



MEDICAL LABORATORY SCIENCE

The Medical Laboratory Science (MLS) degree offered at UMC is through the Western College Alliance for Medical Laboratory Science (WCAMLS) Education program. Students take classes at UMC for their first 5 semesters, then transition into the MLS program at the University of North Dakota. Their final year is spent in clinical training at a remote medical facility, typically in the upper Midwest. Upon completion of the degree, students are prepared to work in hospitals, clinics, and physician offices performing tasks related to chemistry, microbiology, hematology, and immunology. Due to a shortage in medical laboratory scientists, graduates readily find employment, often times being retained by the facility where they spent their final year in the MLS program.

Some golden nuggets to consider...

- Technology driven curriculum
- Undergraduate research opportunities
- Excellent job opportunities
- Faculty members focused on students



PROGRAM FEATURES

UMC provides the core biology and chemistry courses necessary to be a successful medical laboratory scientist.

Our students get a very hands-on experience throughout their entire time in the MLS program. The chemistry and biology lecture and lab courses at UMC are run by faculty who are accustomed to providing personal attention and practical experiences to their students. UMC faculty provide opportunities for students to engage in novel research projects that often end up with students presenting their work at professional conferences and/or publication in scientific journals.

RESEARCH OPPORTUNITIES

Engage in undergraduate research through the Undergraduate Research Opportunity Program (UROP) or the Crookston Student Research and Creative Works fund (CSRCW). Students have the opportunity to work directly with faculty on research projects in biology, chemistry, exercise science, and environmental science. Whether you are interested in field work or getting experience using state-of-the-art instruments and equipment, opportunities exist for working during the academic year and/or during the summer. Students are encouraged to attend professional conferences to present their work to their peers.

CAREER PATHS

- Forensic Laboratories
- Hospitals
- Research Clinics
- Pharmaceutical Companies
- Blood Banks
- Public Health Clinics
- Veterinary Practices and Laboratories
- Public Health Organizations
- U.S. Military
- Volunteer Organizations, (Peace Corps and Doctors Without Borders)
- Equipment and Supply Companies

Small Campus. Big Degree.

PROGRAM REQUIREMENTS & CURRICULUM

BIOLOGY REQUIREMENTS: 20 CREDITS

BIOL 2012 - General Zoology (4.0 cr)

BIOL 2032 - General Microbiology (4.0 cr)

BIOL 2103 - Human Anatomy and Physiology I (4.0 cr)

BIOL 2104 - Human Anatomy and Physiology II (4.0 cr)

Choose one of the following:

BIOL 1009 - General Biology [BIOL SCI, PEOPLE/ENV] (4.0 cr)

or BIOL 1009H - Honors: General Biology [BIOL SCI, PEOPLE/ENV] (4.0 cr)

CHEMISTRY REQUIREMENTS: 16 CREDITS

CHEM 1061 - Chemical Principles I [PHYS SCI, PEOPLE/ENV] (3.0 cr)

CHEM 1062 - Chemical Principles II (3.0 cr)

CHEM 1065 - Chemical Principles I Laboratory [PHYS SCI, PEOPLE/ENV] (1.0 cr)

CHEM 1066 - Chemical Principles II Laboratory (1.0 cr)

CHEM 2301 - Organic Chemistry I (3.0 cr)

CHEM 2310 - Organic Chemistry Laboratory I (2.0 cr)

Choose one of the following:

BIOL 3027 - Cell Biology (3.0 cr)

or CHEM 3021 - Biochemistry (3.0 cr)

MLS REQUIREMENTS: 51 CREDITS

MLS 2234 - Human Parasitology (UND) (2.0 cr)

MLS 3301 - Immunology (UND) (3.0 cr)

MLS 3325 - Hematology (UND) (3.0 cr)

MLS 3326 - Hematology Laboratory (UND) (1.0 cr)

MLS 3336 - Laboratory Calculations (UND) (1.0 cr)

MLS 3340 - Molecular Diagnostics (UND) (2.0 cr)

MLS 3394 - Medical Microbiology (UND) (2.0 cr)

MLS 4471 - Clinical Chemistry I (UND) (2.0 cr)

MLS 4472 - Pre-Analytical Testing Skills (UND) (1.0 cr)

MLS 4473 - Clinical Hemostasis I (UND) (2.0 cr)

MLS 4474 - Clinical Urinalysis I (UND) (2.0 cr)

MLS 4476 - Clinical Immunohematology I (UND) (1.0 cr)

MLS 4477 - Clinical Immunohematology I Laboratory (UND) (1.0 cr)

MLS 4478 - Clinical Microbiology I (UND) (2.0 cr)

MLS 4479 - Clinical Hematology I (UND) (2.0 cr)

MLS 4480 - Clinical Immunohematology II (UND) (2.0 cr)

MLS 4481 - Clinical Chemistry II (UND) (2.0 cr)

MLS 4483 - Clinical Hemostasis II (UND) (1.0 cr)

MLS 4484 - Clinical Microbiology II (UND) (2.0 cr)

MLS 4485 - Clinical Urinalysis II (UND) (1.0 cr)

MLS 4487 - Medical Mycology (UND) (1.0 cr)

MLS 4488 - Clinical Hematology II (UND) (2.0 cr)

MLS 4489 - Clinical Body Fluids (UND) (1.0 cr)

MLS 4490 - Financial and Quality Management of the Clinical Laboratory (UND) (3.0 cr)

MLS 4491 - Clinical Chemistry III (UND) (2.0 cr)

MLS 4492 - Clinical Immunohematology III (UND) (2.0 cr)

MLS 4494 - Clinical Immunology (UND) (1.0 cr)

MLS 4495 - Clinical Microbiology III (UND) (2.0 cr)

MLS 4498 - Clinical Hematology III (UND) (2.0 cr)

LIBERAL EDUCATION REQUIREMENTS

COMP 1011 - Composition I [COMMUNICAT] (3.0 cr)

COMP 1013 - Composition II [COMMUNICAT] (3.0 cr)

PHIL 2002 - Introduction to Ethics [HUMANITIES, ETH/CIV RE] (3.0 cr)

SPCH 1101 - Public Speaking [COMMUNICAT] (3.0 cr)

WRIT 3303 - Writing in Your Profession (3.0 cr)

Take 2 or more course(s) totaling 6 or more credit(s) from the following:

• MATH 1031 - College Algebra [MATH THINK] (3.0 cr)

• MATH 1150 - Elementary Statistics [MATH THINK] (3.0 cr)

• MATH 1250 - Precalculus [MATH THINK] (4.0 cr)

• MATH 1271 - Calculus I [MATH THINK] (4.0 cr)

TECHNOLOGY REQUIREMENT: 3 CREDITS

ELECTIVES

Students must take enough electives to satisfy the 126 credit graduation requirement.

CONTACT US TODAY!

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CROOKSTON