What is the study of Pre-Pharmacy?

The programs at Washington State University and University of Washington lead to a Doctor of Pharmacy (PharmD) degree. Western provides a series of courses which prepares students for application to the College of Pharmacy at these as well as other institutions. Selective admission includes evaluation of GPA (both cumulative and science), letters of recommendation, pharmacy related experience, and an interview as well as legal and social records. Due to variations in admission requirements, students are encouraged to research the schools of their choice for detailed information at www.aacp.org/resources/student/Pages/default.aspx.

Pharmacy schools emphasize the importance of a liberal arts education and do not recruit students from one specific major or discipline. Although Western does not offer a Pre-Pharmacy major, examples of majors popular among pre-pharmacy students are Biology, Environmental Science, Psychology, Spanish, and Business.

Program Checkpoints:

Freshman year:
- Take Math Placement Test and begin appropriate math sequence to complete Calculus I: MATH 124.
- Begin General Chemistry series as soon as possible: CHEM 121, 122, 123.
- Begin General Biology series winter or spring quarter: BIOL 204, 205, 206.
- Work on GUR courses, including ENG 101 and ECON 206.
- Begin prerequisite and co-requisite courses for possible major.
- Meet with Pre-Healthcare Advisors (OM 280) to develop a plan of study.

Sophomore year:
- Take Microbiology with lab: BIOL 345, 346 or BIOL 245 (or do junior year).  {Upper-division preferred}  
- Take a second English composition course: ENG 201 or 202.
- Take stats class: MATH 240 (or equivalent in major, if offered).
- Declare or apply for major.
- Begin shadowing Pharmacists sophomore and/or junior year.

Junior year:
- Research pharmacy schools and graduate programs.
- Prepare for the Pharmacy College Admission Test (PCAT) to be taken the summer after junior year.
- Begin Biochemistry: CHEM 471, 472 (or take these in senior year).
- Depending upon schools, take Anatomy & Physiology: BIOL 348, 349 or equivalent elsewhere.
- Take a third English composition course: select from ENG 201, 202, 301 or 302.
- Take a communication course: COMM 327 or 331.
- Begin primary application to the Pharmacy College Application Service (PharmCAS).
- Draft personal statement.
- Request letters of recommendation from professors and professionals.

Senior year:
- Prepare for possible pharmacy school interview with a mock interview (or do spring of junior year).
- Complete major, GUR, WP, and other graduation requirements.
- Two quarters before graduation, meet with declared major advisor and apply for graduation.

Additionally:

NOTE: Advanced Placement may not be recognized by professional schools as college-earned credit. Check with each school.

PCAT: More than two-thirds of pharmacy schools require or recommend the Pharmacy College Admission Test (PCAT).
Core Courses

This list is intended to be a broad guideline, covering the requirements for entrance into both WSU and UW, as well as most other Pharmacy programs. Contact individual schools for requirement specifics.

Non-Science Requirements:

Written Communication: 10 credits selected from ENG 101, 201, 202, 301 or 302 (5 credits each)

Interpersonal Communication: COMM 327 or 331 (5, 3)

Microeconomics: ECON 206 (4)

Introductory Psychology: PSY 101 (5)

Philosophy—Ethics, Logic, or Critical Thinking: At least five credits selected from PHIL 102, 112, 113, 202, 320, 360 (3 credits each)

Science and Math Requirements:

General Chemistry sequence: CHEM 121¹, 122, 123 (5, 5, 4)

General Biology sequence: BIOL 204², 205, 206 (4, 5, 5)

Organic Chemistry sequence: CHEM 351, 352, 353 (4, 4, 3); labs: 354 & 355/[or 356 for non-Chemistry majors] (3, 3/[2])

CHEM 375 is NOT acceptable

Biochemistry: CHEM 471, 472 (4, 4)

Microbiology with lab: BIOL 345, 346 (3, 2) {Upper-division preferred} or BIOL 245 (5)

Anatomy and Physiology: BIOL 348, 349 (5, 5) {Upper-division preferred}

Calculus: MATH 124 (5) or 157 (4)

Statistics: MATH 240 (4) or equivalent in major, if offered

¹Completion of MATH 114 or Math Placement into 115 or higher is a pre-requisite for CHEM 121
²CHEM 121 is prerequisite to General Biology

NOTE: It is imperative that students begin chemistry as early in their program as possible.

The courses below satisfy WWU GUR and may also apply to pre-pharmacy requirements of some schools.

**ACOM:** ENG 101

**BCOM:** COMM 101, 224; ENG 202

**QSR:** MATH 124, 157, 240; PHIL 102

**HUM:** PHIL 112, 113, 360

**SSC:** ECON 206; PSY 101

**LSCI:** BIOL 204, 205, 206; CHEM 121, 122, 123; PHYS 115, 116, 161, 162, 163

**SCI:** PHYS 114

DECLARING A MAJOR*: Refer to the department of your chosen major for prerequisites and GPA requirements for declaring.

*NOTE: To major in Biology requires a grade point average of 2.9 or better for CHEM 121, 122, 123, and BIOL 204, 205, and 206 in order to advance to Phase II of the Biology major. Admission to Phase II is required in order to take upper division Biology classes.

To major in Biochemistry requires a 3.0 grade average in CHEM 121, 122, 123, 351, 352 and BIOL 205 in order to move on to a Phase II Biochemistry major.

To major in Chemistry (BS) requires a grade point average of 3.0 in CHEM 121, 122, 123, 351, 352 and MATH 124 and 125 in order to move on to a Phase II Chemistry major.

ACCESS TO CLASSES: Due to high student demand for many upper-division courses, especially in the sciences, many departments must give enrollment priority to students for whom these courses are required for their major over those who want to take them for electives. Registration details for these and other heavily impacted programs are posted at department websites.

Biology: https://cse.wwu.edu/biology/registration

Chemistry: https://cse.wwu.edu/chemistry/registration

REPEATING COURSES: is not viewed favorably by professional schools. An isolated case may be acceptable but may also require an explanation in application. Discuss your options first with a Pre-Healthcare Advisor.

Additional Resources

Join the advisors’ Pre-pharmacy Listserv: Send an e-mail to Renee.Murray@wwu.edu with this information: Subject: pre-pharmacy listserv, Last name, First name, student number, and major and concentration (if declared).

WWU Pre-Health Pinterest: www.pinterest.com/wwuprehealth/

Student Clubs: Join health-related clubs through the WWU Associated Students (AS), http://as.wwu.edu/clubs/.

American Association of Colleges of Pharmacy (AACP)
www.aacp.org

Washington State Pharmacy Schools:
- Washington State University www.pharmacy.wsu.edu/
- University of Washington http://sop.washington.edu

Pharmacy College Application Service (PharmCAS)
www.pharmcas.org

Pharmacy College Admission Test (PCAT) www.pcatweb.info

Explore Health Careers: www.explorehealthcareers.org

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American Association of Colleges of Pharmacy (AACP)
www.aacp.org

Washington State Pharmacy Schools:
- Washington State University www.pharmacy.wsu.edu/
- University of Washington http://sop.washington.edu

Pharmacy College Application Service (PharmCAS)
www.pharmcas.org

Pharmacy College Admission Test (PCAT) www.pcatweb.info

Explore Health Careers: www.explorehealthcareers.org

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