

MEDICAL LABORATORY SCIENCE (BACHELOR OF SCIENCE, B.S.)

Overview

Missouri Western State University offers a program leading to the Bachelor of Science degree with a major in Medical Laboratory Science, also referred to as Clinical Laboratory Science or Medical Technology. The first three years of the program are spent completing specified college course work (94 credits). The fourth year is spent in an affiliated hospital which provides a structured educational program in a clinical laboratory. The clinical training programs are accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). When a student successfully completes the hospital clinical program, Missouri Western State University will award 30-43 credits depending on the clinical affiliate, for the fourth year's work.

Acceptance into a clinical laboratory program is highly competitive, and enrollment in the Medical Laboratory Science program does not guarantee acceptance of the student into a clinical program. Students must make separate application to one of the three affiliated hospitals for the clinical program, which consists of ten to eleven months of full-time day clinical instruction. Affiliated programs are located at North Kansas City Hospital, St. Luke's Hospital of Kansas City, Truman Medical Center and University of Nebraska Medical Center in Omaha. Clinical course requirements and credit hours vary for each affiliated site. Students should consult the Medical Laboratory Science advisor in the Chemistry department for specific clinical course requirements and to ascertain the time schedule for application to each clinical program and the approximate dates when acceptance notices will be given.

Upon completion of the clinical program, students are eligible to take a national credentialing examination. Passing the examination is not a requirement for the Bachelor of Science degree with a major in Medical Laboratory Science; however, the student must pass the examination to become certified to practice as a medical laboratory scientist.

Requirements

Students who choose this bachelor degree program will have no more than 6 years from admission or subsequent declaration to meet the requirements listed below. If certification, accreditation or statutory requirements change and additional requirements become effective during this time, the new requirements take precedence.

Code	Title	Credit Hours
General Studies		42
Students must complete General Studies courses (https://catalog.missouriwestern.edu/undergraduate/university-information/academic-standards-regulations/baccalaureate-degree/#bachelor-general-studies) ¹		
Major Requirements		50-51
BIO 106	Principles of Cell Biology	4
BIO 205	Genetics	4
BIO 250 or BIO 311	Anatomy and Physiology Animal Physiology	4-5

BIO 390	Microbiology	4
BIO 421	Immunology	4
CHE 111	General Chemistry I	5
CHE 120	General Chemistry II with Qualitative Analysis	5
CHE 310	Organic Chemistry I	3
CHE 311	Organic Chemistry Laboratory I	2
CHE 321	Quantitative Analysis	4
CHE 326	Instrumental Analysis	4
CHE 370	Biochemistry I	4
MAT 116	College Algebra	3
Courses in Medical Laboratory Science ²		30-43

¹ Courses in general studies may also be required within the major. While the course(s) may satisfy both requirements, the credit hours will count only one time in the overall hours earned.

² The courses and credit hours required will vary based on clinical site.

Courses in Medical Laboratory Science North Kansas City Hospital, St. Luke's Hospital, or Truman Medical Center

The following courses will be taken by students accepted into the clinical laboratory science training programs at North Kansas City Hospital, St. Luke's Hospital or Truman Medical Center.

Code	Title	Credit Hours
MTE 412	Clinical Lab Science Theory, Applications and Correlation	5
MTE 413	Applications of Chemistry for Clinical Lab Science	1
MTE 430	Clinical Microbiology	4-8
MTE 432	Clinical Chemistry	6-10
MTE 434	Clinical Hematology	3-7
MTE 436	Clinical Immunohematology	3-7
MTE 438	Clinical Immunology	1-6
MTE 440	Clinical Urinalysis	1-3
MTE 442	Topics in Medical Technology	1-4

University of Nebraska Medical Center

The following courses will be taken by students accepted into the University of Nebraska Medical Center clinical laboratory science training program.

Code	Title	Credit Hours
CLS 407	Clinical Laboratory Operations	2
CLS 408	Introduction to Clinical Hematology	2
CLS 409	Introduction to Clinical Microbiology	2
CLS 410	Introduction to Clinical Chemistry and Urinalysis	1
CLS 411	Introduction to Clinical Immunohematology	1
CLS 412	Clinical Lab Science Theory, Application, and Correlation	5
CLS 413	Clinical Endocrinology and Toxicology	1
CLS 414	Clinical Chemistry and Urinalysis I	2

CLS 415	Clinical Chemistry and Urinalysis II	2
CLS 416	Clinical Hematology I	2
CLS 417	Clinical Hematology II	2
CLS 418	Clinical Microbiology I	2
CLS 419	Clinical Microbiology II	2
CLS 420	Clinical Immunology and Molecular Diagnostics	2
CLS 422	Clinical Immunohematology I	2
CLS 423	Clinical Immunohematology II	2
CLS 430	Clinical Laboratory Management I	2
CLS 431	Clinical Laboratory Management II	3
CLS 442	Clinical Immunohematology Laboratory Practicum I	1
CLS 443	Clinical Immunohematology Laboratory Practicum II	1
CLS 444	Clinical Core Laboratory Practicum I	1
CLS 445	Clinical Core Laboratory Practicum II	1
CLS 448	Clinical Microbiology Laboratory Practicum I	1
CLS 449	Clinical Microbiology Laboratory Practicum II	1

Program Graduation Requirements

1. Earn an overall GPA of at least 2.0 and a major GPA of at least 2.0.

University Graduation Requirements

1. Earn a minimum of 120 credit hours (100 level and higher, maximum of 6 continuing education credit hours applicable).
2. Earn a minimum of 30 credit hours in upper-division courses. Lower-division transfer courses accepted as meeting upper-division departmental course requirements cannot be used to fulfill this requirement.
3. Earn 30 of the last 45 credit hours at MWSU in institutional coursework (exclusive of credit by examination).
4. Participate in required departmental and campus wide assessments.
5. Fulfill the Missouri Constitution requirement.
6. Successfully pass the Missouri Higher Education Civics Achievement exam.