



# Required Pre-Pharmacy Courses

## Course Transfer Sheet

### Missouri State University

Pharmacy is a great career in high demand! Students complete the Doctor of Pharmacy (Pharm.D.) program in four years in Kansas City, Columbia or Springfield following the Pre-Pharmacy courses.

Below are the Pre-Pharmacy courses approved to transfer from the [Missouri State University](https://www.missouri-state.edu/). 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. Constitution or Bachelor's Degree

#### MISSOURI STATE UNIVERSITY COURSES

ENG 110 (MOTR ENGL 100)  
ENG 210 or 221 (MOTR ENGL 200)  
COM 115 or 205 or 206 or 332  
(MOTR Comm 100, 110, 120 or 125)  
HST 121 or HST 122 or PLS 101  
(MOTR HIST 101 or 102 or MOTR POSC 101)  
  
MTH 261 or MTH 287  
MTH 340 or AGR 330 or BIO 550 or IPE 381 or PSY 200 or  
QBA 237 or REC 328 or SOC 302  
PHY 123 (MOTR PHYS 150L)  
  
CHM 160/161 (MOTR CHEM 150L)  
CHM 170/171  
BIO 121 or BMS 110  
BIO 122 or BMS 230 or BMS 231

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

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

Organic Chemistry I CHM 342  
Organic Chemistry II w/2.0 hrs lab CHM 343/345  
Microbiology w/lab BIO 312/313 or BMS 317  
Medical Terminology LLT 102  
Human Anatomy BMS 307 or KIN 250  
Human Physiology or Cell Biology BMS 308 or KIN 252 or BIO 320 or BMS 521

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

Pharmacy Biochemistry CHM 554 & 556

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- 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>.
  - All courses should be complete with C- or higher before Fall entry into the Pharm.D program.

## Additional Notes for UMKC Pre-Pharmacy Prerequisite Courses

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

-Pharm.D. students are admitted to downtown Kansas City Health Sciences District or to the Mizzou campus in Columbia or to the Missouri State University Brick City campus.

-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.