

# MEDICAL LABORATORY TECHNOLOGY

(Also see Phlebotomy)

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The goal of the Medical Laboratory Technology curriculum is to provide a broad science background and courses in both theoretical and practical aspects of clinical laboratory science. Medical laboratory technicians work to determine the presence, extent or absence of disease and provide data needed to evaluate the effectiveness of treatment in hospitals, clinics, physicians' offices and commercial laboratories. Course offerings include laboratory techniques, principles and physiological significance of tests on all types of body tissues and fluids, from urine and blood to cell samples, and hands-on experience on a wide variety of specialized, high-precision instruments, including centrifuges, electronic counters, automatic analyzers and computers.

During the second year of this curriculum, students are required to spend 864 hours in an assigned clinical laboratory. Part of the practical experience may extend into vacation time and/or school holidays. Students are required to provide uniforms and health insurance.

The graduate is eligible to take the certification examination administered by the Board of Certification of the American Society for Clinical Pathology and become a certified MLT (ASCP). The MLT Curriculum is accredited by:

NAACLS (National Accrediting Agency for Clinical Laboratory Sciences)  
5600 North River Road, Suite 720  
Rosemont, IL 60018  
773-714-8880.

This is a limited enrollment curriculum. For more information, contact the department chair or health career advisor at 847-635-1844.

Medical Laboratory Technology courses are offered in specific semesters only. Therefore, students should plan to follow this course schedule:

- Fall semester: MLT 105, MLT 106, MLT 111, MLT 112, BIO 231, CHM 121
- Spring semester: MLT 113, MLT 115, MLT 117, BIO 232, BIO 251, CHM 122
- Summer session: MLT 210, MLT 215
- Fall semester: MLT 220, MLT 221, MLT 225, EGL 101, General Education courses from Areas A, D, E, G
- Spring semester: MLT 230, MLT 231, MLT 235, General Education courses from Areas A, F, G

## Admission Requirements:

1. High school graduation or High School Equivalency Certificate.
2. High School GPA of 2.0 or higher.
3. One year of high school or one semester of college:
  - a. Algebra (completed within the last seven years) with a minimum grade of C or one semester of college algebra (Oakton - MAT 140 or equivalent). Math placement test may be required.
  - b. Biology (completed within the last 10 years) with a minimum grade of C or one semester of college biology (Oakton - BIO 101 or equivalent)
  - c. Chemistry (completed within the last seven years) with a minimum grade of C or one semester of college chemistry (Oakton - CHM 101 or equivalent)
4. Foreign high school graduates or students with foreign college credits need to send English translated copies of their transcripts to Educational Perspectives, [www.edperspective.org/oakton](http://www.edperspective.org/oakton). Students with foreign college credit should request a catalog match.
5. Entry level competency for EGL 101 demonstrated by coursework or placement testing.
6. Native English Accuplacer® Reading Assessment test, taken at Oakton's Testing Center, with a minimum score of 250.
7. ACT score of 21 or higher, or SAT score of 1060 or higher, or minimum of 12 credit hours from the following courses with a grade of C or better: BIO 231, BIO 232, and CHM 121, CHM 222.
8. Cumulative college GPA of 2.0 or better.
9. Satisfactory interview with MLT faculty.
10. Admitted students are required to submit a current and complete physical examination record before registration for MLT clinical courses.
11. Applicants must be able to meet MLT Essential Skills.
12. All Oakton MLT courses must be completed at the College. There is no transfer of MLT coursework from other programs.

Students must receive a minimum grade of C in all MLT and science courses.

Health Career curricula are governed by specific objectives, rules and regulations formulated by the College, accrediting bodies and participating clinical facilities. Students should familiarize themselves with these standards. Students should also be aware that failure to maintain satisfactory progress in technical courses may significantly delay completion of the curriculum or may result in the student being dropped from the curriculum. Each student's right to participation in the clinical portion of the curriculum is also contingent upon compliance with the rules of the clinical facility. The clinical facility has sole discretion to determine when its rules have been violated.

Clinical placements require a health assessment, certain immunizations, yearly flu vaccine, substance abuse testing, criminal background check, specific skill certification (i.e., CPR) and health insurance. The requirements represent an additional cost to the student.

All Oakton Community College Health Career students in nursing, physical therapist assistant, medical laboratory technology, pharmacy technician, phlebotomy, health information technology, and medical assistant programs must have "clear" criminal background checks and drug screens in order to participate in any and all clinical components of any health career program courses.

To comply with state statutes and clinical affiliation agreements, and to provide a safe environment for students, employees, and patients cared for by students, those accepted into Oakton's health career programs will be required to complete a criminal background check and drug screening through a company contracted by the College. Health Career students will be charged a fee for this service.

Timelines for completing criminal background checks and drug screens may vary among the various programs. Deadline dates for each program will be provided by the individual department chairs at the time of a student's acceptance into a health career program.

Students without a clear criminal background check and/or clear drug screen will not be allowed to enroll in clinical practicum courses or attend clinical programs. This would further necessitate that the student withdraw from the health career program at that time.

Students who refuse a criminal background check and/or drug screen will not be considered "clear" and will not be authorized to participate in the clinical component of the health career program, necessitating withdrawal from the program at that time.

Individual results of student background checks and drug screens are considered confidential.

Determination of whether or not a student can participate in the clinical component of a particular health career program will be communicated to the respective department chairs by the Background Check/Drug Screen vendor. Students may view their personal results on the vendor's website.

## Medical Laboratory Technology A.A.S.

68 Semester Credit Hours; Curriculum: 0280

**Note:** Refer to IAI General Education Courses page for guidelines on General Education course selection.

Code	Title	Hours
<b>General Education Requirements</b>		
<i>Area A — Communications</i>		
EGL 101	Composition I	3
Select one of the following:		3
EGL 102	Composition II	
EGL 111	Introduction to Business and Technical Writing	
EGL 212	Technical Writing Applications	
SPE 103	Effective Speech	
<i>Area B — Mathematics</i>		
No course needed		0
<i>Area C — Science</i>		
BIO 231	Human Anatomy and Physiology I	4
BIO 232	Human Anatomy and Physiology II	4
<i>Area D — Social and Behavioral Sciences</i>		
Select one course from a social or behavioral science discipline		3
<i>Area E — Humanities/Fine Arts</i>		
Select one course from a humanities or fine arts discipline		3
<i>Area F — Global Studies<sup>1</sup></i>		
Select one course that satisfies Global Studies requirement		0-3
<i>Area G — U.S. Diversity Studies<sup>2</sup></i>		
Select one course that satisfies U.S. Diversity Studies requirement		0-3
<b>Total Hours</b>		<b>20</b>

<sup>1</sup> Students may take a Global Studies that satisfies both Area F and another Area requirement.

<sup>2</sup> Students may take a U.S. Diversity course that satisfies both Area G and another Area requirement.

Code	Title	Hours
<b>Major Requirements</b>		
MLT 105	Introduction to Health Care Issues	1
MLT 106	Basic Skills in Medical Laboratory Technology	2
MLT 111	Hematology	4

MLT 112	Urinalysis and Body Fluids	2
MLT 113	Immunohematology/Blood Bank	4
MLT 115	Coagulation	1
MLT 117	Immunology/Serology	1
MLT 210	Clinical Practicum I	2
MLT 215	Clinical Chemistry	4
MLT 220	Clinical Practicum II	2
MLT 221	Clinical Practicum III	2
MLT 225	Medical Microbiology	4
MLT 230	Clinical Practicum IV	2
MLT 231	Clinical Practicum V	2
MLT 235	Applications In Laboratory Practice	3
BIO 251	Microbiology	4
CHM 121	General College Chemistry I	4
CHM 122	General College Chemistry II	4
<b>Total Hours</b>		<b>48</b>

### Program Learning Outcomes

1. Perform routine clinical laboratory tests (in hematology, clinical chemistry, blood bank, microbiology, immunology, and coagulation) as the primary analyst making specimen oriented decisions on predetermined criteria, with 90 % accuracy.
2. Collect, transport, handle and process blood specimens for analysis, following standard operating procedures, with 90% accuracy.
3. Select appropriate laboratory equipment and supplies in testing procedures following standard operating procedures, with 90% accuracy.
4. Identify factors that affect specimen collection and testing procedures and test results and take appropriate actions within predetermined limits, when applicable, with 90% accuracy.
5. Perform routine clinical laboratory testing, adhering to infection control and safety policies and procedures, with 90% accuracy.

## Medical Laboratory Technology Pathway

The following Pathway is recommended for students pursuing an Associate in Applied Science degree in Medical Laboratory Technology.

For more information on recommended courses or program specific advising, contact the Health Career Advisor at 847-635-1844, or the Division of STEM and Health Careers at 847-635-1864. **General Education courses should be selected from the list of IAI General Education Courses.**

Course	Title	Hours
<b>First Year</b>		
<b>Semester One (Fall)</b>		
BIO 231	Human Anatomy and Physiology I	4
CHM 121	General College Chemistry I	4
MLT 105	Introduction to Health Care Issues	1
MLT 106	Basic Skills in Medical Laboratory Technology	2
MLT 111	Hematology	4
MLT 112	Urinalysis and Body Fluids	2
<b>Hours</b>		<b>17</b>
<b>Semester Two (Spring)</b>		
BIO 232	Human Anatomy and Physiology II	4
BIO 251	Microbiology	4
CHM 122	General College Chemistry II	4
MLT 113	Immunohematology/Blood Bank	4
MLT 115	Coagulation	1

MLT 117	Immunology/Serology	1
<b>Hours</b>		<b>18</b>
<b>Semester Three (Summer)</b>		
MLT 210	Clinical Practicum I	2
MLT 215	Clinical Chemistry	4
<b>Hours</b>		<b>6</b>
<b>Second Year</b>		
<b>Semester One (Fall)</b>		
EGL 101	Composition I	3
MLT 220	Clinical Practicum II	2
MLT 221	Clinical Practicum III	2
MLT 225	Medical Microbiology	4
Select one Social and Behavioral Science course		3
Select one Humanities/Fine Arts course		3
<b>Hours</b>		<b>17</b>
<b>Semester Two (Spring)</b>		
MLT 230	Clinical Practicum IV	2
MLT 231	Clinical Practicum V	2
MLT 235	Applications In Laboratory Practice	3
Select one of the following:		3
EGL 102	Composition II	
EGL 111	Introduction to Business and Technical Writing	
EGL 212	Technical Writing Applications	
SPE 103	Effective Speech	
Select one Global Studies course <sup>1</sup>		0-3
Select one U.S. Diversity Studies course <sup>2</sup>		0-3
<b>Hours</b>		<b>10-16</b>
<b>Total Hours</b>		<b>68-74</b>

**Note:** Pathway is a recommended sequence of courses. Part-time students should reach out to their Health Career Advisor to discuss a part-time pathway as well as course prerequisites and recommendations.

- <sup>1</sup> Course fulfills the Global Studies Requirement. At least one Global Studies course is required for degree completion.
- <sup>2</sup> Course fulfills the U.S. Diversity Requirement. At least one U.S. Diversity course is required for degree completion.