



# Pharmacy

## Pathway Preparation Sheet 2016-2017

### Pharmacy —What is it?

Pharmacology is the science of drugs. Pharmacologists study the interaction of chemicals with the human body to help treat and prevent disease. They dispense, monitor and evaluate drugs that are prescribed by doctors and other health care professionals; they also provide consultation to patients and medical staff on the selection and effects of drugs. In addition, Pharmacists are responsible for security of controlled substances and disposal of hazardous wastes to ensure patient safety and public health.

**Areas of study in Pharmacy:** Inorganic and Organic Chemistry, Biological Sciences, Quantitative Analysis, Preventative Medicine, Toxicology, Infectious Disease, Patient Assessment, Drug Design and Development, Medication Management, Pharmacotherapy of Medical Disorders, Drug Actions, Interactions and Side Effects, Patient Safety, Therapeutics of Special Populations, Public Health and Pharmacy Law.

### Where does my path start?

You will complete an Associate of Science-Transfer (AS-T) Track 1 at Shoreline.

Use the AS-T Track 1 **Degree Planning Guide** to understand the requirements for graduation.

A typical next step would be to complete a Bachelor’s degree at a four-year school, then apply for Doctor of Pharmacy (Pharm.D.) programs. Most Pharmacy programs do not require a Bachelor degree, however, very few students are selected for admission without one.

### Where can I go for help?

#### Program Faculty Advisors

<b>Linda Kuehnert</b>	206-546-4575	lkuehner@shoreline.edu	Rm 2821
<b>Dave Phippen</b>	206-546-4572	dhippen@shoreline.edu	Rm 2817
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<b>Joyce Fagel</b>	206-546-6984	jfagel@shoreline.edu	Rm 5229

#### General Academic Advising

FOSS (5000) Building, Rm. 5229  
206-546-4559  
[advising@shoreline.edu](mailto:advising@shoreline.edu)  
[www.shoreline.edu/advising](http://www.shoreline.edu/advising)

#### International Student Academic Advising

9000 Building, Rm. 9302  
206-546-4697  
[leadvisors@shoreline.edu](mailto:leadvisors@shoreline.edu)  
[www.shoreline.edu/international/advising/](http://www.shoreline.edu/international/advising/)

**For course information and entry codes, contact:**  
[biologyadvising@shoreline.edu](mailto:biologyadvising@shoreline.edu) , [chemistryadvising@shoreline.edu](mailto:chemistryadvising@shoreline.edu)

**Career Planning**  
[www.shoreline.edu/job-career-services/](http://www.shoreline.edu/job-career-services/)

### Where can I transfer for a Bachelor’s degree?

The AS-T makes it possible for students to transfer to a number of public and private colleges and universities in the U.S. with junior standing within a four-year Bachelor’s degree program (please see the AS-T Track 1 Degree Planning Guide for a list of schools) The courses recommended to prepare for a Pharmacy program align well with majors in chemistry, biochemistry, and biology; however, a science-related major is not required to apply to most Pharmacy programs.

### Where can I study Pharmacy?

The only schools in Washington State that offer Pharmacy programs are the [University of Washington](http://www.washington.edu), Seattle campus, and [Washington State University](http://www.washingtonstate.edu), Yakima and Spokane campuses.

### What can I do with a Doctor in Pharmacy degree?

Graduates in pharmacology develop strong scientific, critical thinking, problem solving, and communication skills to work in science and health care fields. Careers include chemical/pharmaceutical sales, pharmaceutical consultants, research scientist, industrial chemist, crime lab analyst, forensic scientist, and professors.

**Potential employers include:** Pharmaceutical companies, drug and grocery stores, hospitals, clinics, medicine and manufacturing companies, agriculture and biotechnology industries, state and government agencies, colleges and universities. For more, please visit career information and resources at <http://www.shoreline.edu/counseling-services/career-counseling.aspx>

**What courses should I take?\***

**I. GENERAL EDUCATION REQUIREMENTS | 18 - 20 Credits**

ENGL &101  
 ENGL &102, &230, or CMST &101  
 One course in Multicultural Understanding  
*Recommended MCS 105 or CMST 203*  
 Quantitative/Symbolic Reasoning (MATH &151)

**II. DISTRIBUTION REQUIREMENTS | 15 Credits**

One course in Humanities  
*Strongly recommended: CMST &210 or &220 (UW)*  
 One course in Social Sciences:  
*Strongly recommended: ECON &201 (UW & WSU)*  
 A third course in either Humanities or Social Sciences  
*Strongly Recommended: PSYC &100, PHIL 102*

**III. PRE-MAJOR PROGRAM I 65.5 Credits**

INORGANIC CHEMISTRY   19.5 Credits	QTR	GR	CR
CHEM 171/181 <i>Every quarter</i>			6.5
CHEM 172/182 <i>Win, Spr, Sum</i>			6.5
CHEM 173/183 <i>Spr, Sum, Fall</i>			6.5

MATHEMATICS   10 Credit	QTR	GR	CR
MATH &152* <i>Every quarter</i>			5
MATH &163 or 211 <i>Every quarter</i>			5

**Major Science Sequences**

ORGANIC CHEMISTRY   21 Credit	QTR	GR	CR
CHEM &241/271 <i>Fall, Win</i>			4/3
CHEM &242/272 <i>Win, Spr</i>			4/3
CHEM &243/273 <i>Spr</i>			4/3
Other Pre-Major Electives			

BIOLOGY   15 Credits	QTR	GR	CR
BIOL &211 <i>Every quarter</i>			5
BIOL &212 <i>Win, Spr</i>			5
BIOL &213 <i>Spr, Sum</i>			5

<p><b><i>Electives are not required for the AS-T degree.</i></b>                      Most Pharmacy programs require Microbiology and Biochemistry (at right). Many require additional science courses; this varies by school. Some pharmacy schools also require a year of physics.</p>	ELECTIVES	QTR	GR	CR
	BIOL &260 <i>Every quarter</i>			5
	CHEM 255 <i>Win-online only</i>			3
	CHEM 256 <i>Spr-online only</i>			3

**More information about programs in Pharmacy**

Pharmacy programs typically require four years of study after entrance, culminating in a Doctor of Pharmacy (Pharm.D.) degree. The University of Washington and Washington State University each admit 80-94 students per year in their Pharmacy programs. Admission is competitive. Although Pharmacy programs in Washington state do not require completion of a Bachelor's degree before entrance, more than 75% of applicants have one. The application process takes a full year and requires taking the PCAT test, health care experience (volunteer or paid), and letters of recommendation. For more information, consult the American Association of Colleges of Pharmacy: [www.aacp.org/](http://www.aacp.org/)

**University of Washington—Doctor of Pharmacy, Pharm.D.**

In addition to the general math and science courses, the UW requires biochemistry, CHEM 255 and CHEM 256. 10 credits each in Humanities and Social Sciences are required of which 5 credits needs to be CMST& 210 or 220 for Humanities and ECON& 201 is required for a Social Science. [www.pharmacy.washington.edu/students](http://www.pharmacy.washington.edu/students)

Students who choose to pursue their bachelor's degree at the UW must meet the high school admission requirements. The UW requires two years of the same world language in high school or two quarters in college for admissions. In addition, UW-Seattle requires the third year in high school or the third quarter of a language in college with a 2.0 to graduate. Non-native speakers of English are exempt from world language requirements.

**Washington State University—Doctor of Pharmacy, Pharm.D. in Spokane and Yakima.**

<http://www.pharmacy.wsu.edu/prospectivestudents/pharmacyadmissioninformation.html>

In addition to the AS degree math and sciences, WSU requires BIOL&241, &242, &260 CHEM 255, 256, PSYC &100, PHIL 102, and ECON &201. Students applying without a Bachelor degree may have additional general education requirements.

Students who choose to pursue their Bachelor's degree at WSU before entering Pharmacy will need two years of a world language in high school or three quarters or two semesters in college to graduate from WSU.

\* MATH& 152 is not a required pre-requisite for Pharmacy. Students who choose not to take the extra math courses can graduate with an Associate in Arts—Individualized Plan (AA-IP) and still be prepared for a pharmacy program.

**\*\* This unofficial guide is intended to support you as you prepare for your major Please consult with an advisor and your chosen four-year school(s), as program and admissions requirements vary and may change without notice.**