

Medical Laboratory Technician AAS DEGREE

Program Overview

The Medical Laboratory Technician program is a combination of classroom, laboratory and applied experiences that will provide students with training needed for employment in Medical Laboratory careers. Following the didactic coursework, which includes hands-on training in campus student laboratories, students are assigned to a clinical affiliate for the clinical experience. This required portion of the curriculum provides realistic experiences and an opportunity for further learning and demonstration of technical and affective skill competency. The Associate of Applied Science Degree earned prepares graduates to enter employment as a Medical Laboratory Technician or continue their education to earn a baccalaureate degree as a Medical Laboratory Scientist. Medical Laboratory Technicians collect blood, examine and analyze body fluids, tissues and cells. They look for bacteria, parasites, or other microorganisms; count cells and look for abnormal cells; analyze the chemical content of fluids; match blood for transfusions and test for drug levels in the blood to demonstrate how a patient is responding to treatment. They also prepare specimens for examination. They use automated equipment and instruments that perform a number of tests simultaneously, as well as microscopes, cell counters and other kinds of sophisticated laboratory equipment to perform tests. They then analyze the results and relay them to physicians. Qualifications include an interest and aptitude in science and mathematics, accuracy and attention to detail, strong communication skills, moral and intellectual integrity, self-discipline, an ability to multitask and prioritize workload, and desire to contribute to quality patient care. Laboratory workers must have the cognitive and technical skills to perform and master a variety of tasks.

Career Opportunities

Laboratory tests are of vital importance to modern medical practice. The need for clinical laboratory workers is expected to remain strong. Increased job openings are expected due to the increased need for laboratory testing in an aging population and also due to vacancies created through retirements of current employees. Employment of medical laboratory professionals is projected to grow 16% from 2014 to 2024 (according to the U.S. Bureau of Labor Statistics). Medical Laboratory Technicians are employed in hospital laboratories, clinics, doctor's offices, public health agencies and pharmaceutical, industrial, and medical research laboratories.

Program Outcomes

1. The graduate will demonstrate proper use, calibration, adjustment, and operation of most laboratory precision instrumentation including clinical microscopes, spectrophotometers, centrifuges, computers, and automated laboratory analyzers.

2. The graduate will demonstrate standard safety practices in the medical laboratory designed to prevent injury, illness, or loss of life to those working in and/or around medical laboratory equipment with particular emphasis on the skills required for collection and testing of numerous body fluids and specimens using Standard Precautions (including the use of personal protective equipment).
3. The graduate will correlate pathological conditions of the human body, including cause and symptoms, to the laboratory's role in diagnosis and treatment.
4. The graduate will demonstrate organized work skills as reflected in efficient time and material utilization while performing proficiently and safely in the clinical environment.
5. The graduate will perform a wide variety of testing procedures employed in a medical laboratory and relate the principles of quality assurance and the importance of these procedures to patient safety and the diagnosis and treatment of disease processes in the following areas: clinical chemistry, hematology and hemostasis, urinalysis, microbiology, immunohematology (transfusion medicine) and immunology.
6. The graduate will be prepared to take the examination administered by the Board of Certification under the direction of the American Society for Clinical Pathology (ASCP).
7. The graduate will demonstrate preparedness for entry level employment as a Medical Laboratory Technician, including both technical expertise and professionalism.

National Certification Exam

Upon completion of the program, the student is eligible to take an examination administered by the Board of Certification under the direction of the American Society for Clinical Pathology (ASCP).

Textbook and Supply Costs

Students should expect to spend approximately \$2,400.00, beyond the cost of tuition and fees, for books, supplies, certification exam, and liability insurance.

Part-time and Full-time Options

Many students attend part-time, which usually increases the program length to 3 years. Part-time students take required general education courses prior to enrolling in the MDLT courses. Once admitted to the MLT Major, students must take all of the required MDLT courses in sequence as prescribed. Students completing the required General Education, developmental or ESL courses and who have not been officially admitted to the MLT program are considered Pre-Medical Laboratory Technician.

*Information is subject to change.
This Program Requirements Guide is not a contract.*

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institutions for the baccalaureate degree programs listed below.

For more information please go to www.saintpaul.edu/Transfer.

Medical Laboratory Technician AAS

- BS Clinical Laboratory Science
Winona State University
- BS Healthcare and Human Service Management
Saint Mary's University-Twin Cities Campus
- BS Medical Laboratory Science
University of North Dakota
- BA Health Care Administration
Concordia University, St. Paul
- BA Individualized Studies
Metropolitan State University

Application Process

After completing the Saint Paul College application and admission process, students interested in the Medical Laboratory Technician program must submit to Enrollment Services a completed Application to the Medical Laboratory Technician Program form. This form is available on the Medical Laboratory Technician Web page (www.saintpaul.edu/MLT) beginning on the first day of fall semester through the last day in January. This application window is for the subsequent all semester start in the MLT Major. Applicants must meet the following criteria to submit the form:

- Documented readiness for, or completion of, the following required General Education Courses: ENGL 1711 English Composition and CHEM 1711 Principles of Chemistry 1
- Achieve a cumulative GPA of 2.8 or better with a minimum grade of "C" in all college level courses.

*See back of this guide for
Program Requirements and Course Sequence*

Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of "C" or better in READ 0722

Writing: Score of 78+ on Reading Comprehension or grade of "C" or better in ENGL 0922

College Level Mathematics: Score of 50+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

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Medical Laboratory Technician AAS DEGREE *(continued)*

Program Requirements

- Check off when completed
- All classes must be successfully completed with a grade of "C" or better.

MDLT Core Courses Cr

MDLT Core Courses can only be taken by students who have been officially accepted and admitted into the Medical Laboratory Technician Program.

<input type="checkbox"/> HLTH 1410 Medical Terminology	1
<input type="checkbox"/> MDLT 1400 Orientation	1
<input type="checkbox"/> MDLT 1410 Laboratory Techniques	3
<input type="checkbox"/> MDLT 1421 Hematology 1	2
<input type="checkbox"/> MDLT 1422 Hematology 2	4
<input type="checkbox"/> MDLT 1430 Urinalysis/Body Fluids	3
<input type="checkbox"/> MDLT 1441 Clinical Chemistry 1	2
<input type="checkbox"/> MDLT 1442 Clinical Chemistry 2	4
<input type="checkbox"/> MDLT 1446 Phlebotomy	1
<input type="checkbox"/> MDLT 1510 Immunology	2
<input type="checkbox"/> MDLT 2400 Mycology/Parasitology	2
<input type="checkbox"/> MDLT 2410 Immunohematology	3
<input type="checkbox"/> MDLT 2420 Clinical Microbiology	4
<input type="checkbox"/> MDLT 2430 Clinical Practice Orientation	1
<input type="checkbox"/> MDLT 2591 Clinical Practice	9
<input type="checkbox"/> MDLT 2593 Comprehensive Examinations	1
MDLT Core Credits Subtotal	43

General Education/MnTC Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
SPCH 1710 Fundamentals of Public Speaking – 3 cr	
OR SPCH 1720 Interpersonal Communications – 3 cr	
<input type="checkbox"/> Goal 3: Natural Sciences	16
BIOL 1730 Human Body Systems – 3 cr	
BIOL 1740 General Biology 1: The Living Cell – 5 cr	
CHEM1711 Principles of Chemistry 1 – 4 cr	
CHEM1712 Principles of Chemistry 2 – 4 cr	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
PSYC 1710 General Psychology OR	
SOC1 1720 Social Problems (recommended)	
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
PHIL 1722 Health Care Ethics (recommended)	

General Education Requirements 29

Total Program Credits 72

Recommended Supplemental Courses

The following optional Learning Lab courses reinforce the basic skills required for attaining proficiency in performing medical laboratory procedures:

MDLT 1451 Learning Lab 1 – Introductory Skills	1
MDLT 1452 Learning Lab 2 – Introductory Skills	1
MDLT 1453 Learning Lab 3 – Intermediate Skills	1
MDLT 1454 Learning Lab 4 – Intermediate Skills	1
MDLT 2455 Learning Lab 5 – Advanced Skills	1
MDLT 2456 Learning Lab 6 – Advanced Skills	1

Course Sequence

The following Course Sequence is required for full-time students. MDLT Core Courses can only be taken by students who have been officially accepted and admitted into the Medical Laboratory Technician program and who have attended the Mandatory Medical Lab Technician Orientation.

Accepted students progress through the major as a cohort and must take MDLT courses in sequence in the semester indicated. Non-MDLT coursework can be taken prior to acceptance into the MLT Major or during the semester indicated in the presented course sequence.

Students should consult with the program advisor to develop an appropriate educational plan. HLTH 1410 Medical Terminology must be completed by the end of the first semester in the MLT Major.

Not all courses are offered each semester. MDLT coursework can be started only Fall semester.

Fall Semester

HLTH 1410 Medical Terminology	1
MDLT 1400 Orientation	1
MDLT 1410 Laboratory Techniques	3
MDLT 1421 Hematology 1	2
MDLT 1430 Urinalysis/Body Fluids	3
MDLT 1441 Clinical Chemistry 1	2
MDLT 1446 Phlebotomy	1
Goal 3: CHEM 1711 Principles of Chemistry 1	4
Goal 3: BIOL 1730 Human Body Systems	3
Total Semester Credits	20
<i>Recommended Supplemental Courses First Semester:</i>	
MDLT 1451 Learning Lab 1 (Optional)	1
MDLT 1452 Learning Lab 2 (Optional)	1

Spring Semester

MDLT 1422 Hematology 2	4
MDLT 1442 Clinical Chemistry 2	4
MDLT 1510 Immunology	2
Goal 3: CHEM 1712 Principles of Chemistry 2	4
Goal 3: BIOL 1740 General Biology 1	5
Total Semester Credits	19
<i>Recommended Supplemental Courses Second Semester:</i>	
MDLT 1453 Learning Lab 3 (Optional)	1
MDLT 1454 Learning Lab 4 (Optional)	1

Summer Term

Goal 1: SPCH 1710 Fundamentals of Public Speaking OR	
SPCH 1720 Interpersonal Communications	3
Goal 1: ENGL 1711 Composition 1	4
Total Summer Term Credits	7

Fall Semester (Year 2)

MDLT 2400 Mycology/Parasitology	2
MDLT 2410 Immunohematology	3
MDLT 2420 Clinical Microbiology	4
MDLT 2430 Clinical Practice Orientation	1
Goal 5: PSYC 1710 or SOCI 1720 recommended	3
Goal 6: PHIL 1722 Health Care Ethics recommended	3
Total Semester Credits	16

<i>Recommended Supplemental Courses Fourth Semester:</i>	
MDLT 2455 Learning Lab 5 (Optional)	1
MDLT 2456 Learning Lab 6 (Optional)	1

Spring Semester (Year 2)

MDLT 2591 Clinical Practice	9
Total Semester Credits	9

Summer Term

MDLT 2593 Comprehensive Examinations	1
Total Summer Term Credits	1

Total Program Credits 72

Program Start Dates

Fall

Program Faculty

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Students should consult with the program advisor to develop an appropriate educational plan.

Admission into the Program

Applying by the priority application deadline (listed on the application) does not guarantee admission to the Medical Laboratory Technician Program.

Being admitted to Saint Paul College does not imply admission into the Medical Laboratory Technician Program.

After the priority review deadline indicated on the Application to the Medical Laboratory Technician Major, the Medical Laboratory Technician Admissions Committee will review each application in the order submitted on the basis of overall academic ability, GPA of college level courses, and assessment scores. Applicants are admitted on a first-qualified, first-served basis according to the order of application submission. Notification of acceptance into the Medical Laboratory Technician Major will be sent by mail 6 weeks after the deadline date listed on the Application to the Medical Laboratory Technician form.

Students admitted into the Medical Laboratory Technician program must attend a mandatory orientation to complete documentation to enter the program.

This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS):

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