



## Medical Laboratory Technician, AAS Degree - 67 credits

Program Area: Health (Fall 2024)

The Medical Laboratory Technician program begins once per year fall semester.  
Applications will be accepted until the program is full.

### Program Description

The Medical Laboratory Technician (MLT) program provides students with entry level knowledge and technical skills required to work in a medical laboratory. MLTs are responsible for completing clinical tests on blood and body fluids that provide important results to physicians for the diagnosis, treatment and monitoring of disease. MLTs use automated instruments and manual laboratory methods to accomplish accurate and timely testing in each department of the clinical laboratory. Skills learned include counting and identifying cells in Hematology, using sophisticated instrumentation to perform chemical analysis, matching patient blood types to donors for transfusion and preparing samples in Microbiology. Students will also gain skills in coagulation testing, urinalysis, molecular diagnostics and blood collection (phlebotomy). MLTs must work with Medical Laboratory Scientists (MLS), physicians, phlebotomists, nurses and other healthcare professionals as they collect patient samples, communicate test results and resolve diagnostic discrepancies. Students should have a strong interest in science and math, strong communication skills, ability to work independently and as part of a team, ability to prioritize workloads and make accurate decisions under pressure, possess moral and intellectual integrity, and good motor coordination. Upon completion of the MLT program, national certification is through the American Society for Clinical Pathology (ASCP) Board of Registry exam. This is generally a requirement for employment. Students who possess a bachelor of Science in Biology, chemistry or a related field, earn the MLT AAS and pass the MLT Board of Certification (BOC) exam upon graduation, can often sit for the Medical Laboratory Scientist (MLS) BOC in one year. St. Cloud State University offers their Medical Laboratory Scientist (MLS) program in an online/hybrid format for MLTs who are certified and working. Students who plan to continue in the MLS program should discuss this with their advisor before registering for coursework.

### Pre-Program Courses

Course	Course Title	Credits	Term
ALTH 1410	Medical Terminology	1	
BIOL 1140	Human Anatomy and Physiology I	4	
BIOL 1141	Human Anatomy and Physiology II	4	
CHEM 1110 or CHEM 1210	Aspects of Chemistry I or General Chemistry I (MLS track)	3 (5)	
ENGL 1106	College Composition I	3	
MEDA 1410	Professionalism and Safety in Healthcare	1	
MTLN 1574	Collection Skills	2	
PHIL 1130	Ethics	3	

### Required Courses

Course	Course Title	Credits	Term
BIOL 1170	Microbiology	3	
MLTN 1400	Introduction to Medical Laboratory Techniques and Instrumentation	2	
MLTN 1410	Immunology and Serology	3	
MLTN 1424	Urinalysis and Body Fluids	3	
MLTN 1420	Hematology	3	
MTLN 1422	Medical Microbiology	4	
MTLN 1426	Immunochemistry	2	
MLTN 1428	Clinical Chemistry	2	
MLTN 1430	Molecular Diagnostics	1	
MLTN 2420	Special Hematology	3	
MLTN 2422	Special Medical Microbiology	2	
MLTN 2426	Special Immunochemistry	2	
MLTN 2428	Special Clinical Chemistry	2	
MLTN 2444	Medical Laboratory Skill Development	2	
MLTN 2500	Medical Lab Technician Seminar	1	
MLTN 2505	Medical Lab Tech Clinical Practicum	11	

### Total Credits

**67**

**Courses may require a pre-requisite. Refer to course outline or check with an advisor**

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## Program Outcomes

- Comply with laboratory safety and compliance procedures and policies.
- Demonstrate knowledge of principles, operations, and maintenance of laboratory equipment and instruments.
- Demonstrate organized work skills resulting in efficient time and material management and utilization.
- Employ quality assurance techniques to monitor procedures, equipment, and competency.
- Correlate laboratory findings to common disease processes.
- Demonstrate standard specimen collection and processing practices employed in medical laboratory professions.
- Model professional behaviors, ethics, and appearance.
- Identify pre-analytical, analytical, and post-analytical variables that affect test accuracy and take appropriate actions.
- Perform mathematical functions as required by laboratory procedures.
- Perform information processing functions in the clinical laboratory.
- Communicate verbally and in written format with colleagues and patients in a professional manner.
- Perform a variety of diagnostic and screening test procedures according to standard operating procedures.
- Relate basic discipline principles (hematologic, chemical, immunologic, etc.) to laboratory test procedures and test results.

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Qualified applicants should be aware that program class sizes are limited, which may delay acceptance into the program. You may be required to complete additional (or less) coursework, dependent upon the results of your Computerized Placement Test (CPT) and/or previous coursework completed, or certifications awarded.

General Education courses that are required may be taken prior to entering the program, as long as the specific prerequisites for that course have been met. Prior to taking any Medical Laboratory Technician required program courses, all pre-program courses listed must be completed with a GPA of 2.8 or better. A minimum of "C" is required in all college level courses. All program courses must be completed with a "C" or better to advance to the next semester.

## Pre-Program Requirements

Successful entry into this program requires a specific level of skill in the areas of English, mathematics, and reading. Program entry will depend, in part, on meeting the prerequisites listed below.

### English/Reading:

- ENGL 1106 - College Composition I, may not be taken concurrently with Semester I coursework.

### Mathematics:

- Completion of MATH 0970 - Intermediate Algebra with a "C" or better (or equivalent or higher). MATH 0970 may not be taken concurrently with Semester I coursework.

**NOTE:** You will need current immunizations and current negative Tuberculosis (TB) screening. Students are not required to complete CPR training, but completion of BLS CPR training is highly encouraged. Background Study approval is required from the State of Minnesota/or Wisconsin. A national criminal background study is also required.

## Program Accreditation

The Medical Laboratory Technician program is accredited by the [National Accrediting Agency for Clinical Laboratory Sciences](#), (NAACLS). NAACLS is located at: 5600 N River Road, Suite 720, Rosemont, IL 60018. [Email](#), Telephone: 773-714-8880

**Program Articulation:** St. Cloud State University, Medical Laboratory Science Program (Bachelor of Science)  
College of St. Scholastica, Natural Sciences BA

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For more information about the Medical Laboratory Technician AAS including course descriptions, course prerequisites, and potential career opportunities see the [program website](https://degrees.lsc.edu/mlt/) (https://degrees.lsc.edu/mlt/) or contact the [professional advising team](mailto:advising@lsc.edu) (advising@lsc.edu) at 218-733-7601 or the Director of the Medical Laboratory Technician program.



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