

Careers in Pharmacy

The **Doctor of Pharmacy (PharmD)** is the professional degree to prepare licensed pharmacy practitioners. The PharmD is granted after a four-year doctoral program following a minimum two years of pre-pharmacy college coursework. The large majority of students who enter PharmD programs have completed a bachelor's degree. (A PhD in pharmaceutical sciences or a related field is the degree which prepares students for research careers.)

The American Association of Colleges of Pharmacy (AACP) annually publishes Pharmacy School Admission Requirements (PSAR), which offers information on each pharmacy school. www.aacp.org features the same information and more as well as links to individual school sites.

TEXAS PHARMACY PROGRAMS

Texas A&M University – Kingsville College of Pharmacy

Texas Southern University College of Pharmacy and Health Sciences

Texas Tech University – Amarillo School of Pharmacy

University of Houston College of Pharmacy

The University of Texas at Austin – College of Pharmacy

University of the Incarnate Word – Feik School of Pharmacy

ADMISSION REQUIREMENTS

Admissions committees assess a candidate's **academic preparation** (i.e., undergraduate coursework and GPA and, in some cases, standardized test scores) as well as his or her **professional potential** (via biographic information and knowledge of the profession conveyed in the application and personal characteristics communicated via letters of reference and an admissions interview). Undergraduate grade point averages for entering pharmacy students typically range between 3.1 and 3.6. Pharmacy schools seek to admit students from a diversity of academic, cultural, economic and social backgrounds.

Pre-pharmacy course requirements typically include, but are not limited to:



Career Services

Southwestern University at Georgetown, Texas
McCook-Crain Building, 512.863.1346, 512.863.1270 fax
career.services@southwestern.edu
www.southwestern.edu/careers

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General chemistry (with labs)	Physics
Organic chemistry (with labs)	Calculus
Biology (with lab)	Economics
Speech/Public speaking	Psychology
Writing/Composition	

Some schools also require a course in:

Microbiology	Human anatomy
Mammalian physiology	Biochemistry
Interpersonal communication	Statistics

Applicants must take additional electives in the humanities and social sciences to satisfy general admission requirements for schools of pharmacy. For the most current admissions requirements, check school specific information on www.pharmcas.org, contact pharmacy schools or review Pharmacy School Admission Requirements.

Standardized Tests

Many pharmacy schools require applicants to take the Pharmacy College Admission Test (PCAT), administered by Harcourt Assessment, Inc. The five content sections of the PCAT are designed to measure verbal ability, quantitative ability, reading comprehension, knowledge of basic principles and concepts of biology, general and elementary organic chemistry and writing. The PCAT is typically offered once each in the summer, fall and winter. PCAT information, including test center locations (Austin is one option), online registration and sample tests are available online at www.pcatweb.info.

Non-Academic Requirements

Admissions committees are interested in each applicant's personal characteristics such as his/her demonstrated ability to communicate effectively both orally and in writing, motivation to be a pharmacist, maturity and interest in serving others. These qualities are assessed through the information the applicant provides in the application essay, letters of reference and the personal interview. Pharmacy schools encourage applicants to seek out experiences (paid or unpaid) that will help them confirm pharmacy as their career choice. Most successful applicants have some record of experience that might also have helped them develop skills like interviewing, listening, advising or teaching, although such experience is not required.

A **personal statement** or some other form of written narrative is part of each application. This essay provides the candidate an opportunity to describe the

process and experience by which he/she decided to become a pharmacist and other academic and life experiences which helped develop the candidate as a person. Career Services will critique essays on request.

Letters of reference (two or three) from some combination of the applicant's instructors, supervisors, extracurricular advisors or pharmacy professionals are required to provide more information on each candidate.

Interviews are required of applicants whom the admissions committee views as most competitive for admission. The interview facilitates assessment of the applicant and affords the chance to tour the campus, meet with faculty and currently enrolled students and learn about financial aid and housing. Interview feedback from students who have interviewed previously at specific schools is very valuable. Visit www.studentdoctor.net to read about interviewing experiences posted by pharmacy school applicants across the country.

THE APPLICATION PROCESS

PharmCAS (Pharmacy College Application Service), a service of the AACP, is the initial pharmacy application for the majority of US pharmacy schools. Applicants complete the PharmCAS application and send college transcripts to PharmCAS. Pharmacy schools then invite qualified applicants to complete a secondary application, including reference letters. **Application deadlines** typical range from November 1 to March 1 for entry in the following Fall. Applicants are advised to apply early, particularly if the school uses a rolling admission process. Consult Pharmacy School Admissions Requirements or www.pharmcas.org for information on curriculum, GPA, test scores, admission requirements, tuition, location, housing and other factors as you choose schools to which you will apply.

THE PHARMACY PROFESSION

Although pharmacists are known as professionals whose primary function is to compound and dispense medicines prescribed by physicians, dentists or other authorized health care providers, the responsibilities of pharmacists are substantially broader, primarily in the areas of direct patient care and patient education. Pharmacists must have strong communication skills and the ability to relate well to patients and other health care providers. As pharmacists have become more involved in education patients about the medications they are taking including drug interactions and side effects, communication skills have become increasingly important. Pharmacists who work in community pharmacies must also develop effective management and interpersonal skills.

The majority of pharmacists work in community pharmacies, from independent prescription only, such as those found in medical offices, to retail chain pharmacies which also sell other items. Other

pharmacists work in hospitals and other health care facilities are employed in research and development efforts in research or manufacturing companies or are engaged in teaching or research in universities. Opportunities are also becoming available for pharmacists with advanced training (PharmD plus fellowship or residency) to work as clinical pharmacists in practitioner specialties such as ambulatory care, clinical pharmacokinetics, geriatrics, oncology, psycho pharmacy, drug information and nutrition support. Pharmacists have also been instrumental in establishing many of the poison information and control centers across the country. Many pharmacists spend most of their workday on their feet. Many community and hospital pharmacies are open for extended hours or around the clock, so pharmacists may work nights, weekends and holidays. About 21 percent of pharmacists worked part-time in 2004. Most full-time salaried pharmacists worked approximately 40 hours a week. Some, including many self-employed pharmacists, worked more than 50 hours a week. There is currently a nationwide shortage of pharmacists, and the job outlook for the profession is excellent. Median annual wage and salary earnings of pharmacists in May 2004 were \$84,900. The middle 50 percent earned between \$75,720 and \$94,850 a year. The lowest 10 percent earned less than \$61,200, and the highest 10 percent earned more than \$109,850 a year.

Related Occupations

Pharmacy technicians and pharmacy aides also work in pharmacies. Persons in other professions who may work with pharmaceutical compounds include biological scientists, medical scientists and chemists and materials scientists. Increasingly, pharmacists are involved in patient care and therapy, work that they have in common with physicians and surgeons.

ADDITIONAL RESOURCES

Bureau of Labor Statistics – Pharmacists:
www.bls.gov/oco/ocos079.htm

PharmWeb: www.pharmweb.net

National Association of Boards of Pharmacy
www.nabp.net

American Society of Health-System Pharmacists:
www.ashp.org

National Association of Chain Drug Stores:
www.nacds.org

Academy of Managed Care Pharmacy:
www.amcp.org

American Pharmacists Association: www.aphanet.org

*Adapted from:
Career Services Center, University of California, San Diego
US Department of Labor Bureau of Labor Statistics*