About the Profession

Pharmacists distribute prescription drugs to individuals. They also advise their patients, physicians, and other health practitioners on the selection, dosages, interactions, and side effects of medications, as well as monitor the health and progress of those patients to ensure that they are using their medications safely and effectively. Some pharmacists specialize in specific drug therapy areas, such as intravenous nutrition support, oncology, nuclear pharmacy, geriatric pharmacy, and psychiatric pharmacy.

Most pharmacists work in a community setting, such as a retail drugstore, or in a healthcare facility, such as a hospital. Pharmacists who are trained in the United States must earn a Pharm.D. degree from an accredited college or school of pharmacy. Pharm.D. programs generally take four years to complete. The Doctor of Pharmacy (Pharm.D.) degree program requires at least two years of pre-professional (undergraduate) study followed by four academic years of professional study. The majority of first year students enter a pharmacy program with three or four years of college experience.

Prerequisite Courses

The requirements for admission to pharmacy programs vary from school to school, but students wishing to study pharmacy should be certain to take at least a year of biology, chemistry, organic chemistry, general physics, English, college math including calculus, and other social science and humanities courses. Some schools may want biochemistry, microbiology, anatomy, and physiology. One can use any major to apply to pharmacy school. Be sure to consult with the pre-pharmacy adviser at your school or an adviser at the school or college of pharmacy that you plan to attend. School specific requirements are located at the following web site: www.aacp.org/resources/student/Pages/default.aspx.

Suggested Penn State science courses include: calculus (MATH 140), statistics (STAT 200 or 250), general biology (BIOL 110 plus 230W or 240W; or BMB 251, BMB 442, and BIOL 322), general chemistry (CHEM 110, 111, 112, 113), organic chemistry (CHEM 210, 212, 213), general physics (PHYS 250, 251; or PHYS 211, 212, 213, 214) and microbiology (MICRB 201/202 or MICRB106/107). Additional recommended science courses could include anatomy, physiology, and biochemistry. Many schools may require general psychology (PSYCH 100) and economics (ECON 002 or 004).

Pharmacy College Admission Test

Most applicants to pharmacy schools must take the Pharmacy College Admissions Test (PCAT). Visit http://www.aacp.org/resources/student/pharmacyforyou/admissions/Pages/PSAR.aspx to see which schools require the PCAT. The PCAT is administered four times a year and is a pencil/paper format and lasts approximately four hours. The PCAT consists of five scored sections including verbal ability, quantitative ability, biology, chemistry, and reading comprehension. Information on the PCAT can be found at www.pcatweb.info.

Competitive Applicant

Your GPA, PCAT scores, letters of recommendation, and your school interview will be the most important factors in a school’s decision to admit you. Other relevant considerations may be your interpersonal skills and your record of extracurricular, community, pharmacy-related shadowing or research-oriented work. Pharmacy schools require letters of recommendation, and the requirements regarding the type of letters vary by school. In the last several years, the average GPA has been about a 3.29 science GPA and 3.41 overall GPA. The average composite scores for the PCAT was 55th percentile.

Application Process

There are 124 schools of pharmacy in the United States. 100+ of these schools participate in the Pharmacy College Application Service (PharmCAS). For more information about PharmCAS and to access the application, visit https://portal.pharmcas.org/. PharmCAS allows pharmacy school applicants to use a single web-based application and one set of materials to apply to multiple schools and colleges of pharmacy. Applicants who apply through PharmCAS submit a completed web-based application comprised of biographical data, colleges and universities attended, academic course history, letters of recommendation, work experience, extracurricular activities, honors, and a personal essay. PharmCAS will allow students to submit up to four letters of recommendation. For schools that do not participate in PharmCAS, students would need to contact those schools to determine the school’s application process. Because of the differing requirements and application processes, it is imperative that students carefully review each school that they are applying to in order to meet the specified requirements and to apply in the correct manner.
Pharmacy School — Timeline for Success

First Year
— Take entry-level courses in biology, chemistry, and math.
— Focus on getting adjusted academically.
— Get involved in campus activities.
— Begin to explore pharmacy, shadow a pharmacist and consider joining the Penn State Pre-Pharmacy Club.

Sophomore Year
— Start taking organic chemistry and physics.
— Continue to focus on achieving good grades.
— Stay involved in campus activities and pursue leadership positions within an organization.
— Continue gaining experience with a pharmacist.
— Meet with an adviser in the Health Pre-Professional Advising Office.

Junior/Senior Year
— Finish prerequisite courses like physics and life science requirements.
— Check with the schools that you are interested in to determine that you have met their guidelines for admission and if they participate in PharmCAS [http://www.pharmcas.org/collegesschools/schoolpagesPARTinstitution.htm](http://www.pharmcas.org/collegesschools/schoolpagesPARTinstitution.htm)
— Early in the junior year begin studying for the PCAT.

Junior/Senior Year (continued)
— Register for the PCAT at [www.pcatweb.info](http://www.pcatweb.info).
— Apply to pharmacy schools thorough PharmCAS, a centralized application service located at [https://portal.pharmcas.org/](https://portal.pharmcas.org/). If the school does not participate with PharmCAS, contact the school for specific application instructions.
— Continue gaining any relevant experiences with a pharmacist and involvement in extracurricular activities.
— Communicate with the pharmacy schools to make sure your file is complete.

Helpful Web Sites
American Association of Colleges of Pharmacy
[www.aacp.org](http://www.aacp.org)
[http://www.aacp.org/resources/student/Pages/default.aspx](http://www.aacp.org/resources/student/Pages/default.aspx)

Pharmacy School Admission Requirements
[http://www.aacp.org/resources/student/pharmacyforyou/admissions/Pages/PSAR.aspx](http://www.aacp.org/resources/student/pharmacyforyou/admissions/Pages/PSAR.aspx)

Pharmacy College Admissions Test
[www.pcatweb.info](http://www.pcatweb.info)

Pharmacy College Application Service
[https://portal.pharmcas.org/](https://portal.pharmcas.org/)

Advisers are here to help! Contact:
Health Pre-Professional Advising Office
Eberly College of Science
The Pennsylvania State University
213 Whitmore Laboratory
University Park, PA 16802-6101
814-865-7620 or 814-863-3889
[www.science.psu.edu/premed](http://www.science.psu.edu/premed)

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