

MEDICAL LABORATORY SCIENCE M.S.

All students must meet the Requirements for the Master's Degree

OVERVIEW

The Master of Science in Medical Laboratory Science (MMLS) program is designed to provide students with the knowledge and skills required for leadership roles in management, education, and research related to advanced clinical practice in the medical laboratory profession.

Individuals may enter the program via 2 tracks, depending on their background:

- Track 1 is for individuals with a Bachelor's Degree who are not certified in medical laboratory science but desire a career in the clinical laboratory sciences. Upon completion of the program, these students will be eligible to take the national certification exam in medical laboratory science offered by the American Society of Clinical Pathology (ASCP). Graduation is not contingent upon passing the ASCP certification exam.
- Track 2 is for medical laboratory science-certified graduates who seek advanced training and expertise in evidence-based practice, scientific research, healthcare management and leadership. Track 2 also includes an accelerated Master's option for current UVM medical laboratory science students (we are currently not accepting applications for Track 2).

Both Track 1 and Track 2 involve a research-based capstone project that will engage students in hands-on research methodology, experimental practice, and scientific communication. The capstone project provides students with the opportunity to develop important skills in evidence-based practice and clinically-related research.

Our faculty offer advanced practice courses in molecular methods, clinical laboratory correlations, health care leadership and management, policy, ethics, quality, research design and methods; and research experiences to prepare graduates of both tracks to become future leaders in the profession.

Students in Track 1 will complete a semester-long clinical practicum at one of our clinical affiliate hospitals as part of the core NAACLS-accredited program.

SPECIFIC REQUIREMENTS

REQUIREMENTS FOR ADMISSION TO GRADUATE STUDIES FOR THE DEGREE OF MASTER OF SCIENCE

TRACK 1

- B.S. or B.A. in one of the life sciences (or related field) from accredited college or university
- Minimum overall GPA of 3.0
- Undergraduate and (when applicable) graduate transcripts
- General biology or anatomy and physiology (8 credits), general chemistry (8 credits), organic chemistry or biochemistry (4

credits), general microbiology with lab (4 credits), college level math (3 credits)

- TOEFL or IELTS scores (international students)
- UVM Graduate College Application

TRACK 2 (NOT CURRENTLY ACCEPTING APPLICATIONS)

- B.S. in Medical Laboratory Science or related field
- ASCP certification in Medical Laboratory Science or ASCP certification-eligible
- Minimum overall GPA of 3.0
- Undergraduate and (when applicable) graduate transcripts
- General biology or anatomy and physiology (8 credits), general chemistry (8 credits), organic chemistry or biochemistry (4 credits), general microbiology with lab (4 credits), college level math(3 credits)
- TOEFL or IELTS scores (international students)
- UVM Graduate College Application

MINIMUM DEGREE REQUIREMENTS

TRACK 1

43 credits NAACLS accredited courses and 24 credits Advanced Practice courses (67 credits total). Students should work closely with the program or their advisor on their academic plan

FIRST YEAR		
Fall Semester		
MLS 5100	Gr Clinical Chemistry I	4
BHSC 5810	Gr Applied Molecular Bio	3
BHSC 5820	Gr Applied Molec Bio Lab	1
STAT 5000	Biostatistics and Epidemiology	3
	or STAT 5210	Advanced Stat Methods & Theory
MLS 6100	Advanced Immunobiology	3
Spring Semester		
BHSC 5440	Gr Immunology Lab	1
MMG 5220	Gr Medical Micro w/lab	4
MLS 5110	Gr Clinical Chemistry II	3
GRNS 6280	Quality in Healthcare	3
PATH 6250	Genetics for Clinicians	3
NH 6899	Fundamentals Critical Inquiry	3
Summer Semester		
MLS 6900	Clinical Leadership & Mgt	3
MLS 6500	Research and Design II	3
SECOND YEAR		

Fall Semester		
MLS 6300	Emerging Diag. Technologies	3
MLS 5200	Gr Hematology	3 or 4
MLS 5300	Gr Clinical Micro II	3
MLS 5400	Gr Immunohematology	4
MLS 6600	Research Capstone	1-3
Spring Semester		
MLS 6700	Clinical Practicum	12
MLS 6600	Research Capstone	1-3
MLS 6000	Certification Review	1

REQUIREMENTS FOR ADVANCEMENT TO CANDIDACY FOR THE DEGREE OF MASTER OF SCIENCE

Successful completion of the comprehensive exam and in academic good standing.

TRACK 2 (NOT CURRENTLY ACCEPTING APPLICATIONS)

30 credits of advanced practice coursework.

FIRST YEAR		
Fall Semester		
MLS 6300	Emerging Diag. Technologies	3
STAT 5000	Biostatistics and Epidemiology	3
or STAT 5210	Advanced Stat Methods & Theory	
Spring Semester		
NH 6899	Fundamentals Critical Inquiry	3
PATH 6250	Genetics for Clinicians	3
Summer Semester		
MLS 6900	Clinical Leadership & Mgt	3
MLS 6500	Research and Design II	3
SECOND YEAR		
Fall Semester		
MLS 6600	Research Capstone	1-3
Approved Elective		3
Spring Semester (Note: these courses may also be taken in the Spring of year 1)		
MLS 6200	Clinical Correlations	3
GRNS 6280	Quality in Healthcare	3
MLS 6600	Research Capstone	1-3

COMPREHENSIVE EXAMINATION

Students will complete a written comprehensive exam prior to graduation.