PRE-PHARMACY

CAREER INFORMATION

The pharmacist is a professional specialist in the science of drugs. She/he possesses comprehensive knowledge of all drugs. Some areas of knowledge are (a) chemical and physical properties of drugs, (b) the composition, manufacture and uses of pharmaceuticals, and (c) the effect of drugs on the normal and the sick body.

Although the role of the pharmacist has traditionally been linked to the dispensing of prescriptions, increased technology and improved health care delivery has opened up new careers in addition to retail pharmacy for the licensed pharmacist. Mirroring trends in other health sciences, curricula in pharmacy schools have moved from an emphasis on drug information to a more holistic approach that emphasizes the application of this knowledge to the care of patients. As part of a health care team, the clinical pharmacist serves as the authoritative source of drug information, and may advise the medical staff on selection and effects of drugs on patients. Other pharmacy careers that are open to the licensed pharmacist include industrial pharmacy, governmental pharmacy (FDA) service representation, research, teaching and administration.

Although not required at the UC San Francisco (UCSF), University of Pacific (UOP), USC or Western University of Health Sciences (WUHS) it is strongly recommended that the pharmacy school applicant have some exposure to the field of pharmacy. This exposure is important because it ensures that the individual is aware of what the pharmacy profession entails.

DEGREE INFORMATION

There are two types of professional degrees offered in pharmacy, the Bachelor of Science in Pharmacy (B.S. Pharmacy) and Doctor of Pharmacy (Pharm.D). Both degrees are designed to train a scientifically and technically competent pharmacist. The B.S. program is usually 5 academic years in length and limits the pharmacist to non-clinical pharmacy. The Pharm.D. program requires a minimum of two years pre-professional plus three to four years of professional study and includes training in clinical pharmacy. A Pharm.D. is usually necessary for administrative work, research, and college teaching.

A Bachelor of Science Program
A Bachelor of Science in Pharmacy is no longer offered in California.

Pharm. D. Program:
The four schools in California (UCSF, UOP, USC and WUHS) offer the Pharm. D. degree. Student may enter the program with or without a baccalaureate degree provided that they have completed the minimum units required and course work at an undergraduate institution before beginning the pharmacy program.

EDUCATIONAL REQUIREMENTS

The minimum educational requirement for licensure as a pharmacist is a Bachelor of Science degree from an accredited school of pharmacy. This is typically a 5-year program with a 1-year internship, which is usually completed during, or following the completion of professional training. Completion of minimum educational requirements confers eligibility to take the state licensing examination.

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION
**UNIVERSITY OF CALIFORNIA, SAN FRANCISCO**

- **Doctor of Pharmacy**
  A minimum of 62 transferable semester units is required including:

  Requirements (Per articulation agreement): Chem 1A, 1B, 12A, 12B; Bio 1A, 1B; Engl 1 and 2 or 3 or 3H; Econ 1A or 1AH or 1B; Math 60, 70; Physics 2A+2B or 3A+3B; Speech 10 or 60; Physi 1 or Anat 41; one UC-transferable course in one of the following areas: Psychology, Sociology, Cultural Anthropology or related area.

  For additional information, contact UC San Francisco School of Pharmacy at (415) 476-2732.

**UNIVERSITY OF PACIFIC (UOP)**

- **Doctor of Pharmacy**
  A minimum of 64 transferable semester units is required including:

  Pre-requisites (Advisory based upon catalog information): Anthr 2 or History 18; Bio 1A, 1B, 2; Chem 1A, 1B, 12A* 12B*; Econ 1A; Engl 1 or 1H and 2 or 3 or 3H; Math 60; Physics 2A or 3A; Psych 1; Speech 10 or 60; one course from: Hist 1A, 1AH, 1B, 1BH, Phil 6; one course from: Art 1, 1H, 2, 2H, 5, 5H, 9, Music 30A, 30B, Tart 25; and 4 additional semester units of liberal arts courses.

  * Please note that some pharmacy programs require upper division organic chemistry sequence. Please contact the four-year institution to ascertain whether LBCC’s lower division organic chemistry sequence will fulfill the pre-pharmacy requirement.

  For additional information, contact University of Pacific School of Pharmacy at (209) 946-2528.

**UNIVERSITY OF SOUTHERN CALIFORNIA (USC)**

- **Doctor of Pharmacy**
  A minimum of 60 transferable semester units is required including:

  Pre-requisites (Advisory based upon catalog information): Bio 1A, 1B; Chem 1A, 1B, 12A*, 12B*; Econ 1A or 1B; Engl 1 or 1H and 2 or 3 or 3H; Math 60; Psych 1 or 1H; Speech 10 or 60; two UC-transferable courses in literature, philosophy, history, ethics, foreign language, or fine arts; two courses in electives, preferably in biochemistry, human anatomy, physiology, computer science, statistics, and physics.

  * Please note that some pharmacy programs require upper division organic chemistry sequence. Please contact the four-year institution to ascertain whether LBCC’s lower division organic chemistry sequence will fulfill the pre-pharmacy requirement.

  For additional information, contact USC School of Pharmacy at (323) 342-1466.

SEE NEXT PAGE FOR ADDITIONAL INFORMATION
WESTERN UNIVERSITY OF HEALTH SCIENCES (WUHS)

- **Doctor of Pharmacy**
  
  A minimum of 60 transferable semester units is required including:

  **Pre-requisites (Advisory based upon catalog information):** Engl 1 or 1H and 2 or 3 or 3H; Speech 10 or 60; Anat 1; Physi 1; Bio 2; Chem 1A, 1B, 12A*, 12B*; Math 60; 2 courses from following areas: public speaking/debate, social sciences or economics.

  * Please note that some pharmacy programs require upper-division organic chemistry sequence. Please contact the four-year institution to ascertain whether LBCC’s lower-division organic chemistry sequence will fulfill the pre-pharmacy requirement.

  For additional information, contact Pharmacy Admissions, Western University of Health Sciences at (909) 469-5541.

**NOTE:** Each individual school of pharmacy has its own specific requirements and deadlines which are subject to change from year to year. **It is the applicant’s responsibility to determine the requirements of the school(s) of his/her choice and to fulfill these requirements before the projected date of entrance.** Contact each school for information and applications the summer before you plan to apply in order to be able to meet deadlines and fulfill the course requirements. It is imperative that you apply in a timely manner.

**Pharmacy College Admission Test (PCAT)**

The PCAT is designed to measure general academic ability and scientific knowledge. The examination includes verbal ability, quantitative ability, biology, chemistry and reading comprehension. California schools do not require the PCAT, but most out-of-state schools do.

**Letters of Recommendation**

Most pharmacy schools require that the applicant send 2 or 3 letters of recommendation. It is advisable that one letter be from a pharmacist, preferably one with whom you have worked, who can evaluate your ability and the kind of asset you will be to the profession. Also, letters from science instructors and/or former employers may be required.

**For additional information on all schools of pharmacy in the United States, write to:**

Pharmacy School Admission Requirements (PSAR)
American Association of Colleges of Pharmacy
Office of Student Affairs
4360 Montgomery Ave., Suite 201
Bethesda, Maryland 20814