

UNIVERSITY *of* WASHINGTON

SCHOOL OF PHARMACY  
DEPARTMENT OF PHARMACEUTICS

# **MASTER'S STUDENT HANDBOOK**

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# TABLE OF CONTENTS

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## Contents

TABLE OF CONTENTS .....	1
PROGRAM TRAINING OBJECTIVES.....	1
THE DEPARTMENT .....	2
STUDENT CONDUCT AND EXPECTATIONS.....	3
DIDACTIC TRAINING .....	4
PREREQUISITES .....	4
CORE COURSES .....	4
SEMINARS, LITERATURE REVIEW, AND RESEARCH.....	6
MASTER’S THESIS.....	7
AUDITING A COURSE AND GRADING OPTIONS .....	7
GRADUATION.....	8
MASTER TO PHD PROGRESSION.....	8
MS COURSE REQUIREMENT SCHEDULE .....	10
GENERAL PROGRAM REQUIREMENTS.....	11
PROGRESSION OF STEPS IN RELATION TO THE MASTER’S DEGREE .....	12
DEFICIENCIES IN STUDENT PROGRESS.....	13
FINANCIAL ASSISTANCE .....	15
APPENDICES .....	16
APPENDIX A- DEPARTMENT POLICY ON TIME OFF AND ON-SITE WORK .....	16
TIME OFF RELATED POLICIES FOR ACADEMIC STUDENT EMPLOYEES (ASEs) .....	16
ON-SITE WORK-RELATED POLICIES.....	16
APPENDIX B- SCHOLARSHIPS AND AWARDS.....	18
DEPARTMENT AWARDS.....	18
SCHOOL AWARDS .....	18
UNIVERSITY AWARDS .....	18
EXTRAMURAL AWARDS.....	18
APPENDIX C- STUDENT GRIEVANCE PROCEDURES.....	19
APPEAL OF AN EXAM OR COURSE GRADE.....	19
UNFAIR TREATMENT .....	20

UNIVERSITY of WASHINGTON

MASTER’S STUDENT HANDBOOK

APPENDIX D- STUDENT PROGRESS CHECKLIST .....21  
APPENDIX E- USEFUL LINKS FOR DEPARTMENT FORMS.....23

# PROGRAM TRAINING OBJECTIVES

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The Master's degree program in Pharmaceutics trains research scholars in the fundamental aspects of drug delivery, drug disposition, and drug action. Drug disposition pertains to the facets of drug absorption, distribution, metabolism, transport and excretion; pharmacokinetics is a sub-discipline within the pharmaceutical sciences and is the study of the time course of these processes. Areas of training emphasis in the UW Pharmaceutics program include:

- 1) **Drug delivery** – methods for enhancing systemic drug exposure, its retention in the body and targeting it to the site of action in order to improve therapeutic effect
- 2) **Drug metabolism** – hepatic and intestinal enzyme catalyzed molecular transformations of a drug to a metabolite that often has different disposition and pharmacological properties compared to the parent molecule
- 3) **Drug transport** – active transfer of drug molecules across biological cell membranes in body tissues where some pharmacological or toxicological effects are elicited (e.g., brain and fetus) or drug metabolism and excretion occur (liver and kidney)
- 4) **Drug action** – pharmacological effects of drugs in the whole body, with a special emphasis on unique disease states or special patient populations (e.g. epilepsy, aging, pregnancy)
- 5) **Mathematical modeling** of drug disposition and action

Graduates of the Pharmaceutics Master's (MS) degree program will possess expertise in basic biochemical, cellular, and molecular techniques and quantitative analytical methods, as well as fundamental knowledge of the mathematical models that describe the kinetics of drug disposition and action. They will be capable of further summarizing the causes of inadequate exposure to a drug at the site of action and elucidating the relationship between the kinetics of drug and metabolites in various body compartments or tissues and the manifestation of pharmacologic, therapeutic and toxic effects. They will be able to assess the impact of alteration in physiological and biochemical processes, which may occur due to disease states or genetic variations, on drug disposition and pharmacological response in a relevant disease state or physiological system.

Many of these studies will require expertise with *in vitro* methodologies and/or conducting pharmacokinetic and pharmacodynamic studies in relevant model organisms or organ systems. Pharmaceutics MS students will receive interdisciplinary training and can expect to interact with diversity of translational researchers, including clinicians, medicinal chemists, biochemists, pharmacologists, analytical chemists, physiologists, and/or biostatisticians. Such training is well suited to careers in the pharmaceutical industry, regulatory agencies, research institutions, and academia (with further doctoral training).

# THE DEPARTMENT

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The Department of Pharmaceutics is comprised of graduate students, post-doctoral fellows, visiting scientists, faculty members, and research and administrative staff, all currently led by the Milo Gibaldi Endowed Chair, Dr. Nina Isoherranen. Administrative and research labs are housed within H-wing, T-wing, D-wing, and F-wing of the Heath Sciences Building, on the University of Washington, Seattle campus.

The goal of our graduate program is to provide the most favorable training environment possible, positioning students to attain their maximal potential for creative scholarship and research. We espouse a philosophy of inclusivity. Our overall mission in this regard is to attract, retain, and promote the success of students from all populations in the profession of pharmacy and in the pharmaceutical sciences. We subscribe to the University's mission of enhancing diversity and equity in all forms and helping students, faculty, and staff understand differences in areas such as, but not limited to, religious, racial, cultural, sexual orientation, political, economic, disability, and gender perspectives. The School of Pharmacy Strategic Plan for Diversity, Equity and Inclusion can be found in its entirety at the following link [here](#).

# STUDENT CONDUCT AND EXPECTATIONS

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The Pharmaceutics faculty expect students in the Master's of Science (MS) degree program to take ownership of their training. Required and recommended courses of instruction are provided, but students should establish a clear individual career development plan with their mentor to shape their graduate training (see ***Progression of Steps*** below). This individual development plan (IDP) is designed to integrate coursework and research activities with relevant knowledge gained from within the broader University community and from outside sources, in order to best prepare for the career envisioned by each student. Students should not be constrained by what others in the program have done in the past or the activities of current peers, but rather customize their training plan to meet their personal and professional career goals.

Students in the Pharmaceutics MS program are expected to follow the UW student conduct code [here](#). Importantly, they must adhere to the highest standards of academic and professional conduct. Academic honesty and professional integrity should be foremost in their minds as they navigate through our highly demanding didactic and experiential course of training. To do otherwise is to fail themselves and the public that largely subsidizes their education.

Students will be offered instruction on scientific rigor and reproducibility (held periodically in Journal Club) to help them achieve these expectations. At any time, they can seek additional guidance from their advisor, Graduate Program Director and Department Chair, as well as the University Ombud [here](#). The UW Allies Program is another resource if issues cannot be resolved through these already listed channels, see [here](#).

# DIDACTIC TRAINING

The Department of Pharmaceutics MS degree program is typically completed within two years (with limited exceptions; 7-8 academic quarters). The program course work is divided into four components: prerequisites that define the level of entry into the program; core didactic training listed below; seminars and literature review; and independent research. The seminal product of MS training is a written thesis that describes results of independent research. See **Appendix D** for the program checklist.

## PREREQUISITES

College Level **Differential Calculus or Calculus I** (e.g., at UW MATH124, see [here](#); 5 credits)

Candidates may be accepted into the program on the condition that any deficiencies in meeting course prerequisite are rectified by the end of the first academic year.

## CORE COURSES

Conferral of the MS degree requires a minimum of 50 credits, of which 18 must be graded (the graded credit must be from graduate courses of 500 level or above). The additional 32 credits include electives, seminar, journal club, research, and thesis study and writing. Students must complete a minimum of 24 credits of PCEUT 700 (Master's Thesis) for the degree. Please review the UW Graduate School Degree Requirements [here](#) for more information. Of the 18 required numerically graded credits, 15 are derived from the following "core" courses (see below) that are intended to give the student the necessary foundational knowledge base in the field of pharmaceutical sciences. The other 3 numerically graded credits will come from an elective class.

### ***Required Numerically Graded Core Courses (15 credits)***

Courses taught by Pharmaceutics Department faculty:

- PCEUT 502: Drug Disposition Science (2 credits)
- PCEUT 505: Concepts in Pharmaceutical Sciences I (2 credits)
- PCEUT 532: Clinical Pharmacokinetics (4 credits)

Courses taught by faculty outside the Pharmaceutics Department:

- MEDCH 501: Medicinal Biochemistry (3 credits)
- BIOST 511: Medical Biometry I (4 credits)

The above core courses are considered essential for all students in the MS program, but may be waived for students entering with previous graduate-level course work in the required areas. All must be taken for numerically graded credit and a grade of 2.7 or higher must be achieved for the course to be counted as part of the 18 credit core requirement. If a student fails to achieve that minimum grade in one of the core courses, they may substitute a numerically graded elective

course (see below) that provides an equivalent or higher number of credits with the approval of the Graduate Program Director and their primary advisor.

As noted, to meet the required 18 graded credits of coursework, a MS student must take at least 3 numerically graded credits of elective. They will also need to take additional numerically graded electives if they fail to achieve a 2.7 grade in one of the department core courses and need a replacement.

Elective Courses suitable as a replacement for a departmental graded core requirement for which they did not achieve the minimum grade of 2.7, are:

Courses from Other Biological Science Programs (any course below):

BIOEN 574: Immunoengineering (3 cr); Winter

BIOEN 591: Controlled Release Systems (3 cr); Winter

BIOST 524: Design of Medical Studies (3 cr); Spring

BIOST 565: Statistical Evaluation of Biomarkers (3 cr); Winter

BIOST 509: Introduction to R for Data Analysis in the Health Sciences (2 cr); Autumn

GH 566: Biochemistry and Genetics of Pathogens and Their Hosts (4 cr); Autumn

MCB 522: Development I: The Developmental Basis of Human Disease (3 cr); Autumn, Odd years

MCB 532: Human Pathogenic Viruses (3 cr); Autumn

MEDCH 527: Advanced Drug Metabolism (2 cr); Winter

MEDCH 529: Advanced Medicinal Chemistry (4 cr); Autumn

NEURO 559: Neurobiology of Disease (Offered: jointly with NEURL 559/P BIO 559) (3 cr); Spring

PATH 550: Mechanisms of Disease (3 cr); Autumn

PCEUT 501: Advanced Pharmacokinetics I (3 cr); Autumn, Even years

PCEUT 503: Drug Transport and Delivery (3 cr); Spring, Odd years

PCEUT 506: Concepts in Pharmacokinetics (3 cr); Spring (Required Course for PhD Students)

PCEUT 534: Principles of Precision Medicine (2 cr); Spring

PCEUT 551: Introduction to Drug Discovery and Development (2 cr); Winter

PHARM 501: Alternative and Complementary Medicines (2 cr); Autumn and Winter

PHARM 581: Global Health Pharmacy: Medicines, Practice, and Policy (Offered: jointly with GH 543) (2 cr); Winter

PHCOL 502: Signal Transduction from the Cell Membrane to the Nucleus (2 cr); Autumn

PHCOL 503: Autonomic/Cardiovascular Pharmacology (2 cr); Winter

PHCOL 504: Neuropharmacology (2 cr); Winter

PHCOL 505: Endocrine Pharmacology (2 cr); Spring

PHCOL 506: Immunopharmacology and Chemotherapeutics (2 cr); Spring

PHG 513: Basic Concepts in Pharmacogenetics and Toxicogenomics (3 cr); Winter

Courses from the Certificate in Clinical Trials Program (any course below):

PHRMRA 524: Introduction to Clinical Trials (3 cr); Autumn

PHRMRA 525: Implementation & Conduct of Clinical Trials (3 cr); Winter

PHRMRA 526: Project Management & the Business of Clinical Trials (3 cr); Spring



Courses from the Certificate in Biomedical Regulatory Affairs Program (any course below):

PHARM 516: Introduction to Biomedical Regulatory Affairs (3 cr); Autumn

PHARM 517: Product Development & Manufacturing Systems (3 cr); Winter

PHARM 518: Product Testing, Evaluation & Post-Market Issues (3 cr); Spring

Elective courses that would meet the Graduate School 18 numerically graded credit requirement (i.e., 3 cr) are those listed above and any other 500-level numerically graded course taught at the University of Washington that suits the students IDP (approval by the supervisory committee is required).

## **SEMINARS, LITERATURE REVIEW, AND RESEARCH**

### **1) Seminars and Literature Review (required each quarter – 12 credits in total)**

- PCEUT 520: Seminar (1 credit/quarter; 3 quarters/year for 2 years). MS students are not required to make a presentation, but they may take the opportunity to present for the experience.
- PCEUT 583: Journal club (1 credit/quarter; 3 quarters/year for 2 years).

### **2) Research (24 credits minimum)**

- PCEUT 700 (variable credits/quarter; 4 quarters/year until graduation)

MS students will typically have their principal advisor (mentor) identified upon entry into the program. Students and their advisor are expected to determine the research project direction and goals by the end of the first quarter of their first academic year. MS students sign up for PCEUT 700 (lab research/thesis research, variable credits) during each academic quarter of the program until the submission of their thesis (see [here](#)). The credits for PCEUT 700 in any quarter can vary from 1 to 8, depending on the course load and thesis research goals for the academic quarter. Students must register for a minimum of 10 credits per quarter in autumn, winter, and spring, and minimum 2 credits per summer quarter. The department expects that a student will accumulate 24-30 PCEUT 700 credits by the time they graduate (Yr 01: 1-3 credits per quarter, A, W, Sp, Su; Yr 02: 8 credits/qtr, A, W, Spr). Students may take summer quarter off, which will likely delay graduation by each academic quarter missed during the thesis program of study (e.g., 1 summer quarter off will delay graduation by 1 academic quarter).

### **3) MS Thesis Workshops (2 credits total; 1 credit Winter and Spring quarters, Year 2)**

- PCEUT 540 (CR/NC)

All MS students must take a two-quarter Thesis Writing Workshop during winter and spring quarters of their 2<sup>nd</sup> year in the program. Upon successful completion of the course (with a passing grade), the student should have produced a full draft of a research manuscript. This document can be converted into a MS thesis (program requirement) and further developed into a peer-reviewed publication.

**4) In addition to the course requirements above, all MS students must attend the following training sessions:**

- a. Prior to beginning laboratory research – see list of required on-line training courses (students' welcome letter), laboratory specific training, Radiation Safety, Human Subjects (CITI course), and Animal Use Regulations training may also be required if relevant to the student's Master's research. Students are advised to consult with their mentor as early as possible about project-specific training requirements to minimize delays in commencing thesis research, but no later than the first week of autumn quarter of their first academic year.
- b. If a Master's student is offered a TAship, they must take the following on-line training: UW TA training is [here](#)
- c. All students in the MS program must take Title IX training: Husky Prevention & Response (Title IX) is a foundational, required online prevention and response course about sex- and gender-based violence and harassment. Throughout the course, the strategies offered are meant to create and support positive UW climates and endeavor to stop sex- and gender-based violence and harassment before they happen. The course includes tailored content based on your role as a graduate student. **Entering students who have not completed the Husky Prevention & Response (Title IX) student course in their first quarter will be blocked from registering for their second quarter.** The course takes 60 – 90 minutes to complete. The registration block will be lifted within approximately an hour of course completion.

Access the student course [here](#)

## **MASTER'S THESIS**

MS students are required to submit a written master's thesis to receive the degree. The content of the thesis document should be a written summary of their independent laboratory research project. The format should follow general scientific publication style and include (at minimum) an abstract, introduction, materials and methods, results, discussion and conclusion, with appropriate references cited. Under special circumstances and with the consent of their advisor and the Graduate Program Director, a comprehensive review of a relevant area of pharmaceutical research may be permitted. Each student should work closely with their advisor in order to identify and develop the content of the Master's thesis and the composition of the supervisory committee (advisor and at least one other PCEUT faculty member). Students are advised to begin on this written document early in the second year of their MS program, but no later than winter quarter of the second year, when they take PCEUT 540.

## **AUDITING A COURSE AND GRADING OPTIONS**

To audit a class not required for the degree, students must get permission from the course coordinator/instructor. If students do not need an official record on their transcript for the class,

UNIVERSITY of WASHINGTON

as long as they have permission from the course instructor, they can sit in the class. If they need to audit a class with an official record on their transcript, students need to follow the process listed below. The audit option can be changed after the registration period has begun through the end of the second week of the quarter. Students will not get any credits for audited classes.

- (1) Register for the course.
- (2) Complete the **Registration Transaction Form** [here](#) [UoW 2127] (Section 2) to change the course to "Audit".
- (3) Obtain approval from the instructor to audit the course and provide initials on the form indicating such.
- (4) Submit the completed form to the Office of the University Registrar (OUR) via email to [regoff@uw.edu](mailto:regoff@uw.edu).

Instructors in Pharmaceutics will not grade the homework or exams of a student who audits one of their classes. To have homework and exams graded, students must register for the course. If the course is a required course, students must register for it as a graded course. If the course is optional, students may register for it either as a numerically graded course or select it to be graded S/NS or CR/NC. Whether students can register for a course as CR/NC is at the discretion of the course coordinator. Please visit [here](#) for more information regarding the school's S/NS and CR/NC policy.

## GRADUATION

During the last year in the MS program, students should discuss with their principal advisor and the Graduate Program Director a timeline for graduation. No later than the first week of their last academic quarter, the student should identify a department faculty member, including affiliate and adjunct faculty, who is willing to serve as the second member of their thesis reading committee. The reading committee appointment needs to be approved by the Graduate Program Director prior to contact and submission of their name to the Graduate School. With approval of the reading committee and completion of the following form [here](#), the thesis can be submitted to the Graduate School.

After completion of the thesis document, MS students should schedule a ~30-min oral presentation that summarizes their thesis research accomplishments. This is a department degree requirement. It can occur before submission of the thesis to the Graduate School, but ideally in the same academic quarter. Unlike the doctoral dissertation presentation, there will not be an oral examination following the Master's thesis presentation. Note, more than one student thesis presentation can be scheduled back-to-back in the same day.

## MASTER TO PHD PROGRESSION

Students admitted into the MS program can formally apply to the PhD program, see [here](#). There are two transition options. For both options, an MS student must apply to the PhD program, rank in the top tier of applicants for that year and be admitted to the doctoral program.

Option 1: if their current PI has funding and is willing to take the student, an MS student accepted into the PhD program can remain in the same lab where they conducted their MS research and pursue dissertation research;

Option 2: if a student wants to consider other department labs for their dissertation research, either by choice or available funding, they will participate in Year-01 lab rotations before final lab placement.

If the student is accepted into the PhD program, they will NOT need to repeat the courses completed under the MS program and required for the PhD program, with the following exception: any student who is admitted to the PhD program with a grade of <3.0 in any PCEUT PhD core course will need to retake that course and pass it with a grade of  $\geq 3.0$  to fulfill requirements of the PhD program.

In addition, Master's research CANNOT be used to fulfill the PhD dissertation requirements (see [here](#)).

## MS COURSE REQUIREMENT SCHEDULE

YEAR 1			
AUTUMN	WINTER	SPRING	SUMMER
BIOST 511 (4 credits; A,Su)	MEDCH 501 (3 credits)		
PCEUT 502 (2 credits)		<i>Elective Course (3 credits)*</i>	
PCEUT 505 (2 credits)	PCEUT 532 (4 credits)		
PCEUT 520 (1 credit)	PCEUT 520 (1 credit)	PCEUT 520 (1 credit)	
PCEUT 583 (1 credit)	PCEUT 583 (1 credit)	PCEUT 583 (1 credit)	
PCEUT 700: Lab Research (Variable credits 1-2 cr)	PCEUT 700: Lab Research (Variable credits 1-3 cr)	PCEUT 700: Research (Variable credits 2-7 cr)	PCEUT 700: Research (2 credits)

YEAR 2			
AUTUMN	WINTER	SPRING	SUMMER
<i>Elective Course (2-3 credits)*</i>	<i>Elective Course (2-3 credits)*</i>		
PCEUT 520 (1 credit)	PCEUT 540 (1 credit)	PCEUT 540 (1 credit)	
PCEUT 583 (1 credit)	PCEUT 520 (1 credit)	PCEUT 520 (1 credit)	
PCEUT 700: MS Thesis (Variable)	PCEUT 700: MS Thesis (Variable)	PCEUT 700: MS Thesis (Variable)	

\* Electives are not required in every quarter, but students are encouraged to take classes that will enhance their thesis research or career. However, every MS student must acquire at least 3 graded elective credits to meet the 18 graded credits required by the Graduate School. Students must register for minimum 10 credits per quarter autumn, winter, spring and a minimum 2 credits per quarter summer to maintain their full-time student status.

# GENERAL PROGRAM REQUIREMENTS

Pharmaceutics graduate students are also students of the UW Graduate School and as such must satisfy the general requirements of the Graduate School and the requirements of the Department in which they undertake their graduate training. A full description of requirements of the Graduate School can be found [here](#). Some of the pertinent requirements of the Graduate School and the Department are described below, dealing with scholarship, residence and credit requirements. Most forms required for use during their time in PCEUT can be found [here](#).

The following include a combination of pertinent Graduate School and Department requirements for the MS degree in Pharmaceutics (in addition to those listed above):

1. **Credits and scholarship:** For students in the MS program, a minimum of 50 credits of course work must be completed. Of these, at least 18 numerically graded credits at the 500 level are required (UW Graduate School requirement: see [here](#)). Students must take all required Core courses for graded credit. In addition, the minimum passing grade in any given course is 1.7, however, to count towards the 18 numerically graded credit requirement, the MS students must obtain a grade of 2.7 or higher. This includes those listed with the PCEUT prefix.

The UW Graduate School requires that MS program students attain a minimum cumulative GPA of 3.0 in all numerically graded courses.

All MS students are expected to acquire graduate research credits. MS students should register for PCEUT 700 every quarter (including Summer quarter) until they graduate from the program. The minimum requirement of 700-level credits for the MS degree is 24, set by the Graduate School.

The PCEUT 700 credits that a student should register for in a given quarter will vary from 1 to 8, depending on course load each academic quarter and the time students need to spend on their thesis/dissertation research. To maintain a full-time status, students must register for a minimum of 10 credits for all courses in total per quarter in autumn, winter, and spring, and minimum 2 credits per quarter in summer.

2. **Academic Progress:** Student progress to the degree will be evaluated each spring quarter in the program; ideally more than once, during Year 01. They should prepare and submit an IDP to their advisor by May 15<sup>th</sup>. This will be evaluated, corrected if necessary and signed by the student and the advisor. The IDP will then be sent to the Department Chair and Graduate Program Director along with a recommendation for proceeding with MS thesis study (see ***Deficiencies in Student Progress***).

## **Thesis Submission to the Graduate School, Oral Presentation and Graduation:**

Submission of an approved written thesis is required to receive the MS degree. The student

must submit a full draft of their thesis to their reading committee at least 4 weeks in advance of the end of quarter during which they plan to graduate. A final written document must be submitted online to the Graduate School by 11:59 pm on the final day of the final academic quarter. Although there is no thesis defense requirement for the degree, students must present their thesis research to the public before the degree will be conferred. This is a department requirement.

## PROGRESSION OF STEPS IN RELATION TO THE MASTER'S DEGREE

1. **Selection of Master's advisor:** In most circumstances, Master's students are offered direct entry into a specific laboratory under guidance of a Principal Investigator (also referred to as PI). This advisor will supervise student's progression and guide the student throughout the program.
2. **Development of research skills and identification of thesis topic:** Upon joining a lab, with guidance from their advisor, students must identify a suitable thesis project and actively engage in their thesis research.
3. **The MS Supervisory Committee:** The MS thesis advisory committee should be formed no later than the first week of winter quarter of the second (last) academic year in the program. It consists of a Chair (principal student advisor) and one other graduate faculty member. Both individuals must be productive scholars in the student's major field and/or subfields. One of the members must hold a regular appointment in the Pharmaceutics department and be a member of the UW Graduate Faculty; this may or may not be the committee Chair (see [here](#)). The second faculty member must also be a member of the UW Graduate Faculty, but can be an affiliate or adjunct faculty in Pharmaceutics or a member of another UW department (e.g., Medicinal Chemistry or Pharmacy). Nominations for the second member of the committee will come to the Graduate Program Director from the supervisory committee chair, with input from the student. With approval from the Graduate Program Director, the student may reach out to the nominee with a request to serve on the supervisory committee. The names of individuals that are acceptable to the Director and willing to serve will be forwarded to the Graduate School for final approval. The Graduate School will send out automatic email notices of appointment.
4. **Preparation of Individual Development Plan:** Each student must prepare an individual development plan (IDP) every spring quarter (see [here](#)), review this with their advisor and submit it to the Graduate Program Advisor by **May 25** in every year in the program, up to the year of graduation. This will be a permanent part of the academic record.
5. **Appointment of Thesis Reading Committee:** The MS reading committee is the same as the Supervisory committee. A timeline for submitting the thesis should be developed, no later than Winter quarter of the second year in the program. The two members of the supervisory committee will also serve as the thesis reading committee.

6. **Submission of the Thesis**: Once a final thesis document has been approved by the reading committee (likely following one or more rounds of revision), the student needs to have the thesis approval form (see [here](#)) signed by the committee members. The form and final thesis document is then submitted (on-line) by the student to the Graduate School, using MyGrad, no later than 11:59 pm on the final day of the academic quarter in which the student is graduating (i.e., typically spring or summer quarter of 2<sup>nd</sup> year).
7. **Oral Presentation**: With approval from their thesis reading committee, students may schedule with assistance from the department GPA a ~30-minute oral presentation of the research accomplishments. This can occur before submission of the final thesis document to the graduate school, but typically in the same quarter. There will not be an examination or defense of the thesis presentation.

## DEFICIENCIES IN STUDENT PROGRESS

The Department is committed to helping students to succeed academically and professionally. With the Graduate School's Academic Performance and Progress as the basic framework, these steps will be followed should a student encounter difficulty with required course work:

1. **Oral/email communication**: Course instructor(s) will communicate with a student when they see early signs that the student might be struggling with a course. Instructor(s) will communicate with the identified student and explore possible ways to help the student to improve their performance in the class and meet academic expectations.
2. **Warning letter**: If a student receives a grade below the minimum requirement of the program for a core course, the student will receive a written letter from the Graduate Program Director, which serves as a warning letter, to communicate with the student about the situation involved, remediation plan (remediation exam or retake that course), and the timeline for remediation. The letter will also contain a message that failing to meet the expectations stated in the warning letter will lead to probation.
3. **Probation**: If a student fails a second core course, the student will be put on probation and a letter issued. The letter will communicate with the student about the situation involved, remediation plan (remediation exam or retake that course), and the timeline for remediation. The letter will also contain a message that failing to meet the expectations stated in the probation letter will lead to final probation.
4. **Final Probation**: If the student fails to meet expectations stated in the probation letter, or fails a third core course, the student will be put on final probation. The final probation letter will communicate with the student about the situation involved, steps to remove final probation, and the timeline for the process. The steps to remove the final probation could be to take an oral exam with a faculty committee (possibly, course instructor and the Graduate Program Director or other faculty members).

For research related progress issues, a student's thesis advisor, with input from the Graduate Program committee as needed, will address deficiencies in the student's annual review report,



provide clear expectations and a timeline for the student to resolve the issues, and state the consequence of failing to meet the expectations.

# FINANCIAL ASSISTANCE

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The Master's program is a self-supported program and thus the Department typically does not offer financial support. However, the research advisor may provide the MS student with a Research Assistantship (RA) through funds under their control. MS students also qualify for departmental awards and may apply for RA support through departmental student scholarships.

In addition, TA opportunities for PCEUT courses are available to all Pharmaceutics graduate students and typically open around May each year. Once applications are open, the Graduate Program Advisor will send out a list of courses along with their corresponding TA job descriptions to all students. If an MS student is interested in any course, they should consult with their advisor for approval. The students submit applications through the Microsoft form provided in the email, ensuring it is completed by the deadline. Students can apply for as many courses as they'd like. The faculty will review all applications and assign students to the appropriate courses.

Master's students are encouraged to seek financial support from other intramural or extramural sources in consultation with their advisor and Graduate Program Director. Periodically (often prior to the start of autumn quarter), the Graduate School offers a workshop on how to seek funding for graduate education.

# APPENDICES

## APPENDIX A- DEPARTMENT POLICY ON TIME OFF AND ON-SITE WORK

MS students are expected to maintain satisfactory performance and progress towards their degree. (Please see details in the General Program Requirements section)

### TIME OFF RELATED POLICIES FOR ACADEMIC STUDENT EMPLOYEES (ASEs)

Students who have ASE status (TA or RA appointments) should refer to [here](#) for time off and leave policies.

Time off policies for ASEs:

Visit [here](#)

Salaried ASE time off FAQs:

Visit [here](#)

At the department level, it is important that all students (self-funded or ASEs) inform and coordinate with their supervisors/PIs ahead of time when asking for time off, whenever it is possible. Students should fill out the Request for Short-Term Leave or Overtime form [here](#), get the signature from their supervisors/PIs, and send the signed form to the Graduate Program Advisor for documentation.

### ON-SITE WORK-RELATED POLICIES

In general, students are expected to work on-site for completion of required and elective courses and thesis research. Those who wish to perform their duties offsite will need to obtain approval by the responsible faculty member before the initiation of offsite work. For research duties, the responsible faculty member is the student's primary advisor; and for instructional duties, the course master/instructor. Suspension of this policy may occur, as happened during the COVID-19 pandemic, and will be communicated by the Graduate Program Director and/or Department Chair.

The agreement between the student and the responsible faculty member should specify the frequency/duration and the nature of the offsite work (e.g., hybrid, occasional or 100% remote). Such agreement should be documented and reviewed (i.e., to be extended, modified or terminated) at least on a quarterly basis and any impact (potential or real) it may have on the student's academic performance and progression noted in the student's Individual Development Plan.

If there are disagreements between the student and the responsible faculty member on the appropriateness, or the specifics, of the offsite work under consideration, the issue can be presented to the Graduate Program committee, with consultation from the student's supervisory committee, to achieve resolution. Any unresolved issue or appeal will be reviewed by the Department Chair or designate, whose decision on this matter shall be deemed final.

It is the policy and practice of the UW to create inclusive and accessible learning environment consistent with federal and state law. If the student has already established accommodations with Disability Resources for Students (DRS), then a discussion between the student and the responsible faculty member should occur to determine how they will be implemented as it relates to research and/or instructional duties.

# APPENDIX B- SCHOLARSHIPS AND AWARDS

Graduate students in the Master's program are eligible for some of the scholarship and travel awards offered by the Pharmaceutics department, the School of Pharmacy, the UW Graduate School and Health Science administration, NIH, and various private foundations. All are merit-based and require an application and review process. Receiving an award is a recognition of exceptional merit. As such, it should be received with pride and can be cited in a curriculum vitae or resume.

## DEPARTMENT AWARDS

The Department of Pharmaceutics offers awards to its students that are intended to recognize outstanding scholarly activity during the time that they are enrolled in our programs. The current list of awards are detailed at this link [here](#).

## SCHOOL AWARDS

Click [here](#) for more information.

Rodney J Y Ho and Lily S Hwang-Ho Award: Click [here](#) for more information.

## UNIVERSITY AWARDS

Most of the descriptions presented below are abstracted from the associated websites:

Graduate Student Conference Travel Award: Click [here](#) for more information. The application has to be submitted by the department Graduate Program Advisor or Director through MyGrad (admin view). Contact them with a request to initiate the process. Come with answers to the eligibility requirements listed on the Graduate School website.

Graduate School List of Fellowships: Click [here](#) for more information.

## EXTRAMURAL AWARDS

Graduate students in the Pharmaceutics department may apply for scholarships and awards that are offered by foundations and other organizations outside of the UW system (i.e., extramural). Most are available to students in a doctoral program, but MS students are encouraged to search for exceptions online. Note that some organizations specifically target support of individuals from minority or disadvantaged backgrounds.

# APPENDIX C– STUDENT GRIEVANCE PROCEDURES

The Department of Pharmaceutics follows the School of Pharmacy and University of Washington’s Scholastic Regulations, Student Governance and Policies (see UW Policy, Student Governance and Policies, Chapter 110 [here](#)) when addressing a student appeal of a course grade or exam decision.

## APPEAL OF AN EXAM OR COURSE GRADE

A student who believes that an instructor erred in the assignment of a grade, or who believes a grade recording error or omission has occurred, will follow these steps to resolve the matter:

1. The student should first discuss the matter with the instructor before the end of the academic quarter, or the following quarter if it is a final exam.
2. A student who is not satisfied with the instructor’s response may submit, no later than 10 class days after her/his/their discussion with the instructor, a written appeal to the Chair of the department with a copy of the appeal to the instructor. This time may be extended by the Chair in exceptional circumstances, such as the situation in which the student did not learn of the appeals process deadlines in time. If the Chair has a conflict of interest, the appeal will be heard by a Chair’s designee pre-determined from among the department’s faculty.
3. Within 10 calendar days of receipt of the appeal, the Chair will consult with the instructor to determine whether the evaluation of the student’s performance was fair and reasonable or whether the instructor’s conduct in assigning the grade was arbitrary or capricious.
4. If the Chair determines that the instructor’s evaluation of the student’s performance was not arbitrary or capricious, the Chair notifies the student that the appeal is denied and that the assigned grade is final.
5. If the Chair believes the instructor’s conduct in assigning the grade was arbitrary or capricious, the Chair will request that the instructor revise the grade.
6. If the instructor declines to revise the grade, the Chair, with the approval of the voting members of his, her, or their faculty, shall appoint an appropriate member, or members, of the faculty of the department to evaluate the student’s performance and assign a grade. The Chair will inform the Dean and Provost of this action. The department’s decision will be final.
7. The Dean will refer the matter to the Associate Dean for Assessment, who will review the Chair’s decision to ensure that the appeal process was followed correctly.

8. Once a student submits a written appeal, this document and all subsequent actions on this appeal shall be recorded in written form in a school file residing with the Associate Dean for Assessment.

## **UNFAIR TREATMENT**

Students who feel that they have been subjected to unfair treatment in the administration of departmental academic policies (including those described in this document) may seek resolution on the Academic Grievance Procedure outlined in Policy 3.8 from the Graduate School, see [here](#).

Initiation of an informal conciliation process or formal complaint must occur within three months of the date of the incident. The student is referred to Policy 3.8 [here](#) for further details. A brief description is provided below.

### Informal Conciliation:

Students who wish to challenge a course grade should first attempt to resolve the issue informally with the faculty or staff most closely involved. If they are not satisfied with the outcome, they can bring the issue to the department Chair for informal conciliation, who will facilitate further discussion between the implicated faculty or staff person and student. If the grievance is still not resolved, they may request that the Dean of the School of Pharmacy be engaged for additional informal conciliation. If they remain dissatisfied, they may request assistance from the Graduate School for another round of informal conciliation, typically led by an Associate Dean. They may also involve the Office of the Ombud.

### Formal Complaint:

If a student is not satisfied with the outcome of informal conciliation, they may file a formal complaint within 10 days of the conclusion of the attempted informal conciliation process.

Formal complaints will be handled, as described in Policy 3.8 from the Graduate School. At a minimum, it will involve formation by the Graduate School of an Academic Grievance Committee, comprised of both UW graduate students and faculty outside of the Pharmaceutics Department.

# APPENDIX D- STUDENT PROGRESS CHECKLIST

1 <sup>st</sup> year	Done	To Do
<b>Fall Quarter</b>		
Core prerequisite satisfied		
Refer to the handbook for required and recommended courses		
Residence maintained through courses (10 credits per quarter)		
Take required training such as EH&S Chemical Safety, Biological Safety training, and if needed Radiation Safety, Human Subjects (CITI course strongly recommended) and Animal Use Regulations training.		
Consult with mentor and begin Master's Thesis research		
<b>Winter Quarter</b>		
Refer to the handbook for required and recommended courses		
Residence maintained through courses (10 credits per quarter)		
Continue Master's Thesis research		
<b>Spring Quarter</b>		
Refer the handbook for required and recommended courses		
Residence maintained through courses (10 credits per quarter)		
Continue Master's Thesis research		
Submit IDP by May 15 <sup>th</sup> to the Graduate Program Advisor (GPA) and upload to FileMaker		
Review and complete FileMaker profile		
<b>Summer Quarter</b>		
Residence maintained through courses (2 credits per quarter)		
Continuing thesis research		
Complete UW TA training <a href="#">here</a> if planning to TA the following academic year		
<b>2<sup>nd</sup> year (Fall-Summer)</b>	<b>Yes</b>	<b>No</b>
Maintain EH&S and other training, as needed		
Residence maintained through research (10 credits per quarter; 2 credits for summer)		
Continue thesis research		
Refer the handbook for required and recommended courses		
Sign up for PCEUT 598 in Wtr and Spr quarters and draft written Thesis document		
Submit IDP by May 15 <sup>th</sup> to the GPA and upload to FileMaker		
Submit thesis to the reading committee at least 4 weeks in advance of the end of quarter. Final written document must be submitted online to the		



Graduate School by 11:59 pm on the final day of the final academic quarter, see <a href="#">here</a>		
Review and complete FileMaker profile		

***The above check-list can be used to facilitate tracking of progress to the MS degree.***

# APPENDIX E- USEFUL LINKS FOR DEPARTMENT FORMS

## **Individual Development Plan:**

See [here](#)

## **Graduation Instructions:**

See [here](#)

## **PCEUT Pre-Travel Request Form:**

See [here](#)

## **PCEUT Travel Reimbursement Request Form:**

See [here](#)

