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Office of Admissions: 122 Science and Research 2	713-743-1239
Associate Dean for Academic Affairs: 141 Science and Research 2	713-743-1262
Associate Dean for Practice Programs: 431 Pharmacy Building—Texas Medical Center	713-795-8338
Assistant Dean for Student Affairs: 122 Science and Research 2	713-743-1298
Pharmacological and Pharmaceutical Sciences 521 Science and Research 2	713-743-1222
Clinical Sciences and Administration: 318 Pharmacy Building—Texas Medical Center	713-795-8380
Internet Address:	www.uh.edu/pharmacy/

Dean: Sunny E. Ohia, Ph.D., University of Glasgow, United Kingdom

Executive Vice-Dean for Research: Mustafa F. Lokhandwala, Ph.D., University of Houston

Associate Dean for Academic Affairs: Shara L. Zatopek, M.A., Houston Baptist University

Associate Dean for Practice Programs: Ray Hammond, Pharm.D., University of Tennessee

Assistant Dean for Student Affairs: Andrea Smesny, Pharm.D., University of Houston

Director of Admissions & Recruitment: Paige Pitman, M.B.A., University of Houston

Director of Assessment: Thomas L. Lemke, Ph.D., University of Kansas

Director of Communications: Lindsay Lewis, M.A., Baylor University

Director of Counseling & Advising: Barbara Tatum, M.A.R.E., Southwestern Baptist Theological Seminary; Licensed Professional Counselor

Director of Information Technology: Remi Ademola, B.S., University of Lagos, Nigeria

College Business Manager: Charles Henry

Degrees Offered

The College of Pharmacy offers a four-year professional program leading to the Doctor of Pharmacy (Pharm.D.) degree. Completion of a pre-pharmacy program is required for admission into the professional program. The Department of Clinical Sciences and Administration offers the Master of Science degree in pharmacy administration. The Doctor of

Philosophy (Ph.D.) degrees in pharmaceuticals and pharmacology are offered by the Department of Pharmacological and Pharmaceutical Sciences. The college also offers a combined Pharm.D./Ph.D. degree program.

The Profession

The College of Pharmacy, established in 1947, prepares students to enter into the practice of pharmacy and to function as professionals and informed citizens in a changing health care system and to assume important roles as drug information specialists and primary care providers.

Upon graduation, the new professional utilizes a foundation of skills in administrative, biological, clinical, and pharmaceutical sciences to take an active role in contemporary pharmacy practice—shaping policies and the future directions of the profession. Career options in pharmacy are virtually unlimited. From community to hospital practice, from home care to nuclear pharmacy, from clinical practice to basic science research in the pharmaceutical industry, pharmacists participate in areas that provide patient care and unravel the mysteries of human health. Employment opportunities are also available in academia. Pharmacists educate health care professionals, undergraduate and graduate students, and patients in institutions and communities throughout the world.

Pharmacists are responsible for supervising the drug distribution process, selecting appropriate drug therapies, determining drug dosages and routes of administration, and monitoring therapeutic outcomes. Working with other health care providers—physicians, nurses, veterinarians, and dentists—pharmacists complement the health care system by providing pharmaceutical care.

The College

Students at the College of Pharmacy have at their disposal virtually every resource and opportunity they need to acquire a first-class education in pharmacy. In the college's facility on the University of Houston campus, an Education Technology Center provides

advanced hardware and specialized software for class work and research needs. For study and research needs, students can take advantage of the college's specialized library. The library offers thousands of volumes and more than 165 journal subscriptions. In the college's second facility in the world-renowned Texas Medical Center, the students have the opportunity to train with physicians, medical students and members of our clinical faculty. In addition to faculty/staff offices, research laboratories, computer center, and classrooms, the building houses the Contemporary Pharmacy Practice Laboratory (CPPL). In the CPPL, students learn techniques in pharmaceutical care by role-playing situations they would experience as pharmacists. The Sterile Products Laboratory teaches students the latest aseptic methods of drug formulation and preparation, especially for use in hospitals and home care.

Accreditation

The College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education and holds membership in the American Association of Colleges of Pharmacy.

Pre-Pharmacy Program

Pre-Pharmacy

Students who wish to enter pre-pharmacy at the University of Houston must apply for admission through the university's Office of Admissions. They must satisfy all admission and scholastic requirements outlined in the Admission, Advising, Orientation, and Registration section of this catalog. It should be emphasized that university regulations limit acceptance of hours from a junior or community college to 66 hours.

International Students

International students applying for admission to the pre-pharmacy program at the university, requiring evaluation of a foreign transcript should initiate their application with the college's Office of Admissions, College of Pharmacy, 141 Science & Research Building 2, Houston, Texas 77204-5000 or refer to www.uh.edu/pharmacy/international.html.

Transfer Students

Students who take their pre-pharmacy work at other institutions should meet the curriculum requirements for pre-pharmacy as outlined in this section of the catalog. Students are encouraged to consult the dean of the college they are attending for assistance in selecting courses at other institutions. The College of Pharmacy will determine the number of transferable credits according to regulations and policies existing at the time of the students' enrollment. It should be emphasized that university regulations limit acceptance of hours from a community college to 66.

Students Enrolled at UH

It is recommended that all pre-pharmacy students matriculating at the University of Houston register for Introduction to Pharmacy (PHAR 2200) during either the first or second pre-pharmacy year.

Pre-Pharmacy Curriculum

University Core Curriculum

All bachelor's degrees require completion of a core curriculum. Further information on courses that satisfy core curriculum requirements can be obtained by consulting the current class listings, an academic advisor, or the core curriculum website, www.uh.edu/academics/corecurriculum.

Core Curriculum Requirements	Hours
Communication	6
Mathematics	3
Mathematics/Reasoning	3
U.S. History	6
American Government	6
Humanities	3
Visual/Performing Arts	3
Natural Sciences	6
Social/Behavioral Sciences, (3 hours must be writing intensive)	6

College of Pharmacy's Pre-Pharmacy Curriculum Requirements

College of Pharmacy's Pre-Pharmacy Curriculum Requirements	Hours
BIOL 1361 and 1161. Introduction to Biological Science I, Lab	4
BIOL 1362 and 1162. Introduction to Biological Science II, Lab	4
CHEM 1331. Fundamentals of Chemistry I	3
CHEM 1111. Fundamentals of Chemistry I Lab	1
CHEM 1332. Fundamentals of Chemistry II	3
CHEM 1112. Fundamentals of Chemistry II Lab	1
CHEM 3331. Fundamentals of Organic Chemistry I	3
CHEM 3221. Fundamentals of Organic Chemistry I Lab	1-2
CHEM 3332. Fundamentals of Organic Chemistry II	3
CHEM 3222. Fundamentals of Organic Chemistry II Lab	1-2
PHYS 1301. Introductory General Physics OR PHYS 1321. University Physics I OR Two semesters of high school physics	3
BIOL 2333. Elementary Microbiology	2-3
BIOL 2133. Elementary Microbiology Lab	1
COMM 1332. Fundamentals of Public Speaking	3
ENGL 1303. Freshman Composition I	3
ENGL 1304. Freshman Composition II ¹	3
HIST 1377. The United States to 1877 OR equivalent	3
HIST 1378. The United States Since 1877 OR equivalent	3
MATH 1314. Calculus for Business and the Life Sciences	3
MATH 2311. Introduction to Statistical Analysis	3
POLS 1336. U.S. and Texas Constitution and Politics, OR equivalent	3
POLS 1337. U.S. Government: Congress, President and Courts, OR equivalent	3
PSYC 1300 or SOC 1300. Introduction to Psychology OR Introduction to Sociology	3
Social Science Writing Intensive Core Course ²	3
Humanities Core Course ^{1,2}	3
Visual/Performing Art Core Course ^{1,2}	3

The College of Pharmacy offers students an opportunity to earn credit without a grade in specific courses through a credit by examination program. The tests utilized for placement with credit are: (1) Advanced Placement (AP), (2) College Level Examination Program (CLEP), and (3) departmental examinations offered by the university. For information about eligibility for any of the tests or to report score transfers write: University Testing Service, University of Houston, 210 Student Service

¹Exempt if core complete when transferring to UH from another Texas college/university OR have earned a baccalaureate degree or higher from an accredited college/university in the U.S.A.

²Refer to www.uh.edu/academics/corecurriculum for a listing of UH coursework.

Center 1, Houston, Texas 77204-3025 or visit the website at www.las.uh.edu/UTS.

Grade Point Average Requirements

In order to remain a pre-pharmacy major, students must maintain the following minimum grade point average requirement in both the overall and math/science courses included in the pre-pharmacy curriculum requirements given above.

	Minimum Required Grade Point Average
End of first semester of freshman year	2.50
End of second semester of freshman year	2.75
End of second semester of sophomore year	2.80
End of second semester of junior year	2.90
End of second semester of senior year	3.00

Students are allowed one semester to work with an advisor to improve their grade point average to that of the minimum requirement. Students not meeting these minimum grade point average requirements will have a stop placed on their registration record until such time as they change majors.

It is important to note that meeting these minimum grade point average requirements constitutes a necessary but not sufficient condition for admission to the Pharm.D. program in the College of Pharmacy. The grade point average for admitted students is considerably higher than those given above.

This policy does not apply to incoming transfer students who must have a 2.75 grade point average in both their overall pre-pharmacy prerequisite courses and math/science pre-pharmacy prerequisite courses to become a pre-pharmacy major. Once a transfer student becomes a UH pre-pharmacy student, the minimum grade point average requirement applies, as for all pre-pharmacy students.

Professional Programs

Doctor of Pharmacy (Pharm.D.) Program

The curriculum for the Doctor of Pharmacy degree includes a minimum 205 semester hours of college work, 141 semester hours of which must be pharmacy courses or the equivalent. The Pharm.D. program is a full-time program including some summers. Students with course credit for non-pharmacy courses similar to those courses in the professional program may petition for equivalency credit. Refer to the Graduate and Professional Studies catalog for more information about the program and regulations.

Students must complete six hours in pharmacy elective courses. Three of the six pharmacy elective hours may be satisfied by completion of a special problems course (PHAR 5198, 5298, or 5398), which involves a research project with a faculty member in the College of Pharmacy.

Pharmacy students are required to comply with all changes in the curriculum made subsequent to the year in which they matriculated. Deletions and additions of courses will be of approximately equal credit so that no student will have an overall appreciable increase of total credits required for graduation.

The college requires at least four years in residence

in the professional program at the College of Pharmacy for graduation. Students transferring from another school or college into the professional program are required to complete at least the last 30 semester hours of pharmacy and related work in residence at the University of Houston.

General Requirements for a Pharm.D. Degree

Students are required to meet the general requirements for a baccalaureate degree, including completion of university core curriculum requirements. See the Academic Regulations and Degree Requirements section of this catalog for details.

Immunization Requirement

All applicants accepted into the University of Houston College of Pharmacy program must present proof of adequate immunization against rubeola (common measles), rubella (German measles), mumps, varicella (chicken pox), and tetanus prior to beginning the first professional year.

The Hepatitis B immunization series must be initiated prior to the beginning of the first professional year and completed by January 31 of the second semester of the first professional year.

A negative TB skin test or chest clearance must be documented no sooner than three months prior to beginning the fall semester and thereafter the documentation must be provided annually to the University of Houston College of Pharmacy Admissions Office.

Internship Requirement

Under the Texas State Board of Pharmacy Rules and Regulations, a pharmacy student is required to register as a student pharmacist-intern prior to performing student internship duties and only after successfully completing at least 30 credit hours of coursework towards a professional degree in pharmacy. The agreement for registration requires a student to reveal personal history (i.e. conviction of a felony or any misdemeanor other than a minor traffic violation).

For more information, contact the Texas State Board of Pharmacy, William P. Hobby Building, Suite 3-600, 333 Guadalupe, Box 21, Austin, Texas 78701-3942.

Texas Board of Pharmacy State Registration

Students graduating with the Doctor of Pharmacy degree are eligible to sit for the NAPLEX examination and the MPJE (Multiple Pharmacy Jurisprudence Examination).

All application material and admission inquiries for the Doctor of Pharmacy (Pharm.D.) program should be addressed to:

University of Houston
Office of Admissions
College of Pharmacy
122 Science & Research Building 2
Houston, TX 77204-5000

Internet address: www.uh.edu/pharmacy

Pharmacy

Admission

Admission to the professional Pharm.D. program may be achieved by three methods:

1. Upon satisfactory completion of the pre-pharmacy program at either the University of Houston or another accredited college, students must submit an application for admission to the professional program directly to the college.
2. Students who complete at least 30 credit hours of the pre-pharmacy program with a minimum 3.50 grade point average will be considered for early acceptance into the professional program. Students must successfully complete all remaining pre-pharmacy requirements with sufficiently high grades in all courses; submit scores from the Pharmacy College Admission Test (PCAT); submit two reference forms, one from a registered pharmacist and one from a professor, academic advisor or committee; and have a satisfactory personal interview, a writing skills evaluation, and a teamwork assessment before being given formal admission.
3. Students admitted to the university directly from high school with the objective of entering the professional pharmacy program will be considered for early acceptance into that program if they provide evidence of high SAT and ACT scores and rank in the upper half of their high school graduating class. Students must successfully complete the pre-pharmacy program with sufficiently high grades in all courses; report PCAT scores; submit two reference forms, one from a registered pharmacist and one from a professor, academic advisor or committee; and have a satisfactory personal interview, a writing skills evaluation, and a teamwork assessment.

All students must submit the completed application packet by the application deadline: February 15. Applicants should ensure that official transcripts of all previous academic work, including the University of Houston, are enclosed with the application. The college must receive applications by February 15 from those students who wish to enter in the fall semester. For formal application to the professional program all applicants must: (A) complete all math and science courses by June 1 prior to the anticipated fall enrollment. All remaining prerequisite coursework must be completed prior to enrollment into the fall class; however, students may apply for admission while in the process of completing the prerequisite coursework. (B) Report PCAT scores. (C) Submit two reference forms, one from a U.S. registered pharmacist and the other from a college or university professor, academic advisor or committee.

In deciding on admission to the professional program, the Admissions and Progression Committee will evaluate many factors including grades earned in pre-pharmacy courses, particularly in science and math, PCAT scores, reference forms, the results of a personal interview, writing and teamwork skills evaluation, if administered by the college, and a list of the applicant's community service, honors, awards, and extracurricular activities.

International Students

International students applying for admission to the professional program must contact the college's Academic Advisor, University of Houston, College of Pharmacy, 122 Science & Research Bldg. 2, Houston, TX 77204-5000 or visit www.uh.edu/pharmacy/internatadvising.html.

Transfer Students

Students who take their pre-pharmacy work at other institutions should meet the curriculum requirements for pre-pharmacy as outlined in this section of the catalog. Students are encouraged to consult the dean or academic advisor of the college they are attending for assistance in selecting courses at other institutions. The College of Pharmacy will determine the number of transferable credits according to regulations and policies existing at the time of the student's enrollment. It should be emphasized that university regulations limit acceptance of hours from a community college to 66 semester hours.

Graduate Programs

Master of Science (M.S.) and Doctor of Philosophy Programs (Ph.D.)

The College of Pharmacy offers the Master of Science degree in pharmacy administration and the Doctor of Philosophy degree in pharmaceuticals and pharmacology. Additionally, the college offers a combined Pharm.D./Ph.D. program. For more information about these programs and regulations of the college, refer to the *Graduate and Professional Studies* catalog.

All application materials and admissions inquiries for the programs in pharmaceuticals and pharmacology should be addressed to:

University of Houston
Department of Pharmacological and
Pharmaceutical Sciences
Graduate Programs Office Manager
521 Science & Research Bldg. 2
Houston, TX 77204-5037

All application materials and admissions inquiries for the program in pharmacy administration should be addressed to:

University of Houston
Department of Clinical Sciences and
Administration
Director of Graduate Studies
318 Texas Medical Center
1441 Moursund
Houston, TX 77030

All application materials and admissions inquiries for the dual Pharm.D./Ph.D. program should be addressed to:

University of Houston
Dr. Kelly Standifer
Graduate Programs Director
551 Science & Research Bldg. 2
Houston, TX 77204-5037

Internet address: www.uh.edu/pharmacy/pharmdphd.html

**Courses: Pharmacy
Interdepartmental (PHAR)**

2200: Introduction to Pharmacy Cr. 2. (2-0). Prerequisite: second pre-pharmacy year standing or consent of instructor. Introduction to the profession of pharmacy and its role in health care.

2362: Principles of Drug Action Cr. 3. (3-0). A critical examination of man's environment with particular emphasis on the benefits and risks of drug usage and exposure to chemicals.

Faculty

Professors Carl W. Driever (Emeritus), Kenneth L. Euler (Emeritus), Donald A. Fox (Adjunct), Vishnu Das Gupta, Ming Hu, Bhagavan S. Jandhyala, Thomas L. Lemke, Mustafa F. Lokhandwala, William C. McCormick, Isaac D. Montoya (Clinical), Sunny E. Ohia, Carlos H. Pedemonte, Randall A. Prince

Associate Professors Karim Alkadhi, Richard Bond, Gary G. Cacciatore (Adjunct Clinical), Diana Shu-Lian Chow, Douglas C. Eikenburg, James Essien, Ray Hammond, Brian Knoll, Russell Lewis, Sujit S. Sansgiry, Kelly M. Standifer, Julianna E. Szilagyi, Sandra Evans Webb (Adjunct Clinical), Louis Williams, Xiang-Qun (Sean) Xie, Shara Zatopek (Clinical)

Assistant Professors Mohammad Asghar (Research), Kimberly Birtcher (Clinical), Heide H. Bragg (Clinical), Eric Busby (Clinical), Elizabeth Coyle (Clinical), Riad Efendiev (Research), Kevin W. Garey, Laura Gerard (Clinical), Catherine Hatfield (Clinical), J. David Hayes (Clinical), Tahir Hussain, James T. McCarty (Adjunct Clinical), Nancy Ordonez (Clinical), Paige Pitman (Clinical), Samina Salim (Research), Lindsay Schwarz (Visiting), Jeffrey T. Sherer (Clinical), Lynn A. Simpson (Clinical), Andrea Smesny (Clinical), Vincent Tam, Barbara Tatum (Clinical), David Wallace (Clinical), Mary Woo (Clinical)