

BIOMEDICAL INFORMATICS (MS/PHARMD)

Program Description and Goals

The PharmD/MS Dual Degree program is for students aspiring to be both pharmacists and informaticians. Through this unique program, students earning a Doctor of Pharmacy (PharmD) at the University of Texas at Austin (UT Austin) College of Pharmacy also study at McWilliams School of Biomedical Informatics at UTHealth Houston and earn a Master of Science in Biomedical Informatics during their four years of pharmacy school.

Dual Degree students will learn important skills focused on medication-related patient care and improved health outcomes. Students will discover the importance of informatics practices while managing medication-related information in electronic health records, pharmacy information systems, and other automated systems. The program will explore the benefits and limitations to information systems in a pharmacy practice, standards and regulation in the design and use of information systems in pharmacy practice, health information systems and automation technologies and their impact on the medication-use process, and evaluation of patient safety, clinician satisfaction, workflow and outcomes in pharmacy informatics practice.

Students in the dual degree program must satisfy admission requirements and be admitted separately to each program. Students must meet the requirements of each program for its respective degree. Admission to one program does not ensure admission to the other. Students in the dual degree program will receive a diploma from each degree program after meeting the individual requirements of each program. Admission does not have to be done at the same semester for each school but must be done before reaching the maximum hours set by each School.

Master of Science Biomedical Informatics Admission Process - PharmD/MS Program

The applicant should present a completed application and official documentation of the following:

1. Copy of UT Austin College of Pharmacy admission letter for new students, and for students already enrolled in UT Austin's College of Pharmacy, a letter of good academic standing that includes the applicant's academic year of pharmacy school.
2. A Verification of Enrollment form must be signed and completed by UT Austin College of Pharmacy Advising Coordinator. This form can be located in our website (<https://sbmi.uth.edu/prospective-students/admission-requirements.htm>) in the admission requirements section.
3. Official Transcripts from all colleges and universities attended
4. Goal Statement – follow template instructions on our website (<https://sbmi.uth.edu/prospective-students/admission-requirements.htm>)
5. A resume or curriculum vitae (as appropriate)
6. Three letters of reference from educators and/or employers
7. Students with international college transcripts must submit a course-by-course evaluation report by either World Education Services or Educational Credential Evaluators.

8. For International Applicants: A minimum TOEFL score of 94 is acceptable on the internet-based test. A minimum acceptable score for the IELTS is a 7.

Applicant materials will be reviewed by the McWilliams School of Biomedical Informatics Admissions, Progression and Graduation (APG) Committee. The committee will consider such areas as:

- Health, MIS, Computer, or Engineering related degree
- Healthcare work experience
- Database work experience
- Informatics work experience
- Demonstrated expertise in programming
- GPA in previous degree
- Success in overcoming social, economic or educational disadvantages, race and ethnicity

Requirements for Applicants with International Coursework

- The Test of English as a Foreign Language (TOEFL) (<https://www.ets.org/toefl.html>) or the International English Testing System (IELTS) (<https://ielts.org/ielts-usa/>). For admissions consideration a minimum acceptable score of 94 on the internet-based TOEFL is required or a minimum acceptable overall score of 7.0 on the IELTS is required. Test scores are valid for two years from the test date. The official scores must be submitted directly to GradCAS from the applicable test center. Submit official TOEFL scores by using the reporting code B886; no department code is required. Submit official IELTS scores by sending them to GradCAS; no code is needed. Testing is at the applicant's expense.
- Applicants that have completed coursework outside of the United States and who have received a diploma from a university at which English is the language of instruction are not required to submit an English Language exam. If this school is outside of an English-speaking country, evidence that indicates the language of instruction will need to be provided with your application such as a letter from the University on official letterhead.
- Applicants must submit official transcripts and a course-by-course education evaluation of all transcripts from all universities attended outside the United States. The application forms for such an evaluation may be obtained online from the service providers; Educational Credential Evaluators, Inc. (ECE) (<https://www.ece.org>) and World Education Services (WES) (<https://www.wes.org>). Only evaluations from ECE or WES will be accepted. The results of the evaluation must be submitted directly to GradCAS by the agency. The evaluation report is at the applicant's expense.
- International applicants seeking F-1 student sponsorship are not eligible for this dual degree program.

PharmD/MS Dual Degree Program - Master of Science in Biomedical Informatics Application Deadlines

- Fall admission: July 1
- Spring admission: November 1
- Summer admission¹: March 1

¹ International applicants seeking F-1 sponsorship are not eligible for summer admission to the Master of Science in Biomedical Informatics.

PharmD/MS Program Application Process

The application process for the Doctor of Pharmacy is determined by the University of Texas at Austin College of Pharmacy. The application process for the Master of Science in Biomedical Informatics is determined by McWilliams School of Biomedical Informatics at UTHealth Houston.

Transfer Credit

Transfer credit is not accepted for students enrolled in the dual degree program due to the amount of shared credit hours between McWilliams School of Biomedical Informatics at UTHealth Houston and the participating institution.

Shared Credit Hours

Courses that are being accepted at McWilliams School of Biomedical Informatics, through a dual or joint degree program, can only be transferred into the McWilliams School of Biomedical Informatics degree plan if the grade earned in the course is a "B" or higher. Courses for which grades of less than "B" were earned will not be accepted for transfer.

Academic Requirements

Each student follows a degree plan developed with the guidance of McWilliams School of Biomedical Informatics Office of Academic Affairs. A signed degree plan (<https://sbmi.uth.edu/current-students/curriculum/>) will be filed each academic year that includes the required and/or elective courses as specified for the student's dual degree program. A total of 39 semester credit hours must be completed prior to graduation.

A student in the PharmD/MS Program in Biomedical Informatics has up to eight years (24 semesters) from the time of entry to complete the required course work. A student who has not enrolled in two consecutive registration periods (including the summer session) will have an academic hold placed on their myUTH account by the McWilliams School of Biomedical Informatics Office of Academic Affairs. Students with an academic hold will need to discuss their academic degree plan with their academic advisor to have the hold removed and be allowed to enroll in future courses. A student who has not enrolled for three or more consecutive registration periods will be dismissed and must reapply for admission to the program and the School.

Each course with a BMI prefix in the Biomedical Informatics degree plan is a graduate level, professional course and must be passed with a grade of "B" or better. Students must earn a grade of "B" or higher in all dual degree program courses, unless the course is graded on a Pass or Fail basis in which a grade of "Pass" must be earned. If a dual degree student earns less than a "B" in any required course, it must be retaken to continue in the program. A grade of "B" or higher must be earned on the second attempt to prevent dismissal from the program. The minimum grade point average (GPA) required for graduation is 3.0 on all BMI courses.

Computer Requirement

Every student is required to have reliable access to a computer that meets the minimum requirements. Students are encouraged to purchase

a laptop that meets the minimum UTHealth Houston requirements. Computer requirements are listed on the website (<https://sbmi.uth.edu/current-students/student-handbook/computer-requirements.htm>) and are subject to change.

Curriculum

The PharmD/MS program requires a minimum of 39 semester credit hours to earn the MS, including the completion of a practicum experience in the field of biomedical informatics. Students must complete 27 semester credit hours of McWilliams School of Biomedical Informatics coursework and 12 semester credit hours from the student's PharmD program are accepted by McWilliams School of Biomedical Informatics for the Dual Degree.

The program curriculum for the MS degree includes:

Code	Title	Hours
Informatic Courses		
BMI 5300	Introduction to Biomedical Informatics	3
BMI 5310	Foundations of Biomedical Information Sciences I	3
BMI 5311	Foundations of Biomedical Information Sciences II	3
BMI 6313	Scientific Writing in Healthcare	3
BMI 6000	Practicum in Biomedical Informatics	3
Elective Courses		
BMI 5328W	System Analysis and Project Management ¹	3
BMI 5390	Methods in Pharmacy Informatics	3
BMI 5391	Synthesis Project in Pharmacy Informatics	3
BMI 6316	Change Management for Health Informatics	3
	or BMI 6340	Health Information Visualization and Visual Analytics
UT Austin College of Pharmacy Courses		
PHM 295Q:	Drug Information & Evidence-Based Practice	2
PHM 295R:	Advanced Evidence-Based Practice	2
PHM 283L:	Health Behavior and Health Outcomes	2
PHM 384L:	Pharmacy and the U.S. Health Care System	3
PHM 394F:	Principles of Pharmacoeconomics and Pharmacy Management	3
Total Hours		39

¹ \$50 Course Fee

Practicum

Students in the Master of Science in Biomedical Informatics must select an area of interest in which to apply the knowledge and skill gained during the didactic courses while participating in the required practicum course. Students in the PharmD/MS program must complete at least 24 credit hours in their master's program before participating in the practicum requirement. Students should work with the Practicum Coordinator for any necessary affiliation or program agreements with the practicum site, if agreements are not already in place. A practicum proposal must be submitted to the Practicum Coordinator by week three of the semester of enrollment in the practicum course and it must be approved, in writing, by the student's Faculty Practicum Advisor. Students can complete all required practicum credit hours during one semester or the course can be repeated for a maximum of 3 semester credit hours (for BMI 6000 Practicum in Biomedical Informatics) to meet degree requirements. During the course of the semester(s), student must create weekly logs to chronicle their hours, tasks, and reflections on how the

duties of the practicum relate to Biomedical Informatics courses taken. Once the student has logged all 135 contact hours and concluded all practicum projects, she or he must create an 18-page, double spaced capstone report that details the major project they completed during their practicum. This report, along with other deliverables, will be submitted in completion of the practicum. If students have any questions regarding the practicum, they can contact the Practicum Coordinator or the Office of Academic Affairs.

For further curriculum information, please contact:

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