

# Medical Laboratory Science

The Medical Laboratory Science (MLS) program at Minot State University is a four-year program leading to the Bachelor of Science Degree in Medical Laboratory Science/Medical Technology. The program consists of courses that are designed to give the medical laboratory science student the necessary, scientific background to enter clinical training at an accredited hospital laboratory.

The program consists of three years of academic coursework completed at Minot State University. Through an affiliation with the University of North Dakota (UND), students then spend 12 months in a clinical internship at one of the many participating accredited hospitals while finishing their credits through UND, as a member of the Western College Alliance for MLS.

The academic portion of the program provides the student with a broad-based background in the sciences as well as General Education courses in communications, the humanities, and the social and behavioral sciences. The clinical year provides practical, hands on, experience in clinical laboratory techniques.

The first two years of the program primarily involve General Education courses and fundamental courses in chemistry, microbiology, anatomy, and physiology. The third year involves the students in courses more directly relevant to their major, such as parasitology, hematology, and immunology. These courses address more specifically what the student will encounter during the clinical internship year. During their professional/clinical year, students will be enrolled in a Co-Op course at Minot State to maintain financial aid eligibility and enrollment status.

Minot State University's medical laboratory science program is accredited by the NAACLS through UND. All affiliated hospitals are accredited by the Council on Medical Education. Upon completion, the student is eligible to take the national examination conducted by the Board of Registry to become a certified clinical laboratory scientist by the American Society of Clinical Pathologists MT (ASCP) and the National Certification Agency for Medical Laboratory Personnel National Exam for certification as Medical Laboratory Scientist.

Acceptance to clinical year requires:

- Cumulative GPA of at least 2.80.
- No more than one D in any math or science prerequisite course.
- No standing letter grade of D or F in any MLS major/core course.
- A recommendation from the applicant's college/university advisor.
- Completion of required prerequisite coursework.

## BS Medical Lab Science Student Learning Goals and Outcomes

Student Learning Goals	Student Learning Outcomes
1. First-year MLS majors demonstrate a comprehensive understanding of the curricular requirements, timelines, and career expectations for the MLS professional.	1.1 First-year students summarize MLS degree requirements.
	1.2 First-year students shadow professionals in the field.
2. Second and third-year MLS majors demonstrate proficiency in concepts of biology and chemistry related to human health.	2.1 MLS majors recall biological processes and concepts.
	2.2 MLS majors practice laboratory techniques applicable to clinical testing for human disease.
3. Fourth-year students demonstrate experience in specific clinical testing for human disease.	3.1 MLS majors practice laboratory tests in the areas of blood banking, microbiology, clinical chemistry, hematology, and immunology.
	3.2 MLS majors interpret results of laboratory tests in the areas of blood banking, microbiology, clinical chemistry, hematology, and immunology.
	3.3 MLS majors pass national board exams to earn licensure for Medical Lab Science.

## Bachelor of Science with a Major in Medical Laboratory Science

General Education		38
Required Courses		
BIOL 150	General Biology I	4
BIOL 103	Intro to Medical Lab Science	1
BIOL 202	Introductory Microbiology	4
BIOL 220	Anatomy and Physiology I	4
BIOL 221	Anatomy and Physiology II	4

BIOL 450	Parasitology	4
BIOL 455	Hematology	4
BIOL 465	Immunology	4
CHEM 121	General Chemistry I (& CHEM 121L)	5
CHEM 122	General Chemistry II (& CHEM 122L)	5
CHEM 230	Quantitative Analysis	5
CHEM 240	Fundamentals of Organic Chemistry	5
CHEM 481	Biochemistry I	3
or CHEM 381	Fundamentals of Biochemistry	
MGMT 301	Fundamentals of Management	3
MATH 103	College Algebra	4
BIOL 420	Co-Op Practicum <sup>2</sup>	1

<sup>2</sup> Co-Op Practicum (Students will take 1 credit hour each semester they are at UND to maintain financial aid status at MiSU.)

The summer, fall and spring of their final year in the program, students will be at the University of North Dakota for their Professional Year lab rotations and internship. The following are the additional required courses students will take during their Professional Year at the University of North Dakota.