

POLICY MANUAL FOR THE ADMINISTRATION
OF GRADUATE PROGRAMS

PURDUE UNIVERSITY

DEPARTMENT OF PHARMACY PRACTICE
College of Pharmacy

CONTENTS

SECTION 1: Degree Programs and Mission	3
SECTION 2: Admission-Related Policies	4
SECTION 3: Standards for Graduate Student Performance.....	6
SECTION 4: Program Components.....	9
SECTION 5: Program Oversight	13
SECTION 6: Graduate Positions	14
SECTION 7: Program-related policies	16
SECTION 8: Office-related policies.....	18
SECTION 9: Additional Resources	20
Appendices: Degree Program-specific information.....	21

SECTION 1

Degree Programs and Mission

Graduate programs offered through the Department of Pharmacy Practice at Purdue University

The Department of Pharmacy Practice is one of the three departments comprising the College of Pharmacy at Purdue University. The Department of Pharmacy Practice currently has PhD and MS degree programs in Pharmacy Practice with degreed programs available in (1) Clinical Pharmaceutical Sciences (CLPH) and (2) Health Services, Outcomes, and Policy (HSOP). Students are educated in the principles and techniques of research and encouraged to develop sound teaching skills through course work and supervised experience.

MISSION

The mission of the graduate program in the Department of Pharmacy Practice is to develop scientists and faculty to become progressive leaders in a dynamic health system in:

1. Clinical pharmaceutical sciences
2. Social, behavioral, and administrative sciences
3. Science of education

Department Faculty: The Department includes approximately 25 clinical and 15 graduate faculty with expertise in clinical pharmaceutical sciences, health services research, health outcomes, policy, and educational program development and evaluation.

SECTION 2

Admission-Related Policies

Admission to the graduate program in the Department of Pharmacy Practice is limited to recent graduates demonstrating a high level of academic performance during their undergraduate education and to pharmacists demonstrating a high level of performance in professional practice.

A Bachelor of Science in a health-related field or a Doctor of Pharmacy is normally the minimum degree requirement for admission to the program. Applicants must take the Graduate Record Examination (GRE). *The GRE requirement may be waived for applicants holding an advanced degree (PharmD, MD, DVM, MBA, JD, etc.) from an accredited U.S. institution.* Eligibility for this waiver will be made on a case-by-case basis considering all aspects of the application. An interview will be conducted to assess the student's communicative ability, commitment, and motivation for graduate work. Furthermore, within the formal application procedure, the prospective student will be asked to submit a short essay ("statement of purpose") describing his or her career goals and reasons for pursuing graduate study at Purdue University. This essay is uploaded with the on-line application. International students must submit Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) scores for Purdue University Graduate School admission. A minimum score of 77 with minimum scores per section Speaking 18; Writing 18; Listening 14; and reading 19 on the computer-based TOEFL test is required for admission. For the IELTS, academic version only, applicants must have an overall band scored of 6.5. An interview will be conducted to assess the student's communicative ability, commitment, and motivation for graduate work. Furthermore, within the formal application procedure, the prospective student will be asked to submit a short essay ("statement of purpose") describing his or her career goals and reasons for pursuing graduate study at Purdue University.

Applications will be processed only after all required materials have been received by the Department of Pharmacy Practice Graduate Affairs Committee. Students are normally admitted for study beginning with the fall academic semester. Occasionally a student will be considered for admission beginning with the spring semester if space is available in the program. Applications must be received by December 15 to ensure that they receive full consideration for fellowship opportunities. Applications received after March 1 will have a lower priority in consideration for admission. Therefore, materials should be submitted as early as possible. The Department Graduate Affairs Committee normally meets to make admission decisions in mid-January and in mid-March. Students may check on the status of their applications by contacting the Department Graduate Administrative Assistant Mindy Schultz (Ph: 765-494-1468 or e-mail: mschult@purdue.edu) or the Graduate Chair, Brian R. Overholser (Ph: 317-278-4001 or e-mail: boverhol@purdue.edu). Online Applications may be made at: <https://www.purdue.edu/gradschool/admissions/how/index.html>.

Policy on Written English

"The Department of Pharmacy Practice carefully reviews graduate applicants to assure that students admitted into graduate study have the oral and written English skills necessary to be successful in the program. However, should deficiencies be identified in a student admitted to the program, it is the responsibility of the student to take steps necessary to assure that identified deficiencies are corrected. These steps may range from requiring remedial course work in written or oral English to careful monitoring and the provision of specific feedback related to oral presentations or written assignments that are a part of the student's graduate program. The student will be advised of the appropriate steps to be taken by his/her major professor. Progress by the student in resolving deficiencies shall be reviewed as a part of the normal annual student progress review meeting."

SECTION 3

Standards for Graduate Student Performance

A. Standards for Graduate Student Performance

The student's major professor and/or graduate committee are charged with ensuring a student is making reasonable progress toward his/her degree objective. Although grade point average and satisfactory research performance are the key indicators of success in the program, a variety of additional factors are used in monitoring each graduate student's progress in the program. These considerations include such factors as the level and difficulty of courses taken, attendance and participation in departmental seminars, performance in research activities, engagement in professional organizations, dissemination of research through manuscripts and presentations, conscientious performance of teaching duties, and general attitude. It is the responsibility of the student and major professor to schedule regular graduate committee meetings (minimum 1 per year) to ensure progress in the program. The overall progress and frequency of committee meetings is further reviewed annually through the filing of a progress report to the director of graduate programs.

1. Grade Point Average

At Purdue University the GPA is based on a possible 4.0 which represents an "A". With this as a basis, the Department of Pharmacy Practice has established the following policies to provide guidance to the student:

- a. Any graduate student who fails to obtain a "B" (3.0) average during any semester of academic work will be placed on departmental probation. The chairperson of the Department Graduate Affairs Committee will be charged with reviewing graduate student academic performance at the end of each semester. Graduate students who are identified as being in academic jeopardy will be brought to the attention of the respective student's major professor by the chairperson and a list of these students will be submitted formally to the Head of the Department. The Head of the Department shall then notify each of these graduate students by letter indicating that the student has been placed on academic probation. This student must then obtain at least a "B" (3.0) semester average, while maintaining the assigned course load, at the conclusion of the subsequent semester. In addition, in the event that the student's cumulative GPA has fallen below 3.0, one additional semester will be given to reestablish the grade point to this minimum level.
- b. Any graduate student who fails to satisfy the above conditions at the end of this probationary semester will automatically lose financial support. Continuation in the graduation program will be determined by the Department Head, advisor, and/or the Department Graduate Affairs Committee.
- c. A minimal cumulative GPA of 3.0 is required for certification of either a M.S. degree or a Ph.D. degree.

- d. Graduate students receiving the M.S. degree offered through the Department or another school must have a minimal GPA of 3.1 in their previous graduate work to qualify for the Ph.D. program offered through the Department.
- e. Requests for exceptions to the above policies must be initiated by the student in the form of a written petition and must be approved by the Department Head, following review by the Department Graduate Student Advisory Committee.

2. Research Performance

A student who is not making satisfactory research progress will be given a "U" in research. Any student receiving a "U" in research will be placed on departmental probation. A student must then convene a graduate advisory committee meeting in the semester following receipt of the "U" grade for review of the probationary status. A student who fails to remove the probationary status by exhibiting satisfactory research performance in the subsequent semester may be dismissed from the program following a review of the student's record by the Department Graduate Affairs Committee. Probationary status in research may be considered as grounds for withholding of financial support.

3. Time to Degree

College of Pharmacy rules state that any student who fails to complete all requirements for the Ph.D. in eight (8) calendar years is dismissed from the program unless a written appeal is made to the Associate Dean for Graduate Programs. Similarly, a student may not take longer than six (6) calendar years to complete the Master's degree.

4. Metrics and Milestones

The following metrics and milestones contribute to the development of graduate students toward meeting the graduate program objectives (i.e., those stated in the Department Goals and Objectives).

- a. Teaching opportunities and evaluations
- b. Presentations in Graduate Seminar
- c. Oral and written preliminary examinations
- d. Development of an original research proposal
- e. Thesis and dissertation project standards
- f. Oral defense of the thesis project and dissertation
- g. Participation in ongoing project activities within the department
- h. Participation in grantsmanship
- i. Presentation of papers at professional or scientific meetings
- j. Preparation and submission of professional/scientific journal publications

5. Learning Outcomes

(1) Foundational Knowledge:

Foundational Competencies

1. Foundational competencies are listed for each respective degree program.

(2) Research

Research Competencies

1. Develop research questions that are grounded in the critical analysis of prior literature and relevant theoretical perspectives.
2. Develop and apply a research design that appropriately tests a stated hypothesis.
3. Sample and collect primary data or extract secondary health care data from existing public or private sources.
4. Implement research protocols with standardized procedures and appropriate analytic techniques that ensure reproducibility of the science.
5. Ensure the ethical and responsible conduct of research in the design, implementation, and dissemination of research.

(3) Scientific Communication

Communication Competencies

1. Demonstrate oral and written communication skills appropriate for the dissemination of research.
2. Prepare an original research manuscript, suitable for publication.

(4) Education

Education Competencies

1. Deliver training or educational experiences that promote learning in academic, organizational or community settings.

(5) Leadership and Management

Leadership and Management Competencies

1. Work collaboratively in teams within and across disciplines to develop and disseminate knowledge attained from research.

(6) Personal and Professional Development

Personal and Professional Development Competencies

1. Assess one's own strengths and weaknesses in research, teaching and leadership

SECTION 4

Program Components

1. Advisory Committee

Each student will select a major professor to direct the student's research and act as the chairperson of his/her advisory committee. Ideally, a student will select a major professor late in the first semester or early in the second semester. Selection of the major professor should take place during the first year in the program. The advisory committee is chaired by the student's major professor.

The function of the advisory committee is to assist the student in the development of a plan of study and to offer advice/guidance during the period of graduate work. The advisory committee also serves as the examination committee by preparing and administering the written and the oral qualifying examinations and the thesis/dissertation defense.

The composition of the advisory committee, as agreed upon by the major professor and the student, will consist of a minimum of three graduate faculty members representative of the graduate track for the Masters option. For the Doctoral dissertation, a minimum of four graduate faculty members will be required, one of these members being from a collaborative field of study outside of the Department of Pharmacy Practice.

2. Individual Development Plans

Individual development plans (IDPs) are required for all graduate students admitted after 2017 in the College of Pharmacy. The suggested format for performing IDPs can be found on the following URL: <https://biosciences.stanford.edu/current-students/idp/forms/>. The plan should be developed and agreed upon by the student and the primary advisor. The plans can be reviewed and discussed by the advisory committee or graduate chair at the discretion of the student and primary advisor.

3. Progress Reports

It is crucial that periodic assessment be made by/of the Department's graduate students to assure that optimal progress is being made in their individual plans of study and that their activities are consistent with the mission and philosophies of the Department. Annually, each graduate student in the Department shall submit to his/her major professor/advisor, a typed report outlining the items noted in Appendix C. Appendix D identifies graduate student progress evaluation factors which students may use in their self-evaluation and which students and their major professor/advisor may use for future planning. After signature of receipt on the report by the major professor/advisor a copy of this report will be filed with the graduate affairs chairman and the department head. The report will be reviewed by the major professor/advisor and a meeting date will be set for the student and the faculty member to review the report contents and the future plans. In addition to this

joint student-major professor/advisor review and planning, each student will meet with his/her major professor or advisor, the graduate affairs committee chairman, and department head on a periodic basis as determined by the graduate affairs committee to discuss the student's progress and plans.

4. Plan of Study / Coursework

The Plan of Study outlines the coursework to be completed by a graduate student pursuing either a M.S. or Ph.D. degree. Coursework requirements for degrees in Health Services, Outcomes, and Policy and Clinical Pharmaceutical Sciences are determined by the advisory committee. Responsibility for the preparation and timely submission of the plan of study is shared equally by the student and the major professor. The Policies and Regulations Manual of the College provides specific details related to the Plan of Study.

5. Registration Requirements

The total number of hours of academic credit used to satisfy residency requirements consists of all course credit hours that appear on the plan of study, other graduate course credit hours with grades of C or better that appear on the Purdue transcript, and research hours that appear on the Purdue transcript.

a. Master's degree:

- (1) At least one-half of the total credit hours used to satisfy degree requirements must be earned while registered at Purdue University.
- (2) More than 50 percent of the Purdue credits must be earned through the campus where the degree is conferred.
- (3) At least 30 total credit hours are required.

b. Ph.D. Degree:

- (1) At least one-third of the total credit hours used to satisfy degree requirements must be earned while registered for doctoral study at Purdue University.
- (2) At least 90 credit hours are required
- (3) Courses from a Masters or professional doctoral degree program, if relevant to the Ph.D., may be listed on the Ph.D. plan of study. A maximum of 30 hours from a masters or professional doctoral degree may be included at the on the plan of study as the discretion of the student's graduate program.

6. Graduate Seminar

Students will register for credit in graduate seminar (i.e., CLPH 696 or PHAD 696) each semester they are enrolled in the program. Graduate seminar is an important program component which is designed to allow for student-faculty interchange using a variety of meeting formats. The goal of this seminar is to provide participants with knowledge and feedback regarding their ongoing scholarly efforts in discovery, teaching and clinical practice. Presenters include graduate students, faculty (tenured, tenure track, and clinical track), and visiting speakers from other departments or universities, the pharmaceutical industry, government, health services organizations, and professional associations. Emphasis is placed on presenting original, in-progress or completed scholarship and providing participants the opportunity to receive feedback on their ongoing scholarship in a collegial environment. This forum is intended to be an open platform to present and receive feedback to improve scholarly work.

Learning objectives:

1. Communicate scholarly work to peers and colleagues
2. Debate the pros and cons of scientific methods
3. Appraise scholarly endeavors for strengths and weaknesses

When the semester format provides students with the opportunity to make an oral presentation, those presentations will be evaluated by students and faculty attending the seminars on an evaluation form designed for that purpose. Completed evaluation forms will be provided to the student's major professor/advisor for sharing with the student.

7. Program-related examinations

The Department of Pharmacy Practice has set the following examination guidelines for the Master of Science and the Doctor of Philosophy programs. For the Master of Science program an oral examination covering the thesis is required of the student. For the Doctor of Philosophy program one preliminary written examination is required. With successful completion of the written examination an oral examination is then required. These examinations may be taken by the student when a majority of the plan of study has been completed. Further, these examinations must precede presentation of the dissertation defense at least by two semesters. Both the M.S. and the Ph.D. final examination consists of an open presentation of the student's research study (open to all students and faculty), followed by a closed defense in the presence of the student's examining committee. Preliminary examination time periods are scheduled at the discretion of the Department of Pharmacy Practice and are limited to no more than two per year. These examinations may be scheduled during the fall, spring, and/or summer semesters.

8. Approval of research

After the student has selected a thesis (M.S.) or dissertation (Ph.D.) topic he/she is required to prepare and submit a typewritten proposal to his/her advisory committee

for approval. The proposal must contain the problem to be studied, specific objectives, a critical review of the pertinent literature, research procedures to be used, proposed method of data analysis, estimated cost, and a tentative timetable. Final approval of the Ph.D. proposal cannot precede successful completion of the preliminary examinations.

9. Thesis / Dissertation

Regulations governing the format of theses and dissertations are provided by the University. Dissertations / theses in the final or near-final form must be given to all committee members a minimum of one week prior to defense. In accordance with University policy, the Graduate School must be notified at least two weeks in advance of the scheduled defense date. Completion of thesis or dissertation in absentia is strongly discouraged and will not be approved except in extraordinary cases of hardship and/or where the research dictates the student's presence elsewhere. Purdue Graduate Form GS-12 (Request for Research in Absentia) specifies requirements to be met for approval.

SECTION 5

Program Oversight

1. Director of Graduate Program

2. Graduate Affairs Committee

The Department of Pharmacy Practice Graduate Affairs Committee will be responsible for overseeing the administration of the program and the progress of its graduate students. The academic and the research progress of each student will be reviewed by this committee annually.

The Graduate Affairs Committee provides guidance to the continuing development and administration of the Clinical Pharmaceutical Sciences and Health Services, Outcomes, and Policy graduate programs within the Department. The active Director of the Graduate Programs of Pharmacy Practice is the chairman of this committee. Matters considered by the committee include:

1. Graduate program standards for
 - a. Graduate teaching assistant assignments
 - c. Delivery of preliminary examinations
 - d. Development of original research proposals
 - e. Thesis and dissertation project standards
 - f. Oral defense of the thesis project and dissertation
2. Review of current academic standards for graduate student performance and development of procedures to administer such standards effectively.
3. Maintain guidelines for providing financial assistance to graduate students (e.g., TA, fellowship, summer research appointment, thesis research support, assistance to attend a professional/scientific meeting).
4. Coordinate annual intradepartmental process for developing Department nomination for the Kienly Award for excellence in teaching and the Jenkins/Knevel Award for excellence in research.
5. Development of programs and strategies for the recruitment and retention of graduate students.

3. Graduate Professional Staff

SECTION 6

Graduate Positions

1. Teaching Assistantships

Teaching assistantships represent University support for the Department's teaching and graduate program goals.

- a. TA assignments provide financial support for the graduate student.
- b. TA assignments provide essential administrative and instructional support to our faculty and undergraduate students. As such, responsible and timely completion of activities assigned by supervising faculty are essential.
- c. TA assignments help graduate students develop an appreciation for the importance of those particular courses in the College's educational plan.
- d. TA assignments are designed to allow the graduate student some creative/development opportunities within the course, while recognizing that there are certain routine aspects of each assignment.
- e. TA assignments should encourage an openness that allows for the exchange of ideas between the TA and the supervising faculty regarding course content and structure.
- f. The stipend for teaching assistantships will be determined at the start of each academic year by the Department Head working within the limits of the departmental personnel budget. Assistant assignments are the discretion of the Department Head operating under advisement of the Graduate Affairs Committee and the professor-in-charge of the department course offerings.
- g. Every TA will be evaluated each semester by his/her supervising instructor using a standardized rating form which includes space for comments and a short narrative. This evaluation will be shared with the student and his/her major professor or current advisor. In addition, this evaluation will be shared with the graduate affairs committee chairman and department head and used in conjunction with progress meetings discussed in Section 3.2.

2. Research Assistantships

Fellowships or research assistantships (RA), acquired through competitive application by graduate students, faculty or through extramural funds generated by faculty research and service effort provide stipend support for graduate student appointments exceeding allocated TA appointments. Summer RA appointments and the intent to provide each second-year student and beyond with partial support as an

RA are intended to enable strong student progress in thesis or dissertation research as well as in broadening research background and perspectives through assistance with specific faculty research projects. Given the current size of the graduate program student body, the financial demands on the Department to continue this strategy of student appointments necessitates students putting forth their best efforts to effectively use the opportunities.

SECTION 7

Program-Related Policies

Each student is supplied with a mailbox and adequate working space. During regular office hours, the student is expected to be working in the Department area except when involved in coursework, library activities, fieldwork, or functioning as a teaching assistant. Every effort should be made by the graduate student to let the major professor know of his/her whereabouts in the event of an emergency.

1. Vacation Policy

Graduate students employed on an academic-year basis are in vacation status during the periods of the academic year when classes are not in session. The seven-calendar-day period prior to the first day of classes each semester and the periods between the end of classes and the final date for submitting grade reports are not considered vacation. Official University holidays falling within the vacation periods are treated as vacation except when classes are in session.

2. Attendance at Professional Meetings

Attendance at national professional meetings is encouraged by the Department and limited financial support is available to each graduate student to attend one meeting per year. The following guideline, therefore, was adopted by the Department's Graduate Affairs Committee to assist graduate students to attend a professional meeting each year:

- Basic graduate student allocation to attend a professional meeting (plus transportation in Purdue vehicle if being used for faculty travel to that meeting): a maximum of \$400.00. Students making a presentation at a meeting are eligible for an additional allocation of \$50.00 for a total of \$450.

3. Presentation Approval

To ensure that all external submissions reflect Department standards and do not violate confidentiality requirements or other contractual obligations, all graduate presentations, abstracts, manuscripts or other submissions for external presentation or publication must have prior approval of the advisor/major professor of each student authoring or co-authoring such work. Materials must be submitted for review in adequate time (normally at least two weeks) prior to any submission deadlines.

4. Outside Employment

The graduate program in Pharmacy Practice is a multifaceted experience with objectives and learning opportunities requiring the full attention of the student. Outside employment, in addition to a TA/RA/fellowship/dorm counselor appointment, is a tempting distraction and may offer an occasional advantage if the environment is one that may contribute to the student's perspective of practice. Frequently, however, students despite initial intentions to

balance the full-time graduate program responsibilities with outside work activity, students usually find that the commitments exceed their personal limitations. This situation translates into an inability to meet all facets of program objectives in a timely manner. Avoidable delays of this nature are costly to the student and to the Department.

It should be clear that outside work is not an acceptable excuse for not completing assignments, research project components, and/or plans of study in a timely and high-quality manner. The long-term consequences of additional part-time employment must be carefully considered by each individual student. Outside employment is not permitted to interfere with TA or RA responsibilities.

SECTION 8

Office-Related Policies

1. Use of Departmental Computers

Access to desktop or laptop computers are provided for students enrolled in the graduate program. These computers are available for use 24 hours a day seven days a week. They may be used for any course or research-related activities. They are not to be used by students that are not enrolled in the Department of Pharmacy Practice Graduate Program or for activities unrelated to students' graduate program.

2. Support Staff Assistance

Department support staff may assist graduate students with typing and/or copying of material associated with the following: official University and Department forms; a course in which the student is a teaching assistant; a departmental seminar presentation by the student; a survey instrument; a manuscript for publication or presentation at a professional meeting. The request of such services should be made to the support person through the major professor of the student or the course instructor. In general, typing of reports and other papers associated with a student's coursework or thesis project is the student's responsibility. Similarly, copying of articles or other materials for use in a student's coursework or thesis/dissertation project is the student's responsibility. Exceptions to this policy can be made when deemed appropriate by the major professor.

3. Use of Departmental Stationery / Office Supplies

The use of Department/College stationery for correspondence is reserved for official University business where the contents of the communication represent departmental-related activities. Graduate students must seek permission of the major professor/academic advisor before using letterhead stationery. Instances where the official stationery is permissible to use, after advisor approval, includes but is not limited to, correspondence concerning research proposal, a presented paper or manuscript, or when acting on behalf of a course instructor when serving as a teaching assistant. Departmental stationery should not be used for requesting information and/or expressing interest in employment opportunities or for any other personal matter. If questions arise concerning the policy, the advice of the major professor or the department administrators should be sought.

4. Department Space Utilization Guidelines

The primary purpose of Department research and graduate space is to support the research and teaching of faculty and graduate students in the Department of Pharmacy Practice. Achieving this goal requires that guidelines on the utilization of space in this area are adopted and enforced. Following are guidelines related to the use of Department space.

Department Graduate and research space is restricted for use by faculty, graduate students and employees in the Department of Pharmacy Practice for activities that are

directly related to achieving the research and teaching goals of the Department. Persons not engaged in these activities should not be in the room without proper authorization.

- b. Doors to Department offices and other space should be kept locked when the space is not in use.
- c. Cabinet storage space may be designated for use by graduate students in the Department who are actively engaged in ongoing research. This space is intended for the temporary storage of materials that are needed for the direct support of ongoing research. It is NOT intended to be used for permanent storage, or to supplement the student's assigned office space.
- d. Graduate students should remove all personal belongings, and all other materials that are not stored in their assigned space when they leave for the day.
- e. Cabinet storage that is not designated for graduate student use will be apportioned among graduate faculty who desire space. The use of this space should be limited to materials that are needed to support active research projects or courses.
- f. Counter tops are to be kept clean and uncluttered, and are not to be used for storage.
- g. Floors are not to be used for storage.
- h. Individuals using Department space should not remove any materials other than one's own personal belongings.

SECTION 9

Additional Resources for Information Regarding Policies and Procedures

The following sources provide additional information regarding policies and procedures related to graduate study at Purdue University. Students share the responsibility with their major professor of being aware of policies not specifically addressed in this document.

1. Policies and Procedures for Administering Graduate Student Programs:
https://catalog.purdue.edu/content.php?catoid=7&navoid=2929&_ga=2.20719930.344916276.1624542271-1135995674.1601926729 describes University regulations which apply to all graduate students.
2. Policies and Regulations for College of Pharmacy describes regulations related to graduate study in the College of Pharmacy can be found at the following web link:
https://www.pharmacy.purdue.edu/current-students/resources/gradmanual?_ga=2.50989739.344916276.1624542271-1135995674.1601926729
3. Your major professor or current advisor should be able to help you clarify policy and procedure-related questions or direct you to a source of additional information. These sources include the Director of the Graduate Program, the Department Head, the Dean's Office, or the Graduate School.

APPENDICES

GENERAL PLAN FOR PHPR DEPARTMENT GRADUATE STUDENT APPOINTMENTS AND PROGRESSION GUIDELINES

<u>Time Period</u>	<u>Appointment</u>	<u>Priority Work Plan</u>
Year 1	0.5 TA	Coursework (about 24 cr.) and seminar, TA, explore research interests
Summer 1		Coursework (about 6 cr.), M.S. thesis project development
Year 2	0.50 TA or 0.25 TA + 0.25 RA	Coursework (minimal), and seminar, TA, undertake and complete M.S. thesis defense, work with major professor in developing a proposal for fellowship support
Summer 2	0.5 RA	Assist faculty with an ongoing research project, explore Ph.D. dissertation ideas
Year 3	Fellowship + 0.25 TA or 0.5 TA/RA	Coursework (about 24 cr.) and seminar, TA, Ph.D. dissertation project planning, prelim exams
Summer 3	Fellowship or 0.5 RA	Initiate Ph.D. dissertation research
Year 4	Fellowship + 0.25 TA or 0.5 TA/RA	Seminar, complete coursework, and Ph.D. dissertation

Degree Programs in Health Services, Outcomes, and Policy

The Health Services, Outcomes, and Policy graduate program trains students to become scientists to assess problems that can be solved by an understanding of the principles, concepts, and applications of the economic, management, marketing, policy, social, and behavioral sciences. The following is an example course plan toward the PhD degree in the Health Services, Outcomes, and Policy track. Each course plan is individualized to the student's background, research area, and career objectives. In addition to the courses listed, students participate in Departmental Graduate Seminar.

-----YEAR 1-----

Fall Semester I

Introduction to Pharmaceutical Sciences Research (1 credit)
Microeconomics (2 credits)
Principles of Epidemiology (2 credits)
Experimental Biostatistics (3 credits)
Health Policy Applications (2 credits)
Research Project Development I (2 credits)
Introduction to Translational Research (1 credit)
Seminar (1 credit)

Spring Semester I

Introduction to Pharmaceutical Sciences Research (1 credit)
Healthcare Economics (3 credits)
Pharmacoepidemiology (3 credits)
Research Project Development II (2 Credits)
Advanced Econ or Advance Epi course
Research Credits (3-5 credits)
Seminar (1 credit)

Summer I

Applied Regression Analysis (3 Credits)
Research Credits (3-5 credits)

-----YEAR 2-----

Fall Semester II-

Health and Social Behavior (2 credits)
Theoretical Foundations of Health Behavior (2 credits)
Methods in Social Research (3 credit)
Application of Cost-Effectiveness Analysis (3 credits)
Seminar (1 credit)
Applications of qualitative methods

Spring Semester II

Research Techniques and Proposal Development (2 credits)
Applied Survival Data Analysis (4 credits)
Seminar (1 credit)

Degree Program in Clinical Pharmaceutical Sciences

Overview

The degree programs in the Clinical Pharmaceuticals Sciences (CLPH) train students in applied and experimental pharmacotherapeutics using translational, clinical, and outcomes research. These programs are affiliated with Colleges of Pharmacy with graduates moving onto careers in the pharmaceutical industry, regulatory bodies, and academics.

The Department of Pharmacy Practice (PHPR) is split with faculty and graduate students on the main campus and also on the campus of the Indiana University School of Medicine (IUSM). Students enrolled in the Clinical Pharmaceutical Sciences degree program are housed at our facilities on the IUSM. Courses may be taken on the West Lafayette campus via distant learning and on the IUSM campus through our reciprocal agreement. We have several courses that are cross listed for IUSM and Purdue. PHPR and the IUSM are well-positioned to deliver the Clinical Pharmaceutical Sciences training program in an effective and sustained manner. There is a long and successful history of collaboration between Purdue and the IUSM which is crucial to this multi-institutional training program. The collaborative relationship between these universities includes the training of clinicians and scientists, in addition to common research endeavors, shared institutes, and the integration of faculty with appointments on each campus. There has been marked expansion of basic, translational, and clinical research programs by increased funding mechanisms for collaborative interactions between Purdue and IUSM researchers. The expansion in these areas has been fueled in the last several years by the development of the Indiana Clinical and Translational Sciences Institute (CTSI). This NIH-funded translational sciences institute combines the efforts of the four major research institutions in Indiana and is led by Purdue and the IUSM.

The mission of the clinical pharmaceutical sciences major at Purdue University is to produce the next generation of scientists that will pursue an applied research career to improve health through the advancement of pharmacotherapeutics in the clinical and translational sciences. The pharmaceutical sciences combines a broad range of disciplines toward the discovery and development of pharmacotherapeutics. Clinical pharmaceutical scientists advances the health and wellbeing of our society by improving health care through research in academia and industry.

Learning Outcomes

In addition to the learning outcomes listed in Research, Scientific Communication, Education, Leadership, and Professional Development; the following foundational competencies should be achieved.

(1) Foundational Knowledge:

Foundational Competencies

1. Acquire a strong foundation of knowledge in the clinical pharmaceutical and translational sciences.
2. Apply experimental pharmacotherapeutic, pharmacogenomic, translational pharmacology, or pharmacokinetic and pharmacodynamic concepts in experimental and clinical research design and implementation.

To fulfill the degree requirements, each student must take 18 CR of core didactic coursework and approved electives. The following plan of study includes the most common courses taken by current and previous students in the Clinical Pharmaceutical Sciences program.

-----**YEAR 1**-----

Fall Semester I

CLPH 69000 - Introduction to Pharmaceutical Sciences Research (1 credit)
 CLPH 69000 - Principles of Pharmacokinetics and Pharmacodynamics (3 credits)
 CLPH 69000 – Introduction to Translational Research (1 credit)
 PBLH-B 561 - Introduction to Biostatistics I (3 credits)
 GRDM-G 660 - Clinical Research Methods (3 credits)
 CLPH 69600 – Seminar in Pharmacy Practice
 CLPH 69900 - Research PhD Thesis (3-5 credits)

Spring Semester I

PBLH-B 562 - Introduction to Biostatistics II (3 credits)
 CLPH 69000 - Principles of Pharmacogenomics (2 credits) –course
 CLPH 69000 - Special Topics in Translational Research (2 credits)
 GRDM-G 661 - Clinical Trials (3 credits)
 GRDM-G 504 - Introduction to Research Ethics (2 credits)
 CLPH 69600 – Seminar in Pharmacy Practice
 CLPH 69900 - Research PhD Thesis (3-5 credits)

Summer I

CLPH 69900 - Research PhD Thesis (6 credits)

-----**YEAR 2**-----

Fall Semester II-

CLPH 69000 – Pharmacokinetics using NONMEM (2 Credits)
 CLPH 69000 - Physiological-Based Pharmacokinetic (PBPK) Models (2 Credits)
 CLPH 69600 – Seminar in Pharmacy Practice
 CLPH 69900 - Research PhD Thesis (3-5 credits)

Spring Semester II

CLPH 69000 - Pharmacogenomics of Drug Metabolism and Disposition (2 credits)
 PHRP 66400 – Research Technique and Proposal Development (2 credits)
 CLPH 69000 – Introduction to Precision Medicine (2 credits)
 CLPH 69600 – Seminar in Pharmacy Practice
 CLPH 69900 - Research PhD Thesis (3-6 credits)

-----**YEARS 3 to 4/5**-----

CLPH 69600 – Seminar in Pharmacy Practice
CLPH 69900 - Research PhD Thesis
Complete coursework and electives

Common Electives Available

The following elective courses are examples of those available and may be required in the plan of study depending on the research area.

- Pharmacogenomics of Drug Metabolism and Disposition
- Pharmacokinetics using NONMEM
- Physiological-Based Pharmacokinetic (PBPK) Models
- Introduction to Precision Medicine
- Applied Linear Regression
- Signaling and Ion Channel Biology
- Gene Transfer Approaches
- Advanced Cardiovascular Physiology
- Bioinformatics, Genomics, Proteomics and Systems Biology
- Animal Models of Human Disease
- Techniques of Effective Grant Writing

Master's Degree

The MS degree program is designed for students who plan to continue on to get a PhD in CLPH. The first 2 years of the example plan of study would be consistent with our common MS students. They are given a dissertation or non-dissertation option for the MS degree. Below are the requirements for the MS degree.

- (1) At least 30 total credit hours are required.
- (2) At least one-half of the total credit hours used to satisfy degree requirements must be earned while registered at Purdue University.
- (3) More than 50 percent of the Purdue credits must be earned through the campus where the degree is conferred.