

# Master of Science in Clinical Research

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The University of Kansas Master of Science in Clinical Research program (MS-CR) is a 33 credit hour graduate program with the student's thesis serving as their culminating project. The program is offered through the Department of Population Health at the University of Kansas Medical Center in Kansas City and the University of Kansas School of Medicine-Wichita in Wichita.

The MS-CR program provides students with formal training in clinical research, biostatistics, and epidemiology that will allow clinical scholars to enhance their current research skills. Graduates from the Master of Science in Clinical Research (MS-CR) program serve in a wide variety of fields, including clinical medicine, research, education, disease surveillance and academic settings. The University of Kansas MS-CR degree is designed to provide clinical scholars with a strong foundation in patient-oriented research principles and methods.

Admission and degree requirements are detailed in this section of the catalog. Other program information and application details may be found at our website (<http://www.kumc.edu/school-of-medicine/population-health/education/master-of-science-in-clinical-research.html>).

The application process is an online process. Detailed instructions on how to apply and the application deadlines are posted on the Clinical Research program (<https://www.kumc.edu/school-of-medicine/academics/departments/population-health/academics/master-of-science-in-clinical-research/admissions.html>) website. Admission to the M.S. in Clinical Research degree program is competitive. Students may apply in either Kansas City or Wichita and should indicate their preference of campus on the application itself.

## Admission requirements:

- A bachelor's degree from a regionally accredited institution documented by submission of official transcript indicating the degree has been conferred before entering the program. Official transcripts from institutions attended post-baccalaureate are also required.
- Students with degrees from outside the U.S. are required to submit a foreign credential evaluation (FCE) performed by an established transcript review service to determine the U.S. degree equivalency and minimum cumulative GPA requirements. The MS-CR program will accept evaluations from SpanTran (<https://spanside.my.salesforce-sites.com/SpansideApplication/?Id=6a13d55a-6074-45a5-b373-b07066248435>), the World Education Service (<http://www.wes.org/>) (WES) and Educational Credential Evaluations (<http://www.ece.org/>) (ECE). Other companies will be considered on a case-by-case basis. The evaluation must be course by course, include U.S. grade equivalency for each course with cumulative U.S. GPA equivalency, and U.S. degree equivalency earned (bachelor's master's, doctorate, etc.). The evaluation should be sent directly from the company to the MS-CR program.
- A cumulative grade-point average (GPA) of at least a 3.0 on a 4.0 scale for the bachelor's degree.
- Applicants who are not native speakers of English, whether domestic or international, must demonstrate they meet the Minimum English Proficiency Requirement ([https://www.kumc.edu/academic-and-student-affairs/departments/office-of-international-programs/inbound-programs/information-for-students/academic-english-](https://www.kumc.edu/academic-and-student-affairs/departments/office-of-international-programs/inbound-programs/information-for-students/academic-english-requirements.html)

[requirements.html](https://www.kumc.edu/academic-and-student-affairs/departments/office-of-international-programs/inbound-programs/information-for-students/academic-english-requirements.html)). The Educational Commission for Foreign Medical Graduates (ECFMG) certificate is accepted in lieu of a TOEFL/IELTS score for applicants with a Medical Degree applying to this program. Applicants with degrees from English Proficiency Exempt Countries (<https://www.kumc.edu/documents/international/ENGLISH%20PROFICIENCY%20EXEMPT%20LIST%206-2014.pdf>) may qualify for exemption from this requirement.

- A background check (<https://catalog.ku.edu/graduate-studies/kumc/#BackgroundCheck>) is required during the admission process; it may affect the student's eligibility to enter the program.
- Submission of official scores on the Graduate Record Examination (GRE) or other professional test scores (such as the Graduate Management Admission Test, Medical College Admission Test, Law School Aptitude Test) that are not more than five years old. Official copy of scores should be sent from the Educational Testing Service (ETS) to the University of Kansas Medical Center - ETS institutional code 6895. Applicants who have earned a masters or doctoral degree in the United States are exempt from this requirement.
- Completion of at least one semester of calculus is required.
- Three letters of recommendation from employers, instructors, or other persons who can assess the applicant's academic and professional potential. Letters are submitted per instructions provided for the online application process.
- A résumé or curriculum vitae. Demonstration of one or more years of responsible work experience in the health field or a degree in a recognized health profession or other evidence of training or experience that indicates adequate preparation for the M.S. in Clinical Research curriculum is preferred.
- A personal written statement that describes the applicant's career goals and motivation for seeking post-graduate training in clinical research.

In limited circumstances, applicants not meeting all of the above requirements may be able to petition for an admission waiver. After an applicant has been admitted, a program may defer an applicant's admission for one year after which time the applicant must submit a new application.

Admission requirements are subject to change. In most cases, use the catalog of the year student entered the program. *Other years' catalogs*».

The M.S. in Clinical Research program consists of 33 credit hours. Students are required to complete eight core courses: epidemiology, two fundamentals of biostatistics courses, statistical computing (or data management), advanced epidemiologic methods, grant writing, responsible conduct of research, and clinical trials for a total of 22 credit hours of core courses; 8 additional credit hours consist of electives. The final three credit hours are devoted to the student's thesis.

## Degree requirements:

- Degree requirements are normally completed within 2 years of admission to the program although a maximum of 7 years is allowed. Part-time students normally complete requirements within 5 years of admission to the program.
- Completion of a minimum of 33 credit hours.
- Cumulative grade-point average (GPA) of at least a 3.0 for all KU graduate coursework.
- Enrollment in a minimum of one (1) credit hour of PRVM 899 Thesis the semester the student will graduate.

- Enrollment in PRVM 899 Thesis the semester the student defends their thesis.
  - Successful completion of a thesis defense (<https://catalog.ku.edu/graduate-studies/kumc/#ThesisDefense>).
  - Successful thesis submission (<https://catalog.ku.edu/graduate-studies/kumc/#ThesisSubmission>) (according to Office of Graduate Studies policy.)
  - Successful completion of the following core courses (22 credit hours):
- | Code     | Title  | Hours |
|----------|--|-------|
| PRVM 800 | Principles of Epidemiology   | 3     |
| PRVM 841 | Advanced Epidemiology I: Methods in Cross-Sectional and Case-Control Studies   | 3     |
| PRVM 853 | Responsible Conduct of Research  | 1     |
| PRVM 869 | Systematic Review  | 3     |
| OR       |  |       |
| PRVM 872 | Grant Writing  | 3     |
| BIOS 714 | Fundamentals of Biostatistics I  | 3     |
| BIOS 717 | Fundamentals of Biostatistics II   | 3     |
| BIOS 810 | Clinical Trials  | 3     |
| BIOS 715 | Introduction to Data Management using RedCap and SAS (Kansas City campus only) | 3     |
| PRVM 875 | Management of Public Health Data (Wichita campus only)                         | 3     |
- Successful completion of elective courses (minimum of eight (8) credit hours). Specific courses determined in consultation with the student's advisor.
  - Successful completion of a minimum of three (3) credit hours of thesis:
- | Code     | Title  | Hours |
|----------|--------|-------|
| PRVM 899 | Thesis | 3     |

Degree requirements and course descriptions are subject to change. Any courses taken as an equivalent must be approved by the Graduate Director and the Office of Graduate Studies. In most cases, use the catalog of the year student entered the program. *Other years' catalogs*.

### Typical Plan of Study - Kansas City campus

Year 1			
Fall	Hours Spring	Hours Summer	Hours
PRVM 800 (CORE)	3 BIOS 717 (CORE)	3 Elective	3
BIOS 714 (CORE)	3 PRVM 841 (CORE)	3	
BIOS 715 (CORE)	3 Elective	3	
	<b>9</b>	<b>9</b>	<b>3</b>
Year 2			
Fall	Hours Spring	Hours	
PRVM 853 (CORE)	1 BIOS 810 (CORE)	3	
PRVM 872 (CORE)	3 PRVM 899 (CORE)	3	

Elective	2	
	<b>6</b>	<b>6</b>

**Total Hours 33**

### Typical Plan of Study - Wichita campus

Year 1		
Fall	Hours Spring	Hours
BIOS 714 (CORE)	3 BIOS 717 (CORE)	3
PRVM 800 (CORE)	3 BIOS 810 (CORE)	3
PRVM 872 (CORE)	3 PRVM 875 (CORE)	3
	<b>9</b>	<b>9</b>
Year 2		
Fall	Hours Spring	Hours
PRVM 841 (CORE)	3 PRVM 853 (CORE)	1
Elective	3 PRVM 899 (CORE)	3
Elective	3 Elective	2
	<b>9</b>	<b>6</b>

**Total Hours 33**

*\*These are sample plans, and may be subject to change. Students should meet with their advisors once per semester to discuss course plans.*

**The following abilities and expectations must be met by all students admitted to the Master of Science in Clinical Research program:**

**OBSERVATION:**

A student must be able to observe and analyze class demonstrations and field experiences relevant to the disciplines of clinical research. Observation necessitates the functional use of the senses of vision and hearing.

**COMMUNICATION:**

A student must be able to communicate effectively in oral and written form with other students, faculty, and preceptors. Use of computers and other technology is imperative to this communication. Effective communication includes the ability to understand assigned readings and lectures, the ability to analyze information, and the ability to present results of such analyses verbally and in writing.

**MOTOR:**

A student must have sufficient motor function to attend classes, prepare assignments, and give public presentations. Class requirements may also include field experiences in a variety of health settings.

**INTELLECTUAL-CONCEPTUAL, INTEGRATIVE, AND ANALYTIC ABILITIES:**

Applicants must be able to read and understand documents written in English. A student must possess the ability to understand and work with measurements, carry out calculations, and engage in reasoning, analysis, and synthesis. A student must be able to draw on all these abilities to be an effective problem solver. In addition, a student should be able to comprehend three-dimensional relationships and understand spatial relationships of structures.

**BEHAVIORAL AND SOCIAL ATTRIBUTES:**

A student must possess the emotional maturity and stability required for full utilization of his/her intellectual abilities, the exercise of sound judgment, and the prompt completion of all responsibilities attendant upon responsible activity in the broad field of public health. Integrity, motivation, reliability, self-direction, and the ability to work in diverse groups are personal qualities, which are required for effective practice in this field. As a component of clinical research education, a student must demonstrate ethical behavior.

**Individuals with disabilities are encouraged to apply to the program.**

Candidates who indicate that they cannot meet one or more of the expectations will be reviewed further with applicant and faculty input to determine what reasonable accommodations might be possible to facilitate successful completion of the MS-CR curriculum.

## Program Description

The PharmD/MS in Clinical Research is designed to allow PharmD students to integrate their pharmaceutical knowledge with clinical research skills including epidemiology, biostatistics, systematic review and data management. All students will complete a Thesis. PharmD students will enroll during Professional year 2, 3 or 4 and will complete 22 credit hours of the MS in Clinical Research degree offered by the Department of Population Health at the KU Medical Center. PharmD electives will count towards one required course in Epidemiology and 8 elective credit hours.

## Admission Requirements

Students must be admitted into the PharmD program and submit the following materials for the MS in Clinical Research.

To pursue the MS-CR program, the applicant must meet the general KUMC requirements for admission to Graduate Studies. The minimum requirements are:

- Applications for admission to the MS-CR program at the University of Kansas will be accepted from individuals with a bachelor's degree from a regionally accredited college or university in this country or a recognized university abroad.
- An undergraduate grade point average (GPA) of 3.0 or better (on a 4.0 scale) is required for regular admission status. Applicants with a GPA below 3.0 may be considered for admission under provisional status.
- Successful completion of at least one semester of calculus.

Code	Title	Hours
BIOS 714	Fundamentals of Biostatistics I	3
PRVM 869	Systematic Review	3
BIOS 715	Introduction to Data Management using RedCap and SAS	3
BIOS 810	Clinical Trials	3
PRVM 841	Advanced Epidemiology I: Methods in Cross-Sectional and Case-Control Studies	3
PRVM 853	Responsible Conduct of Research	1
BIOS 717	Fundamentals of Biostatistics II	3
PRVM 899	Thesis	1-3
P&TX 630	Pharmacology I	4
PHPR 620	Ethical, Legal, and Cultural Issues in Patient Care	2
PHPR 619	Health Care Systems and Informatics	3
PHPR 635	Problems in Pharmacy Practice	1-5
PHPR 630	Drug Information and Literature Evaluation	1