialing and grant applications to enhance competitiveness for career opportunities as appropriate.

Score: ____

Comment:

B-1. Develop critical, integrative, and evaluative thinking at the highest levels of rigor

Score: ____

Comment:

B-2. Develop advanced written and oral communication skills.

Score: ____

Comment:

B-3. Become independent, self-motivated researchers with the ability to identify specific problems in their field of expertise and to formulate solutions to these problems.

Score: ____

B-4. Develop a comprehensive knowledge of previous and current research in their field of expertise and be able to demonstrate that knowledge capability in a review of the literature at a level that is potentially publishable.

Comment:

B-5. Generate innovative questions within their field of expertise and pose hypotheses related to those questions.

Score: ____

Comment:

B-6. Apply sound methodological approaches to test hypotheses related to specific research questions and describe the methods effectively.

Score: ____

Comment:

B-7. Perform statistical analyses of research data and present the results in a way that clearly describes the data.

Score: ____

Comment:

Please use as much space as you need for this part. This assessment should be shared with the student, and then signed and dated by the student, the Research Advisor/Mentor as well as the administrative chair prior to submitting the form to the Graduate Program Coordinator.

GRADUATE STUDENT RESEARCH PROGRESS EVALUATION:

PASSING

FAILING

Excellent Satisfactory Needs Improvement

Failing

Research Advisor/Mentor's Signature: _____ **Date:** _____

Administrative Chair's Signature: _____ **Date:** _____

Graduate Student's Signature: _____ **Date:** _____

Additional comments from review by Graduate Faculty:

Graduate Program Director's Signature: _____ **Date:** _____

D. TEACHING ASSISTANTSHIP ASSIGNMENT Evaluation
To be completed by the Student

Please provide a self-assessment of your TA performance. Identify the course(s) for which you were a TA, and amount of time needed per week. Briefly describe the primary duties. Please describe concerns that you have regarding the TA assignment or TA Advisor.

Student's Name: _____

Course taught: _____

Course Advisor: _____ Semester taught: _____

Course taught: _____

Course Advisor: _____ Semester taught: _____

Course taught: _____

Course Advisor: _____ Semester taught: _____

APPENDIX 6: THESIS EVALUATION RUBRIC

**COLLEGE OF PHARMACY GRADUATE PROGRAM
MS Thesis Evaluation Rubric: Final Oral Examination**

Please note: This rubric is intended to be a key piece of the Assessment Plan for the Graduate Program in Pharmaceutical Sciences. The scoring may be used as part of the basis for determining whether the student has passed the exam, at the discretion of the committee. Students are expected to progress with respect to these outcomes over time.

Masters candidate: _____ **Date:** _____

Name of examining faculty member: _____

	Weak	Competent	Excellent
Demonstrates mastery of knowledge in the chosen discipline			
Reviews the literature in a way that demonstrates comprehensive knowledge of previous and current research in the field of study			
States the research problem in such a way that it clearly fits within the context of the literature in an area of study			
Demonstrates the potential value of the solution to the research problem in advancing knowledge within the area of study			
Applies sound and appropriate research methods/tools to problems in an area of study and describes the methods/tools effectively			
Performs appropriate statistical analyses of research data and presents the results in a way that makes clear sense of the data			
Communicates research clearly and professionally in both written and oral forms			
Has demonstrated capability for designing and conducting research in the area of study and making an original contribution to the field			

Comments:

APPENDIX 7: PRELIMINARY EXAM EVALUATION RUBRIC

COLLEGE OF PHARMACY GRADUATE PROGRAM Evaluation Rubric: Preliminary Exam

Doctoral candidate: _____

Date: _____

Committee member: _____

Please note: This rubric is intended to be a key piece of the Assessment Plan for the Graduate Program in Pharmaceutical Sciences. The scoring may be used as part of the basis for determining whether the student has passed the exam, at the discretion of the committee. Students are expected to progress with respect to these outcomes over time.

	Weak	Needs Improvement	Competent	Excellent
Demonstrates mastery of knowledge in the field of study (<i>Outcome A-1</i>)				
States the research problem in such a way that it clearly fits within the context of the literature in an area of study (<i>Outcome B-4</i>)				
Demonstrates the potential value of the solution to the research problem in advancing knowledge within the area of study (<i>Outcome B-3</i>)				
Provides a sound plan for applying appropriate research methods/tools to solving research problem and shows a good understanding of how to use methods/tools effectively (<i>Outcome A-2</i>)				
Provides a sound plan for analyzing and interpreting research data (<i>Outcomes B-6 and B-7</i>)				
Communicates research proposal clearly and professionally in both written and oral forms (<i>Outcome B-2</i>)				
Demonstrates capability for independent research in the area of study and the ability to make an original contribution to the field (<i>Outcome B-5</i>)				

Comments:

APPENDIX 8: PRELIMINARY EXAM ASSESSMENT SURVEY

Assessment Survey: PhD Preliminary Exam, College of Pharmacy

Note: This evaluation form should be filled out to reflect consensus of the committee, at the conclusion of the preliminary exam. Such consensus may be obtained by individual votes of the graduate faculty present at the exam, at the discretion of the Administrative Chair, in which case the number of votes for some of the survey items can be indicated below. The Administrative Chair will sign the form and submit it to the Graduate Program Coordinator, along with the completed Graduate School ballots.

Name of student: _____ Date of exam: _____

1. Was this the first attempt of the student to complete his/her preliminary exam?

____yes ____no

2. Did the student pass the exam?

____yes ____no

3. If the student passed the exam, was their overall performance judged to be:

____outstanding ____good ____marginal

4. The strongest aspect(s) of the student's performance was judged to be:

____knowledge of subject

____ability to answer questions

____quality of data presented

____quality of the hypothesis and specific aims; rationale; innovation

____quality of the experimental plan

____overall oral presentation skills

____other (please elaborate) _____

Comments:

--

5. The weakest aspect(s) of the student's performance was judged to be:

- knowledge of subject
- ability to answer questions
- quality of data presented
- quality of the hypothesis and specific aims; rationale; innovation
- quality of the experimental plan
- overall oral presentation skills
- other (please elaborate) _____

Comments:

6. If the student failed the exam, were specific aspects of performance discussed with the student after the exam?

yes no

If "no", why not? _____

Comments:

7. If the student failed, will s/he be repeating the exam?

yes no

8. Based on the committee discussion, the following improvements to the graduate program could potentially improve the performance of this particular student:

(please check as many items as necessary, or no items, as applicable)

- more extensive or better quality didactic coursework
- more extensive mentoring/advising
- stronger research environment within the department
- more experience in making research presentations
- more time in program before preliminary exam
- better guidelines for the students (e.g., in the student handbook)
- better availability of instruction/remediation in specific areas (e.g., English language, statistics, writing, etc.); please state the specific area _____
- other suggestions (please elaborate) _____

Comments:

9. Please use the space below to provide additional information about the student's preparation and/or performance on the preliminary exam that can help to improve the graduate program.

Signature:

Administrative Chair

Date

APPENDIX 9: FINAL DEFENSE EVALUATION RUBRIC

COLLEGE OF PHARMACY GRADUATE PROGRAM

Evaluation Rubric: Dissertation and Final Defense

Doctoral candidate: _____

Date: _____

Committee member: _____

Please note: This rubric is intended to be a key piece of the Assessment Plan for the Graduate Program in Pharmaceutical Sciences. The scoring may be used as part of the basis for determining whether the student has passed the exam, at the discretion of the committee.

	Weak	Competent	Excellent
Demonstrates mastery of knowledge and a high level of expertise in the field of study (Outcome A-1)			
Reviews the literature in a way that demonstrates comprehensive knowledge of previous and current research in the field of study (Outcome B-4)			
States the research problem in such a way that it clearly fits within the context of the literature in an area of study (Outcome B-4)			
Demonstrates the potential value of the solution to the research problem in advancing knowledge within the area of study (Outcome B-3)			
Applies sound and appropriate research methods/tools to problems in an area of study and describes the methods/tools effectively (Outcome A-2)			
Performs appropriate statistical analyses of research data and presents the results in a way that makes clear sense of the data (Outcome B-7)			
Communicates research clearly and professionally in both written and oral forms (Outcome B-2)			
Has demonstrated capability for independent research in the area of study and is making an original contribution to the field (Outcome B-5)			

Comments:

APPENDIX 10: FINAL EXAM ASSESSMENT SURVEY

Assessment Survey: PhD Final Exam, College of Pharmacy

Note: This evaluation form should be filled out to reflect consensus of the committee, at the conclusion of the final exam. Such consensus may be obtained by individual votes of the graduate faculty present at the exam, at the discretion of the Administrative Chair, in which case the number of votes for some of the survey items can be indicated below. The Administrative Chair will sign the form and submit it to the Graduate Program Coordinator along with the completed Graduate School ballots.

Name of student: _____ Date of exam: _____

1. Was this the first attempt of the student to complete his/her final exam?

____yes ____no

2. Did the student pass the exam?

____yes ____no

3. If the student passed the exam, was their overall performance judged to be:

____outstanding ____good ____marginal

4. The strongest aspect(s) of the student's performance was judged to be:

____knowledge of subject

____ability to answer questions

____quality of data presented/scope of the work

____quality of the hypothesis and specific aims; rationale; innovation

____ability to convey overall significance of the project

____overall oral presentation skills

____other (please elaborate) _____

Comments:

5. The weakest aspect(s) of the student's performance was judged to be:

- knowledge of subject
- ability to answer questions
- quality of data presented/scope of the work
- quality of the hypothesis and specific aims; rationale; innovation
- ability to convey overall significance of the project
- overall oral presentation skills
- other (please elaborate) _____

Comments:

6. If the student failed the exam, were specific aspects of performance discussed with the student after the exam?

yes no

If "no", why not? _____

Comments:

7. If the student failed, will s/he be repeating the exam?

____yes ____no

8. Based on the committee discussion, the following improvements to the graduate program could potentially improve the performance of this particular student:

(Please check as many items as necessary, or no items, as applicable)

____more extensive or better quality didactic coursework

____more extensive mentoring/advising

____stronger research environment within the department

____more experience in making research presentations

____requirement for a certain number of publications before the defense is

scheduled

____better guidelines for the students (e.g., in the student handbook)

____more intensive oversight from the dissertation committee

____better availability of instruction/remediation in specific areas (e.g., English language, statistics, writing, etc.); please state the specific

area_____

____other suggestions (please elaborate) _____

Comments:

--

9. Please use the space below to provide additional information about the student's preparation and/or performance on the final exam that can help to improve the graduate program.

Signature:

Administrative Chair

Date