## *Program Curriculum*

| Academic Year – Semester | Course Number | Course Title | Credit Hours |
|---|---|---|---|
| Semester 1 (FA) | MLT 100 | Introduction to Medical Laboratory Analysis* | 3-6-5 |
| | MLT 121 | Hematology and Hemostasis 1* | 3-3-4 |
| | BIO 151 | Anatomy and Physiology 1 | 3-2-4 |
| | ENG 101 | English Composition | 3-0-3 |
| | | | 16 |
| Semester 2 (SP) | MLT 122 | Hematology and Hemostasis 2 | 2-3-3 |
| | MLT 140 | Clinical Chemistry | 3-3-4 |
| | MLT 170 | Instrumentation for Medical Laboratory Technology | 0-3-1 |
| | ENG XXX | English Elective | 3-0-3 |
| | BIO 152 | Anatomy and Physiology 2 | 3-2-4 |
| | | | 15 |
| Semester 3 (SU) | MLT 181 | Phlebotomy Techniques for MLT | 0-3-1 |
| | MLT 294 | Internship in Specimen Collection | 0-4-1 |
| | MLT 186 | Hematology and Hemostasis Applications | 0-3-1 |
| | MLT 187 | Clinical Chemistry and Urinalysis Applications | 0-3-1 |
| | MLT 295 | MLT Clinical Internship | 0-20-1 |
| | | | 5 |
| Semester 4 (FA 2) | MLT 210 | Clinical Immunology and Serology | 2-3-3 |
| | MLT 255 | Clinical Microbiology with Applications | 3-9-6 |
| | PSY 110 | Introduction to Psychology | 3-0-3 |
| | MLT 191 | Part-Time Cooperative Education 1: MLT | 1-20-1 |
| | | | 13 |
| Semester 5 (SP 2) | MLT 265 | Immunohematology with Applications | 2-9-5 |
| | MLT 270 | Medical Laboratory Seminar | 0-3-1 |
| | MLT 192 | Part-Time Cooperative Education 2: MLT | 1-20-1 |
| | | | 7 |
| | | Total Curriculum Credit Hours | 65 |

- **Technical sequence courses (MLT) start every fall semester, must be taken in order and are offered only during the day.**
- **25-30 students are accepted once a year in the fall semester based on the date pre-requisites were met, admission date and space available.**
- **All students enrolling in the Introductory MLT classes MLT 100 and MLT 121 must have a minimum of a 2.75 GPA at the time of enrollment.**
- **Service Work Policy: Students are not permitted to take the place of qualified staff during their clinical experience. Students are permitted to perform procedures only when supervised by qualified staff. Service work by students in clinical settings outside of regular academic hours must be non-compulsory. If the student is an employee of the site in some other capacity, work performed during paid hours cannot be used toward meeting clinical/ practicum academic objectives.**

Cincinnati State
HEALTH AND PUBLIC SAFETY
Medical Laboratory Technology

# MLT

# Medical Laboratory Technology

## About the Program

Medical Laboratory Technicians work closely with other healthcare professionals. They provide much of the information needed by physicians to diagnose and treat patients. They work in the laboratories of hospitals, emergency centers, research and industry. In clinical chemistry, hematology, microbiology and blood bank laboratories, they form a vital part of the healthcare team, providing approximately 80% of the data needed for diagnosis.

Using computerized laboratory analyzers and sophisticated scientific processes, Medical Laboratory Technicians provide much of the information used for the diagnosis, prognosis and treatment of patients. They may work in several major areas of clinical pathology as a generalist or specialize in:

**Hematology**: Quantitation and evaluation of red blood cells, white blood cells, platelets and clotting factors

**Clinical Chemistry**: Analysis of biochemical compounds in the body such as glucose, urea, sodium, potassium, chloride, lipids and enzymes

**Immunohematology:** Preparation of blood for transfusion, including blood group and type, antibody testing and processing

**Microbiology:** Isolation and identification of microorganisms causing infections such as urinary tract infection, wound infection, food poisoning, meningitis, pneumonia, etc.

**Immunology:** Testing of serum for antibodies in order to diagnose diseases such as rheumatoid arthritis, infectious mononucleosis, lupus erythematosus, syphilis, etc.

The Cincinnati State Medical Laboratory Technology Program is the leading supplier of Medical Laboratory Technicians in the Tri-State area. Virtually every hospital laboratory in the Greater Cincinnati region provides clinical internships and/or cooperative education for the Program and employs Cincinnati State graduates.

## Accreditation

The MLT Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 5600 North River Rd, Suite 720, Rosemont, IL 60018-5119, phone: 773-714-8880. The MLT Program at Cincinnati State has been continuously accredited by NAACLS for nearly 50 years.

## Estimated Costs (2024-2025)

- Ohio residents tuition:  $13,520 – Approximately tuition cost for Ohio residents or reciprocity students
- Out of state tuition $27,040– Approximate tuition cost for out of state residents
- Additional costs for books, lab fees, scrubs, physical, TB tests, HBV immunizations, and background checks

## Financial Aid:

Students are advised to work closely with a Financial Aid advisor, and are cautioned to be aware of Financial Aid limits prior to enrolling in coursework not listed in the curriculum.

## Program Advisors

Students not yet admitted to the College are assisted by the Admissions Office, please call 513-861-7700. Advisors in the Health & Public Safety Division assist students interested in Medical Laboratory Technology. Please call the division at 513-569-1670 to schedule an appointment with an advisor or the Program Chair, Ayman Idrees: ayman.idrees@cincinnatistate.edu

## Background Checks/Drug Screens-Eligibility

All students are subject to background checks and a drug screen which must be completed as part of the clinical placement process. Students who have been convicted of felonies and/or misdemeanors are required to contact the MLT Program Chair before entering the Program. When a student's background check contains findings that could potentially impact clinical placement, additional documentation may be required in order to make a determination regarding eligibility. Division administrators will then follow guidelines as outlined in the Health and Public Safety Division Handbook to determine eligibility. Students who have positive drug screens for non-prescribed controlled substances while enrolled in the Program are not eligible to attend the clinical courses and will not be able to continue in the Program.

## Program Outcomes

***MLT NAACLS PROGRAM OUTCOMES REPORTING***

| GRADUATON YEAR | ASCP PASS RATE* | JOB PLACEMENT RATE ** | GRADUATION RATE*** |
|---|---|---|---|
| 2024 | 100% | 100% | 86% |
| 2025 | 100% | 100% | 83% |
| 2025 | 100% | 100% | 88% |

*Those who sat for the ASCP BOC Exam within the first year of graduation
**Those who found employment (in the field or in a closely related field) and/or continued their education within one year of graduation

***Students who started the first half of the second year and completed the Program

## Cooperative Education Requirement

Two part time co-op semesters are required in the 2nd year technical courses.  Co-op pay ranges from$20 to$25 per hour.  Co-op is not available prior to the 2nd year, due to the need for specialized skills and knowledge. Co-op placement rate remains at 100%.

## Admission to the Program

You may enroll in the program if you are a graduate of an accredited high school or have evidence of high school equivalency by GED  scores. In addition to meeting the requirements  for admission to the College, you must  meet the  following  criteria for the Medical Laboratory  Technician (MLT) program:

- High school diploma or GED (college transcripts can also be submitted for transfer credit)
- High school or college Biology & Chemistry course with a grade of C or better. Courses must be within 7 years of application.
- Complete CHE 115 (College Chemistry) and MAT 151 (College Algebra), or  equivalent transfer courses with a grade of C or better
- Must complete a FYE (First Year Experience) course with a grade of C or better
- At least a 2.75 GPA , when starting MLT 100 & MLT 121
- Check your College email at least weekly as it is the official mode of communication for the Program and the college.

## Credentials

Graduates will earn an associate of applied science degree in Medical Laboratory Technology and may apply to the Board of Certification of the American Society of Clinical Pathology (ASCP) to sit for the certification examination. Persons passing the exam are  recognized as Medical Laboratory  Technicians – MLT (ASCP). The Cincinnati State pass rate of MLT graduates on the certification exam offered by the American Society of  Clinical Pathology (ASCP) has been nearly 100% for 25 years, compared with around 80% nationally. The granting  of the degree or is not contingent upon passing  an external certification or licensure exam.

## Starting Salaries

Starting pay is typically $52,000- $58,000 annually. The program's 3 year average job placement rate for MLT positions is 100%.

## Key Components

### Personal Qualities

- Punctuality and dependability
- Accuracy and analytical judgment
- An ability to work under pressure on multiple task
- An ability to work well under supervision
- An ability to pay close attention to detail
- Effective verbal and written communication skills; including being able to read and follow written and verbal directions

### Physical Demands of the Job:

- Lifting
- Stooping
- Reaching
- Talking
- Close vision
- Color vision
- Depth perception
- Adjusting to darkness
- Manual Dexterity
- Sense of touch
- Handling  Items

### Medical Laboratory Technician work with :

- Microscopes, automatic analyzers, cell counters, other laboratory equipment and computers
- Computerized instruments that perform a number of tests at the same time
- Specimens of blood, tissues, cells, and other body substances which may be infectious
- Solutions and  reagents
- Laboratory Reports

## Program Chair

**Ayman Idrees M.S., B.S., MLS(ASCP)**
Has overall responsibility for the program and students enrolled in the program's technical (MLT) courses.

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