

BS IN MEDICAL LABORATORY SCIENCE

This degree program prepares you for certification as a Medical Laboratory Scientist.

You will complete 5 semesters of foundational courses after admission into the university, 2 semesters of Medical laboratory Science course work after successful application into the professional portion of the program, and 14-15 weeks of clinical externship in an affiliated hospital laboratory the Spring semester of your senior year. A certification examination is taken at the successful completion of the hospital training program. The requirements for certification are established by the Board of Certification of the American Society of Clinical Pathologists.

Acceptance into the professional portion of the program is competitive and application is made during the spring of your sophomore year. The application will be posted on the MLS website during Spring and Summer semester and close at the beginning of Fall semester. In order to be admitted, an overall GPA of greater or equal to 2.5, a C or better in the foundational math and science courses, and completion of all university core requirements must be met.

The following foundational science and math courses are required to be completed with a grade of C or better prior to beginning study in the clinical portion of the program:

Code	Title	Hours
CHEM 1230	General Chemistry I	4
CHEM 1240	General Chemistry II	4
CHEM 1280	General Chemistry Lab I	1
CHEM 1290	General Chemistry Lab II	1
CHEM 2410	Organic Chemistry I	3
CHEM 2420	Organic Chemistry II	3
CHEM 2460	Organic Chemistry Laboratory I for Non-Majors	1
CHEM 2470	Organic Chemistry Laboratory II for Non-Majors	1
BIOL 2170	Fundamentals of Life Science: Biomolecules, Cells, and Inheritance	4
BIOL 2180	Fundamentals of Life Science Laboratory: Biomolecules, Cells, and Inheritance	1
BIOL 3010	Molecular Genetics	3
BIOL 3030	Cell Biology	3
BIOL 3070	Human Physiology	3
EXSC 2510 or BIOL 3510	Human Anatomy Comparative Vertebrate Anatomy	3
EXSC 2520 or BIOL 3510	Human Anatomy Lab Comparative Vertebrate Anatomy	1
BIOL 4030	Microbiology	3
BIOL 4040	Microbiology Laboratory	1
BIOL 4050	Immunology	3
BIOL 4060	Immunology Laboratory	1
MATH 1320	College Algebra	3
MATH 2600	Introduction To Statistics	3

MEDT 2010	Introduction to Medical Laboratory Techniques	2
NSM 1000	Foundations of Academic Success for Science and Math Majors	1
NSM 1500	Building a Career in Science and Math	1

The following courses comprise the clinical portion of the program and are required to be completed with a grade of C or better.

Code	Title	Hours
MEDT 4020	Clinical Hematology I	4
MEDT 4025	Clinical Hematology II	3
MEDT 4030	Urine Analysis and Body Fluids	2
MEDT 4040	Clinical Chemistry	5
MEDT 4050	Clinical Microbiology I	4
MEDT 4060	Clinical Immunology	3
MEDT 4080	Clinical Immunohematology	4
MEDT 4120	Clinical Microbiology II	3
MEDT 4500	Clinical Research and Clinical Correlations	3
MEDT 4950	Clinical Externship: Management	1
MEDT 4951	Clinical Externship: Microbiology	4
MEDT 4952	Clinical Externship: Chemistry	2
MEDT 4953	Clinical Externship: Hematology	2
MEDT 4954	Clinical Externship: Immunohematology	3

Below is a sample plan of study. Consult your degree audit for your program requirements.

First Term		Hours
NSM 1000	Foundations of Academic Success for Science and Math Majors	1
CHEM 1230	General Chemistry I	4
CHEM 1280	General Chemistry Lab I	1
ENGL 1110	College Composition I	3
MATH 1320	College Algebra	3
Core Elective (Multicultural)		3
Hours		15

Second Term		
NSM 1500	Building a Career in Science and Math	1
CHEM 1240	General Chemistry II	4
CHEM 1290	General Chemistry Lab II	1
BIOL 2170	Fundamentals of Life Science: Biomolecules, Cells, and Inheritance	4
BIOL 2180	Fundamentals of Life Science Laboratory: Biomolecules, Cells, and Inheritance	1
EXSC 2510	Human Anatomy	3
EXSC 2520	Human Anatomy Lab	1
	Hours	15

Third Term		
BIOL 3030	Cell Biology	3
CHEM 2410	Organic Chemistry I	3
CHEM 2460	Organic Chemistry Laboratory I for Non-Majors	1

MEDT 2010	Introduction to Medical Laboratory Techniques	2
ENGL 2950	Technical Writing	3
Social Sciences Core		3
Hours		15
Fourth Term		
BIOL 3010	Molecular Genetics	3
CHEM 2420	Organic Chemistry II	3
CHEM 2470	Organic Chemistry Laboratory II for Non-Majors	1
BIOL 3070	Human Physiology	3
MATH 2600	Introduction To Statistics	3
Core Elective (Multicultural)		3
Apply for Clinical Program (terms 5-7) this spring		
Hours		16
Fifth Term		
BIOL 4050	Immunology	3
BIOL 4060	Immunology Laboratory	1
Social Sciences Core		3
BIOL 4030	Microbiology	3
BIOL 4040	Microbiology Laboratory	1
Arts/Humanities Core		3
Arts/Humanities Core		3
Hours		17
Sixth Term		
MEDT 4020	Clinical Hematology I	4
MEDT 4030	Urine Analysis and Body Fluids	2
MEDT 4050	Clinical Microbiology I	4
MEDT 4060	Clinical Immunology	3
MEDT 4950	Clinical Externship: Management	1
Hours		14
Seventh Term		
MEDT 4040	Clinical Chemistry	5
MEDT 4080	Clinical Immunohematology	4
MEDT 4025	Clinical Hematology II	3
MEDT 4120	Clinical Microbiology II	3
Hours		15
Eighth Term		
MEDT 4951	Clinical Externship: Microbiology	4
MEDT 4952	Clinical Externship: Chemistry	2
MEDT 4953	Clinical Externship: Hematology	2
MEDT 4954	Clinical Externship: Immunohematology	3
MEDT 4500	Clinical Research and Clinical Correlations	3
Hours		14
Total Hours		121

- Graduates will demonstrate didactic proficiency expected for an entry level Medical Laboratory Scientist: 1. Measured by meeting the program outcome pass rate of 75%; 2. Measured by passing rate

in all MLS courses of 70% and above.; 3. Measured by BOC passing scores (>400) in each area by 90%.

- Be able to correlate clinical laboratory data with patient disease processes: 1. Measured by MEDT 4500 case study project and presentation.
- Abide by the code of ethics for the profession outlined by the American Society of Clinical Laboratory Scientists <https://ascls.org/code-of-ethics/>. 1. Measure by signing at the point of application.
- Demonstrate commitment to continued education growth within the profession to ensure progress toward professional competence. 1. Measured by the number of graduates getting advanced degrees or certifications. 1. Action: post-graduation surveys.
- Students will demonstrate ethical scientific and academic conduct. 1. Measured by all MLS courses in affecter behavior. 1. Action: each syllabus had measurement of affecter behaviors.
- Students will demonstrate communication skills by oral and written expression of ideas and facts. 1. Measured by reporting of accurate and effective reports. 2. Measured by record of maintenance and quality control. 1. Action: clinical externship MEDT 4951, 4952, 4953, 4954.
- Demonstrate critical thinking in evaluating patient results to ensure accurate patient testing (pre-analytical, analytical phase) and reporting of results (post-analytical phase). 1. Measured by clinical externship courses. 1. Action: Clinical externship and post-6-month affiliate survey.