

GENERAL CAREER INFORMATION

Pharmacists are a vital part of a complete health care system. The number of people requiring health care services has steadily increased, and this trend will likely continue due to:

- increases in average life span and the increased incidence of chronic diseases;
- the increased complexity, number, and sophistication of medications and related products and devices;
- increased emphasis on primary and preventive health services, home health care, and long term care; and
- concerns about improving patients' access to health care, controlling its cost, and assuring its quality.

Modern pharmacy offers outstanding opportunities for professional service and personal achievement. Pharmaceutical care is the philosophy in which the pharmacist cares for their patients and shares responsibility with other members of the health care team to better achieve more favorable drug therapy outcomes in their patients. With minimal risk to patients, outcomes of drug therapy can include:

- cure of a disease;
- elimination or reduction of symptoms;
- arresting or slowing a disease;
- prevention of disease;
- desired alterations in physiological processes.

Private consulting areas, pharmacist house calls, and medication monitoring procedures are but a few of the revolutionary changes the pharmacy profession is engaged in to ensure adequate and proper pharmaceutical care for consumers. Since the pharmacist is frequently more accessible and often sees patients on a more consistent basis, the pharmacist can assist physicians in determining medication effectiveness, patient tolerance to medications, and other related factors that affect the success of a patient treatment program.

Pharmacists also are playing an increasing role in the "wellness" movement, especially through counseling about preventive medicine. The areas of natural (herbal) products therapy and the effective use of over-the-counter vitamins and minerals has blossomed in response to the more informed and educated clientele who desire more responsibility for their health. Pharmacists serve patients and the community by providing information and recommendations that can complement medications and associated services.

Likewise, advances in the use of computers in pharmacy practice now allow pharmacists to spend more time educating patients, as well as monitoring and maintaining patient records. As a result, patients have come to depend on the pharmacist as a health care and information resource of the highest caliber.

Health Care settings are diverse and abundant. Most states continue to experience a shortage of pharmacists. Sources identify 112,000 pharmacists in community pharmacy (66,000 in chain pharmacies; 46,000 in independent pharmacies), 40,000 in hospitals, and 21,000 in consulting, government, academic, industry, and other settings.

EDUCATION AND TRAINING

A quality education is an essential stop on the road to a successful pharmacy career. There are eighty-two (82) colleges within the U.S. with eighty-one (81) colleges offering the Doctor of Pharmacy (Pharm.D.) degree. The Pharm.D. is obtained after four years within a professional program.

Pre-pharmacy curriculum requirements for admission into pharmacy colleges can be met in a two or four-year college or university. It will take two to three years for most students to complete these requirements. While a student may major in liberal arts or other non-science majors, the student should be advised that a strong background in science and mathematics is essential. A prior degree is not required; though many students enter the program with at least a bachelor's degree.

The Pharmacy College Admissions Test (PCAT) is required by all Texas pharmacy schools and most pharmacy schools nationwide. The year before applying to a pharmacy college is the time to begin preparing for the exam. This standardized exam is offered three times each year (January, June, and October). A student may take the exam as many times as desired with the understanding that a solid grade of at least 50% in each of the sections on one sitting is desirable.

The PCAT consists of five scored sections—Verbal Ability, Biology, Reading Comprehension, Quantitative Ability, and Chemistry. The PCAT is scored from 200 to 600, with a mean score between 340 and 460 and a standard deviation around 30 points. The score is given as a percentile based on the strength of the applicant pool (60% means you scored higher than 60% of other test takers). Scores are released within four weeks after taking the exam. Preparation assistance for the exam is offered year-round by several companies. More information about the PCAT can be obtained at www.PCATweb.info.

After a student has completed the requirements for a professional degree, he/she must pass a state licensing examination in order to engage in professional practice. Pharmacy is the third largest health profession (after nursing and medicine) with approximately 180,000 clinicians practicing in community pharmacies, hospitals, and a variety of other health care setting.

PHARMACY EDUCATION IN TEXAS

Six colleges of pharmacy are located in Texas: Texas Southern University, Texas Tech at Amarillo, University of Houston, University of Texas at Austin and University of the Incarnate Word and Texas A&M University-Kingsville. All Texas pharmacy schools admit students once in the fall semester of each year. The selection process involves many factors including academic background, PCAT scores, recommendations, a personal interview, writing and verbal proficiency, community service endeavors, and extracurricular activities. Pharmacy experience is encouraged to assist the student in a better understanding of the career path. The competitive student has an average GPA of 3.2 or above but this may vary depending on the pharmacy school.

The University of Texas - Austin

College of Pharmacy
1 University Station, A1900
Austin, TX 78712-1020
Tel: (512) 471-1737
<http://www.utexas.edu/pharmacy>

Texas Tech University

School of Pharmacy
1300 Coulter Suite 112
Amarillo, TX 79106
Tel: (806) 354-5418
<http://www.ttuhschool.edu/sop>

Texas A&M -Kingsville

Irma Lerma Rangel College of Pharmacy
Texas A&M Health Science Center
MSC 131
1010 West Avenue B
Kingsville, Texas 78363-8202
Tel: 361.593.4271
<http://www.tamuk.edu/pharmacy/>

Texas Southern University

College of Pharmacy and Health Science
Texas Southern University
3100 Cleburne Street
Houston, TX 77004
Tel: (713) 313-4345
<http://www.tsu.edu/academics/pharmacy>

University of Houston

College of Pharmacy
4800 Calhoun Rd
Houston, TX 77204
Tel: (713) 743-1239
<http://www.uh.edu/pharmacy/index.html>

University of the Incarnate Word

Feik School of Pharmacy
4301 Broadway, CPO #99
San Antonio, TX 78209-6397
Tel. (210) 805-3012
<http://www.uiw.edu/pharmacy/>

American Association of Colleges of Pharmacy

1426 Prince Street
Alexandria, Virginia 22314
<http://www.aacp.org>

American Pharmaceutical Association

2215 Constitution Avenue, NW
Washington, DC 20037-2985
<http://www.aphanet.org>

SUMMARY INFORMATION AND PHARMACY ADMISSION REQUIREMENTS

Students should carefully examine and understand specific requirements at the individual schools via their websites and published information.

Texas Colleges of Pharmacy	TSU	Tx Tech	UH	UT Austin	UIW	TAMU-K
Application Deadline	Feb 15	March 1	Feb 15	March 15	Jan 15	Feb 15
PCAT	Required	Required	Required	Required	Required	Required
<i>The following coursework must be completed with a "C" or better by the end of the spring semester prior to admission to the pharmacy program.</i>						
English Composition I & II	6 hrs	6 hrs	6 hrs	6 hrs	6 hrs	6 hrs
English Literature	3 hrs	3 hrs			3 hrs	3 hrs ^b
Speech Communications	3 hrs	3 hrs	3 hrs			3 hrs
General Biology I&II (w/labs)	10 hrs	8 hrs	8 hrs	6 hrs	8 hrs	8 hrs
Microbiology (w/ lab)		4 hrs	4 hrs	4 hrs	4 hrs	4 hrs
Genetics				3 hrs	3 hrs	
Vertebrate Anatomy (w/ lab)^a	4 hrs				4 hrs	
General Chemistry I&II w/lab	8 hrs	8 hrs	8 hrs	8 hrs	8 hrs	8 hrs
Organic Chemistry I&II w/lab	8 hrs	8 hrs	5 hrs	8 hrs	8 hrs	8 hrs
Physics I and/or II	4 hrs	4 hrs	3 hrs	4 hrs	4 hrs	4 hrs
College Algebra	3 hrs ^c					
Pre-Calculus	3 hrs				3 hrs	
Calculus		3 hrs	3 hrs	3 hrs ^d	3 hrs	
Statistics		3 hrs	3 hrs	3 hrs	3 hrs	3 hrs
Pharmacy Orientation	2 hrs					
Pharmacy Application	2 hrs					
Medical Terminology	1 hr					
<i>The following coursework must be completed with a "C" or better by the end of the first summer term prior to admission to the professional program.</i>						
American History I & II	6 hrs		6 hrs	6 hrs	3 hrs	6 hrs
Political Science I & II	6 hrs		6 hrs	6 hrs		6 hrs
Macroeconomics		3 hrs				
Computer Science	3 hrs					
Social & Behavioral Science	3 hrs		6 hrs	3 hrs	3 hrs	3 hrs
Arts and Humanities	3 hrs	15 hrs ^e	6 hrs	3 hrs	3 hrs	
Foreign Language				6 hrs ^f		

- a** Vertebrate Anatomy – 4 hrs; Anatomy & Physiology- 8 hrs; Human Physiology – 4 hrs
- b** Literature, Language, Philosophy, Anthropology, or Geology
- c** Any higher level math (Statistics only in Math Dept)
- d** Calculus must include differential and at least an introduction to integral calculus. In addition, business calculus will no longer satisfy the calculus requirement
- e** Courses may be selected from any mix of Anthropology, Communications (excluding Public Speaking prerequisite), Economics (excluding Economics prerequisite), Ethnic Studies, Family Living/Human Development, Geography, History, Journalism, Philosophy, Political Science (Government), Psychology, and Sociology. -- Note: Performing and Fine Arts (including Music), Physical Education, Foreign Languages, Religion, Computers or similar courses will not meet this requirement.
- f** Either 2 years high school or 2 semesters college

*Due to college placement exams, the pre-professional student may have additional prerequisites to complete before entering the listed courses. Students are advised to contact the health professions advisor or admissions director of the schools for changes or additional requirements. As admission is highly competitive, students are advised to apply to more than one college. On-line application process is available for many of the schools listed.