

SECTION F:
Curriculum

Curriculum Overview

The curriculum of the Pharm.D. program is designed to provide students with the scientific background and clinical skills necessary to render pharmaceutical care in an evolving health care system (See UWSOP Practice Foundations, Care Definition and Ability-Based Outcomes). Instructional methods emphasize the critical thinking and problem-solving skills necessary to ensure patient-centered and evidence-based care, promote healthy lifestyles and disease prevention, optimize therapeutic outcomes by reducing medication-related problems, enhance patients' understanding and adherence to their medication regimen, and effectively manage health system resources as part of a collaborative interprofessional team. Diverse educational goals are accommodated by the many elective opportunities offered throughout the program.

One student from each year, 2nd-4th, with a 3.0 GPA or above, is invited to serve on the School's Curriculum Committee as a full voting member, until completion of the degree program. Please see page 103 (change if necessary) in the Student Organization and Activities section of this Handbook for a list of current members.

Registration

Period I registration for a new quarter begins approximately six weeks after the start of the preceding quarter. For example, Winter quarter registration begins approximately six weeks after the start of Autumn quarter. The exception is Autumn quarter registration which begins six weeks after the start of Spring quarter. Quarterly schedule planning and registration can be complex due to lab and/or conference placement, in addition to elective opportunities, and class size limits. We hope that the following information will assist you in understanding the procedures that guide this process.

- All students are guaranteed enrollment in their core classes.
- Every effort is made to allow students access to a broad selection of elective courses.
- Students opting to take electives that conflict with “break-out” sections such as labs or conferences are given first priority in registration assignments. If a student falls into this category, and wishes priority assignment, he or she must contact Cher Espina Nguyen, two weeks prior to the first day of Period I registration.
- Please note: Once registration is complete, it is important that students remain in the lab/conference section in which they are registered to comply with University regulations, and to facilitate contact in case of an emergency. This refers specifically to the following courses: PCEUT 531, CONJ 401-403, PHARM 504, MEDCH 561, PHARM 511, PHARM 512, PHARM 509, and PHARM 560-565.
- We are often asked if work schedules are a consideration in priority assignments. This is not feasible, since the majority of students hold jobs during the academic year.
- Instructor ID codes are distributed with independent research or special studies courses only. To obtain an ID code, students must meet with the instructor to discuss the course learning objectives, required assignments, the number of credits assigned, and the evaluation process. The faculty member provides the student with their Instructor ID code number and notifies the ASP Office. Please note that independent study/research courses may be graded numerically or CR/NC. Students must register carefully for these courses, using the correct schedule line number (SLN). This is a four-digit number that should correspond with the faculty member's home department. For example, if the faculty instructor is from the Department of Pharmacy, you need to register with the PHARM prefix, SLN. Likewise, the Departments of Medicinal Chemistry (MEDCH) and Pharmaceutics (PCEUT) each have their own designated SLNs for their independent research/special studies courses.
- Entry codes are provided by the ASP Office and used primarily to manage enrollment in School of Pharmacy courses.

- Registration Lead: Cher Espina-Nguyen, cherelyn@u.washington.edu

Students who need to take core courses out of sequence (i.e., retake a core course), need to contact Cher for registration assistance. This is to facilitate coordination between core courses of different years being taken concurrently. Students should contact Cher at least two weeks prior to the date of registration.

Independent and Special Studies Courses

NOTE: The expected time commitment for Independent/Special Studies Courses is 1 credit = approximately 30 hours/quarter.

MEDCH 495 (Special Studies) CR/NC
 MEDCH 499 (Research) *Graded or CR/NC

PCEUT 598 (Independent Study/Research) *Graded or CR/NC

PHARM 595 (Special Studies) *Graded or CR/NC
 PHARM 599 (Independent Study/Research) CR/NC

*The term “graded” above, refers to “numerically graded.” Students must register in the quarter where work and evaluation is performed.

Graduation Requirements

UW PharmD students must meet the following requirements in order to graduate:

- 1) Complete the pharmacy core and elective credits:

<u>Year</u>	<u>Core Credits</u>	<u>Elective Credits</u>	<u>Total Credits (core & electives)</u>
Class of 2009	159	38	197
Class of 2010	162	35	197
Class of 2011	165	32	197
Class of 2012	165	32	197

Note: Up to ten of the elective credits may be earned through general elective courses, provided the courses are at the 300 level or above. The remainder of the elective credits must be earned through approved professional elective courses. Please note that elective credits earned in courses taken prior to School of Pharmacy enrollment will not be counted toward a degree requirement.

- 2) Earn a minimum cumulative grade-point average of 2.00 in the required core professional courses and an overall cumulative grade point average of 2.00 for all courses taken at the University of Washington. Please refer to the Grading Section for individual course and series requirements.
- 3) Meet the standards as outlined in the School of Pharmacy’s Admissions, Retention and Graduation Standards document.

Student Responsibilities

The UW School of Pharmacy seeks to provide a supportive learning environment that fosters academic excellence, encourages continuous professional development, and inculcates the attitudes, behaviors, and ethics consistent with the profession's high standards. The curricular goals of the PharmD program, as defined in the Care Definitions, Practice Foundations and Terminal Objectives document, are designed to provide our graduates with the knowledge, skills, abilities and attitudes/behaviors necessary to render care in a changing health care system.

It is a student's responsibility to know his or her academic standing with respect to grades and progress toward degree requirements and comply with all department, School, and University requirements and regulations. Students should proactively address circumstances that affect academic performance in a timely manner. The advisers in the Office of Academic and Student Programs provide referral to School, University or community resources and encourage students to visit them or consult their student resource card for these services. The on-time graduation rate for the Class of 2005 was 97%, for the Class of 2006, 94%, Class of 2007, 91%, Class of 2008 92.5%.

Academic and Professional Standards Progress Committee (APSPC)

Student academic progress is reviewed by the APSPC, an appointed committee of the School. Membership on the Committee is composed of the Associate Dean of Academic and Student Programs, the Associate Dean of Professional Education, the Associate Director of Counseling Services and the Director of Experiential Education. Other faculty may be added to the Committee as determined by the Dean. The Committee will monitor and enforce the School's academic policies and make recommendations to the Dean regarding student probation and dismissal, approval of a leave of absence or an expanded curricular program, and other ad hoc duties as assigned by the Dean.

Prerequisites

Students should carefully review all course prerequisites before enrolling in core and elective courses.

Beginning with the Class of 2009, students must successfully complete all core courses in years 1 and 2, prior to enrollment in the Therapeutics course series (Pharm 560-565). In addition, beginning with the Class of 2008, students must earn a passing grade of 1.7 or higher in previous quarters of the therapeutics course and lab series for progression into subsequent quarters. Exception: It is recognized that Pharm 527 (Intro Comm Pharm Exper) and Pharm 528 (Intro Institutional Pharm Exper) must be completed by Winter Quarter of the second professional year (Pharm 527) and Winter Quarter of the third professional year (Pharm 528).

Professional Elective Courses

Professional elective classes allow students the opportunity to design a program of studies compatible with individual areas of interest.

As stated above in the Graduation Requirements section, students in the PharmD program may substitute up to ten credits of general elective coursework for a portion of their elective requirements. General elective courses may be chosen from a number of different departments or schools at the University of Washington, provided the course is 300 level or above. Students interested in taking general elective classes may want to consider doing so during the first professional year. For example, at the current time, students in the class of 2012 must complete 32 elective credits, along with their core requirements, to graduate. Twenty-two of these credits must be from classes designated as professional electives by the School of Pharmacy. The remaining ten credits may be from either general or professional elective courses.

A professional elective course that is evaluated with a numeric grade must be taken as such to count toward the professional elective credit requirement. When registering, if a student selects the satisfactory/not satisfactory grading option (S/NS), then credits for that class will apply only towards the student's general elective credits. Students who have already completed ten general elective credits will not receive additional credits counted toward their degree requirements. Alternatively, if a professional elective course is designated as a credit/no credit (CR/NC) course, it will count towards professional elective credit. It is important to note that it is the instructor's prerogative to designate the grading of a course, whether it is numerically graded or CR/NC, and the student's choice to select the S/NS option. CR/NC courses are identified in the Course Catalog and Time Schedule.

The following examples illustrate these points:

MEDCH 525 is evaluated with the credit/no credit grading option, thus earned credits will be applied toward professional elective requirements.

PHARM 548 is a numerically graded course. It must be taken for a numeric grade if the student wishes to apply the credits toward professional elective requirements. If a student chooses the satisfactory/not satisfactory option, then the course credits are considered general elective credits. Please be aware that changing the grading option on this or any Geriatric Certificate course requirement will prevent you from earning the certificate.

Also, students should note that for selected courses there are limits on the number of credits that may be applied toward degree requirements. For example: PHARM 595 is a variable-credit course that may be taken more than once. 24 credits are the maximum number of credits that may be applied toward the PharmD degree. Course descriptions will identify those courses that have maximum credit limits.

The Pharmacology courses offer variable credit options:

PHCOL 401 and 402 are offered as 3-4 variable credit classes Autumn and Winter quarters. You are required to take both these courses for 3 credits each to satisfy graduation requirements. If you opt to take either one or both these courses for 4 credits instead of 3, the additional credits above the core number will be counted as professional elective(s).

Note: This information is subject to change. Please consult the Time Schedule web site at www.washington.edu/students/timeschd/ or the Course Catalog web site at, www.washington.edu/students/crscat for the most current listing of quarterly courses.

Professional Elective Course Lists

Please refer to the Student Section of the UW School of Pharmacy website, for lists of both School of Pharmacy and non School of Pharmacy Elective Course Lists.

School of Pharmacy Student Section: <http://depts.washington.edu/pha/students/info.html>

School of Pharmacy Professional Elective List: <http://depts.washington.edu/pha/students/sopelectives.pdf>

School of Pharmacy Professional Elective List (non School of Pharmacy courses):
<http://depts.washington.edu/pha/students/nonsopelectives.pdf>

Elective Count Procedure

Students are encouraged to track their elective credits each quarter. Students who anticipate graduating in 2010, 2011 and 2012 students should contact Cher Espina-Nguyen (cherelyn@u.washington.edu) or Micki Kedzierski (kedzm@u.washington.edu) with questions. Class of 2009 students should contact Nanci Murphy (murphyna@u.washington.edu) with questions.



University of Washington School of Pharmacy
 Doctor of Pharmacy Program
 Student Academic Progression Plan

Student Name: _____ Student Number: _____

The following Academic Progression Plan describes a quarter-by-quarter course of action for completion of academic coursework and progression through the PharmD program.

Quarter	Autumn		Winter		Spring		Summer	
Year								
	Course	CR	Course	CR	Course	CR	Course	CR
Credits/Quarter								

Notes:

Quarter	Autumn		Winter		Spring		Summer	
Year								
	Course	CR	Course	CR	Course	CR	Course	CR
Credits/Quarter								

Notes:

Quarter	Autumn		Winter		Spring		Summer	
Year								
	Course	CR	Course	CR	Course	CR	Course	CR
Credits/Quarter								

Notes:

Quarter	Autumn		Winter		Spring		Summer	
Year								
	Course	CR	Course	CR	Course	CR	Course	CR
Credits/Quarter								

Notes:

Discussion and agreement on the plan is acknowledged by the following signatures:

Student: _____

Advisor/Faculty: _____

Date: _____

10-06

Experiential Learning

The goal of the experiential learning program is for students to progressively build skills, apply knowledge to solve problems, and foster development of a positive attitude toward their patients and profession, in actual practice sites. 53 academic credits are devoted to helping students achieve this goal.

Beginning in the first year of the professional program, students will work on attaining competencies for the required early experiential classes, PHARM 527, Introductory Community Practice Experience, and PHARM 528, Introductory Institutional Practice Experience. These classes involve demonstration of competency in 35 core practice areas. Prerequisites for PHARM 527 and PHARM 528 include compliance with required immunizations, a valid Washington state pharmacy intern license, a minimum grade of 2.7 in PHARM 500, a minimum grade of 85% on each of the required calculations exams, and a grade of 2.7 or higher in PHARM 504.

Prior to the fourth professional year, students wishing to gain experience in patient-centered care or in some aspect of care systems or the use of medical evidence can enroll in PHARM 529, Elective Experiential Learning. PHARM 529 is a variable-credit class, with approximately 25-30 hours of practice-based learning per one credit hour. Students wishing to complete this coursework will need to submit a learning proposal to the Director of Experiential Education.

Prerequisites for the fourth professional year practicums include:

- Successful completion of PHARM 527, 528 and 574.
- A passing grade (1.7 or above) in all three quarters of the clinical therapeutics courses (PHARM 560, 561, 562, 563, 564 and 565) with a minimum of 2.0 cumulative GPA for these six courses.
- Compliance with immunizations as determined by the Rubenstein Hall Health Immunization Clinic.
- Evidence of first aid and adult CPR certification that expires on or after April of the following year.
- A satisfactory criminal background check, signed statement indicating awareness of ethical practice guidelines, and signed insurance statement.
- HIPAA compliance
- A current Washington state intern license. Additionally, students completing practicums outside of Washington State will need to comply with the intern licensure requirements of the state in which the learning experience is being done.
- Other paperwork as required by the Office of Professional Education

The fourth professional year will involve completion of coursework at pharmacy practice sites. Site assignments are made on the basis of student interest and need, although final placement in sites within the greater Seattle area is done through a randomized matching program. Practicums can start as early as the July following completion of the student's third professional year or in September provided prerequisites for entry are met. Nine advanced practice learning experiences are required for graduation; of these, a minimum of five must involve primarily patient-centered care, including one general medicine rotation, one ambulatory clinic site, one chain or community pharmacy site, and one health-system setting practice or a second in-patient rotation. Interested students are encouraged to pursue learning experiences in rural Washington, states other than Washington and at international locations. All students must complete a minimum of one learning experience in a medically underserved area. Students who choose School of Pharmacy practicums away from campus are welcome to use University and community services identified on their resource card and University websites.

Additional Program Opportunities

Certificate Programs

Student may take selected courses as electives or complete the entire program series to earn a certificate concurrently with their PharmD degree.

Biomedical and Regulatory Affairs

(Sponsored by the School of Pharmacy and the School of Law)

This program is designed for individuals who are seeking an introductory or expanded understanding of regulatory affairs for the drug and medical device industry, and for others seeking training positions in the field. Program participants gain a comprehensive overview of the knowledge and skills necessary to be an effective regulatory affairs and compliance specialist. Such specialists oversee the design, development, testing and production of drugs, biotechnology-derived therapeutics, or medical devices. Access to Pharm 516-518 is available to a limited number of PharmD. students. Please contact Dr. Hazlet for further information.

Contact: Dr. Tom Hazlet, thazlet@u.washington.edu

Website: http://www.extension.washington.edu/ext/certificates/bio/bio_gen.asp

Pharmacy Management Certificate Program

(Sponsored by the School of Pharmacy and the School of Business)

Eligibility – restricted to full-time students enrolled in the PharmD Program. Selection for the program is based upon academic accomplishment in professional courses, school activities, a statement of goals and objectives, previous experience and a personal interview.

This program is designed to prepare students for ownership and for management positions in community pharmacies, institutional pharmacies and retail chain organizations. Participants complete courses in marketing, human resource management, accounting and pharmacy management as well as a 10-week summer management internship in one of the collaborating partner organizations.

Contact: Dr. Jackie Gardner, jsgardne@u.washington.edu

Website: <http://depts.washington.edu/pharma/RetailMgmt.htm>

Plein Certificate in Geriatric Pharmacy Practice

Eligibility – Pharmacists and pharmacy students

This program is designed to train pharmacists to become specialists in geriatrics to meet the needs of older adults in all practice settings. Certificate Program graduates will possess the values, knowledge and skills to provide consultations on drug therapy and education on geriatric pharmacotherapy for patients, health care professionals, students and the general public.

Contact: Dr. Peggy Odegard, podegard@u.washington.edu or Ms. Ariana Ghasedi, Program Manager at arianag@u.washington.edu

Website: <http://depts.washington.edu/gericare/Certificate/index.htm>

Teaching Certificate in Pharmacy Education

This program prepares current and future pharmacy educators for academic teaching in pharmacy. Participants also serve as educational assistants in some PharmD courses. Students can apply Spring quarter of their 1st professional year; for others, the certificate is currently limited to those in the UW system.

Contact: Dr. Dana Hammer, dphammer@u.washington.edu

Website: <http://depts.washington.edu/pharma/tcpe.html>.

Concurrent Degree Programs

PharmD and PhD in Medicinal Chemistry (extended program)

This program provides graduate training in medicinal chemistry concurrent with clinical training in the PharmD Program. Graduates of this dual degree program are qualified to conduct research within the pharmaceutical industry or in academic science. Research includes a broad spectrum of activities including studies pursuant to investigations of the interactions of both drugs and toxic substances with biological systems, and the relationship

of chemical structure and dynamics to biological effect and function. Drug metabolism is a focus of the Department of Medicinal Chemistry.

Contact information: medchem@u.washington.edu; rodneyho@u.washington.edu

Website: <http://depts.washington.edu/medchem/>

PharmD and PhD in Pharmaceutics (extended program)

This program provides graduate training in pharmaceutics concurrent with clinical training in the PharmD Program. Graduates of this dual degree program are qualified to conduct basic and translational research on drug formulation, delivery and disposition, with an emphasis on pharmacokinetic-pharmacodynamic relationships. Research on drug interactions, drug delivery, regulation of drug metabolism enzymes and transporters, and pharmacogenetics are a focus of the Department of Pharmaceutics.

Contact information: pceut@u.washington.edu; rodneyho@u.washington.edu

Website: <http://depts.washington.edu/pceut/>

PharmD and MS in Pharmaceutical Outcomes, Research and Policy (5-year program)

This program provides graduate training in pharmaceutical outcomes research and policy concurrent with clinical training in the PharmD Program. Graduates of this dual degree program provide pharmacoepidemiologic, pharmaco-economic and policy information, through research and scholarship, to government, the pharmaceutical and medical device industry, and managed care organizations.

Contact information: porpp@u.washington.edu

Website: <http://depts.washington.edu/porpp/>

Pharm.D. Program

Class of 2012

FIRST PROFESSIONAL YEAR

Autumn Quarter

CONJ 401	Hum Anat/Physiology	4
PCEUT 531	Pceutical Formulation: Principles and Dosage	4
PHARM 500	Principles of EBMI	2
PHARM 501	Profession of Pharmacy	3
PHARM 587	Pharmacy Calculations	1
ELECTIVES		3
TOTAL		17

Winter Quarter

CONJ 402	Hum Anat/Physiology	4
MEDCH 570	Medicinal Biochemistry I	3
PHARM 504	Pharmacy Practice	3
PHARM 511	Community Outreach Service	2
ELECTIVES		4
TOTAL		16

Spring Quarter

CONJ 403	Hum Anat/Physiology	4
MEDCH 561	Immunizing & Antimicrobial Agents	4
MEDCH 571	Medicinal Biochemistry II	3
PHARM 512	Hum Beh & Cmu Pharm	3
ELECTIVES		3
TOTAL		17

Students are required to successfully complete all core courses prior to entering the Therapeutic series (Pharm 560-565) in the Third Professional Year.

SECOND PROFESSIONAL YEAR

Autumn Quarter

MEDCH 562	Medicinal Chemistry	3
PHARM 537	Chem Dependency Concepts	2
PHARM 546	Non-Presc Drug Therapeutics	3
PHARM 543	Pharmacy Laws & Ethics	4
PHCOL 401*	General Pharmacology I	3
ELECTIVES		2
TOTAL		17

Winter Quarter

MEDCH 563	Medicinal Chemistry	3
PHARM 527**	Intro Community Pharm Exper	4
PCEUT 532	Clinical Pharmacokinetics	5
PHCOL 402*	General Pharmacology II	3
ELECTIVES		3
TOTAL		18

Spring Quarter

MEDCH 564	Medicinal Chemistry	3
PHARM 528**	Intro Institutional Pharm Exper	3
PCEUT 533	Biopceutics/Drug Delivery	3
PHARM 508	Principles of EBM II	4
ELECTIVES		3
TOTAL		16

*You may take an additional credit for Phcol 401 and Phcol 402 which will be considered professional elective credits. **Pharm 527 is to be completed by the end of Winter Quarter of the second year. **Pharm 528 is to be completed by the end of Winter Quarter of the third year. Students are required to successfully complete all core courses prior to entering the Therapeutic series (Pharm 560-565) in the third professional year except for Pharm 528.

THIRD PROFESSIONAL YEAR

Autumn Quarter

PHARM 509	Principles of EBM III	2
PHARM 560	Pharmacotherapeutics I	9
PHARM 563	Applied Pharmacotherapeutics	2
ELECTIVES		4
TOTAL		17

Winter Quarter

PHARM 541	Pharmacy, Health Care & Society	3
PHARM 561	Pharmacotherapeutics II	9
PHARM 564	Applied Pharmacotherapeutics II	2
ELECTIVES		4
TOTAL		18

Spring Quarter

PHARM 562	Pharmacotherapeutics III	7
PHARM 565	Applied Pharmacotherapeutics III	2
PHARM 574^	Clinical Introductory Practice	1
ELECTIVES		6
TOTAL		16

Students must earn a passing grade of 1.7 or higher in previous quarters of the Therapeutics course series (i.e., Pharm 560 and/or 561 for progression into subsequent quarters).

FOURTH PROFESSIONAL YEAR

^PHARM 575, 576, 577 Clinical Practice (5 credits each), 578 (variable credit), 579 (for Geriatric Certificate Students only). Practicums may be scheduled during any quarter. Students must meet practicum requirement including 2.0 minimum cumulative gpa in the Therapeutics series (Pharm 560-565).

^PRACTICUMS: These include: (527) a four-credit practicum to be completed by the end of Winter Quarter of the second year; (528) a three-credit practicum to be completed by the end of Winter Quarter of the third year; and (574) a one-credit practicum to be completed by the end of the third year, and 9 practicums (575, 576, 577, 579) in the fourth year. Nine advanced pharmacy practice experiences are required for graduation; of these a minimum of five must involve direct patient care, including one general medicine rotation, one ambulatory clinic site, one chain or independent community pharmacy site, and one health system setting or a second in patient rotation. Please contact Mary Neyhart or Dr. Terri O'Sullivan with any questions.

Note: Courses are subject to change by action of the School of Pharmacy and UW Curriculum Committees. There are 165 core and 32 professional electives for a total of 197 credits. Typically, a student on federal financial aid must carry a minimum of 12 credit hours each quarter to retain full-time status. Please contact the Academic & Student Programs or the Office of Student Financial Aid with any questions.

Updated: September 17, 2008