



# Required Pre-Pharmacy Courses

## Course Transfer Sheet

### University of Missouri–Saint Louis

The Doctor of Pharmacy (Pharm.D.) faculty requires all specific pre-pharmacy college courses to be complete with a grade of C- or higher before entry into the first semester of the Pharm.D. program.

Below are the courses approved to transfer from **UMSL**. Admission to the Pharm.D. program is competitive with college grades, pharmacy knowledge, communication skills, and a formal interview being key determinants. A degree is not required for admission.

*Note: Courses listed below meet the UMKC pre-pharmacy course requirements for the Pharm.D. program. These courses do not necessarily reflect what other programs at UMKC consider towards a Bachelor's degree.*

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#### REQUIRED COURSES

English Composition I

English Composition II

Communication Studies

U.S. History or American Government

Or Bachelor's degree

Calculus

Statistics

General Physics w/ lab

General Chemistry I w/ lab

General Chemistry II w/lab

General Biology I or Botany

General Biology II or Zoology

#### UMSL DEPARTMENT & COURSE #

ENGL 1100 (MOTR ENGL 100)

ENGL 2120 or 3100

COMM 1030, 1040, or 2230

(MOTR COMM 100, 110, 120, or 125)

HIST 1001, 1002, or POL SC 1100

(MOTR HIST 101, 102, or MOTR POSC 101)

MATH 1100 or MATH 1800

MATH 1105 or 1320

PHYS 1011 (MOTR PHYS 150L)

CHEM 1111 (MOTR CHEM 150L)

CHEM 1121

BIOL 1831

BIOL 1821

**The courses below must be taken within five years prior to the fall start of the Pharm.D. program:**

Organic Chemistry I

CHEM 2612

Organic Chemistry II w/lab

CHEM 2622/2633

Microbiology w/lab

BIOL 2482/2483

Human Anatomy

BIOL 1131&1141 or BIOL 1131A&1141A

Human Physiology or Cell Biology

BIOL 1141 or BIOL 1141A or BIOL 3622

Medical Terminology

Not Offered

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**Optional – Successful completion of Biochemistry I & II may transfer into the Pharm.D. Curriculum**

Pharmacy Biochemistry

CHEM 4712 & 4722

- Please review your school's test credit policy regarding AP, IB, CLEP, etc.

- Transfer sheets for other local schools: <https://pharmacy.umkc.edu/admissions/transfer-sheets.html>.

## Additional Notes for UMKC Pre-Pharmacy Prerequisite Courses

Please contact staff from the Pharmacy Office of Student Affairs (POSA) with any questions you have.

-Online courses may count and the POSA staff know of several online options for courses. Grades of P, Cr &/or S (Pass, Credit &/or Satisfactory) from the Spring & Summer 2020 semesters will suffice.

-If you took a marked course that is older than five years, and you believe your knowledge of the course is current based on courses taken since then within five years of admission or through your current job responsibilities, you can petition the old course to count. Contact POSA to inquire about the process and documentation needed.

-Courses that may transfer from foreign institutions: Physics with lab, Calculus, Statistics, General Chemistry 1 & 2 with labs, Organic Chemistry 1, or General Biology 1 & 2. All remaining courses must be completed from a regionally accredited college or university inside of the USA.

English Composition 1 & 2: Six hours are required. If a student takes an advanced composition course, or tests into Eng Comp 2, the student can take an additional writing course where 5,000 words or 20 written pages (usually noted as a 'Writing Intensive' course). Eng Comp 1 may be completed by earning a minimum required score on the AP Eng Language & Composition (minimum score requirements vary by institution). AP Eng Literature & Composition will not count.

Communication Studies Interpersonal communication, public speaking or small group dynamics are great examples.

U.S. Constitution complete by U.S. History 1 or 2, American Government, or a Bachelor's degree from U.S. school.

Physics with lab should be a college-level, trig based Physics course with lab.

Calculus can be complete by Business Calculus or Calculus w/ Analytical Geometry.

Statistics May be complete with an introduction to statistics or biostatistics course.

Organic Chemistry 1 & 2 with labs can be complete by six hours of Organic Chemistry lecture and two hours of lab. Some schools offer one 2.0 credit hour lab while others offer two 1.0 credit hour labs. Either is fine.

General Biology 1 & 2 may be complete by any two of the following courses: general biology 1, general biology 2, zoology, botany, genetics, cell biology, or human physiology. Labs are not required. Essentials of Biology or Biology for Non-majors do not count.

Microbiology with lab may be complete by a sophomore-level Microbiology course for future health professionals. Environmental Microbiology lecture & lab will not count.

Medical Terminology only one hour required. UMKC offers an online 1.0 hour course each semester.

\*Human Anatomy may be complete by a human anatomy lecture. Vertebrate or comparative anatomy will not count.

\*Human Physiology or Cell Biology applicants entering the Pharm.D. program in 2025 or 2026 may take either Human Physiology (preferred) or a sophomore level Cell Biology course. Labs not required. Students entering 2027 or after must take Human Physiology.

\*Anatomy & Physiology a six-hour A&P sequence will complete both Anatomy & Physiology requirements.

Biochemistry 1 & 2 are not required for entry and may be complete by two semesters of general biochemistry 1 & 2. Students who take introduction to biochemistry or biochemistry 1 and are looking for Biochem 2, the POSA knows of online options. Labs are not required. A 4.0 credit Biochemistry with lab course will not count. Students who complete an approved biochemistry 1 & 2 sequence may not have to take Pharmacy Biochemistry in their first semester of the Pharm.D. curriculum.