

# CLINICAL LABORATORY TECHNOLOGY

The Clinical Laboratory Technology (CLT) program prepares individuals for rewarding professional careers that combine medicine and science. Students learn to perform diagnostic analyses using state-of-the-art laboratory equipment, interpret test results, and consult with physicians in determining and monitoring necessary treatment for patients. The program integrates general education and professional courses with hands-on experiences in a variety of clinical lab settings. Online education is combined with on-campus labs to prepare students with the technical skills needed to work in the following laboratory departments: hematology, microbiology, chemistry, blood bank, immunology, microscopy and phlebotomy. Upon completion of the associate degree, students are eligible to sit for a national certification exam offered by the American Society of Clinical Pathology (ASCP).

The clinical laboratory assistant (CLA) program leads to a basic vocational certificate and provides students with the skills necessary to collect and process specimens, prepare slides, set up cultures, and perform point-of-care testing procedures.

## Accreditation

The Clinical Laboratory Technology program is accredited by:

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)  
5600 N. River Rd., Suite 720  
Rosemont, IL 60018  
Phone: 773-714-8880  
[naacls.org](http://naacls.org)

## Entrance Requirements: Clinical Laboratory Technology and for Clinical Lab Assistant

1. Proof of High School diploma or High School equivalency
2. Successful completion with a grade of C or better in within 10 years:
  - **BIO 110**
  - **CHM 101** or **CHM 112** or grade of C or better in one year high school chemistry if graduated in the past five years.
  - Algebra: **MTH 098** or **MTH 099**, or **satisfaction of other placement criteria**.
  - Geometry: **MTH 097** or **satisfaction of other placement criteria**.

General education courses required for degree completion (may be taken before the program enrollment) must be

completed with a C or better, math and science courses must be completed within 10 years

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Course	Title	Credits
General Education		
ENG 101	English Composition I	3
ENG 102	English Composition II	3
Humanities/Fine Arts		
Social/Behavioral Science		
Math and Science		
BIO 240 or BIO 245 and BIO 246	Human Anatomy and Physiology Human Anatomy and Physiology I	5
BIO 265	Microbiology	4
BIO 113 or CHM 170	Molecular & Cellular Biology (or) Elementary Organic Chemistry	4
CHM 142	General Chemistry I	5
MTH 112	College Algebra	4

## Admission Procedures

Admission to the program is selective. For more information, please see the [admission requirements](#).

## Program Requirements

Students must complete all required courses with grades of C or better to be eligible to sit for the medical laboratory technician certification exam offered by the American Society of Clinical Pathology (ASCP). Prior credits in biology, chemistry, or mathematics must have been earned within the last 10 years. Students must provide their own uniform and transportation to and from all clinical sites.

Students who complete the clinical laboratory assistant certificate and who continue in the CLT program will receive credit for CLT 100 Intro to Clinical Lab Technology and CLT 120 Clinical Lab Technology Practicum I.

## Policies and Procedures

Students applying to health professions programs must complete a background check and drug screen in order to be part of the health profession's program. Students must complete these requirements in order to complete required clinical training (internships). Students demonstrating a positive background check or drug screen will be denied admission to any health professions program.

Health professions students will be required to update their drug test, TB test and flu vaccination on an annual basis. Some clinical affiliates also require a repeat background check. Students demonstrating a positive drug test will be dismissed from the health professions division.

These standards, policies, and procedures of the clinical laboratory technology program are published in the **clinical laboratory technology student handbook**.

- Collect and process specimens independently.
- Apply test principles in the performance of diagnostic lab analyses.
- Correlate test results with clinical disease states.
- Evaluate quality control results before reporting test results.
- Follow established laboratory safety policies.
- Organize and prioritize tasks appropriately.
- Initiate measures to correct technical problems.
- Maintain quality performance under stress.
- Convey written and verbal information to others in a timely manner.
- Follow written and verbal instructions accurately.
- Use computer technology to operate equipment and manage information.
- Develop a sense of responsibility to the patient and the employer.
- Treat co-workers with respect and maintain professionalism in appearance and conduct.
- Remain adaptable to changes that occur in the profession.
- Grow intellectually through continuing education.

## Clinical Laboratory Technology - Associate of Applied Science

Course	Title	Credit Hours
<b>First Semester</b>		
Select one of the following:		5-8
BIO 240	Human Anatomy and Physiology	
BIO 245 & BIO 246	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
MTH 112	College Algebra	4
ENG 101	English Composition I	3
Select one of the following:		2.5-5
CLT 100	Intro to Clinical Lab Technology	
CLT 105 & CLT 106	Clinical Lab Assistant Skills I and Clinical Lab Assistant Skills II	
CLT 120	Clinical Lab Technology Practicum I	0.5
<b>Total</b>		<b>15-20.5</b>
<b>Second Semester</b>		
CHM 142	General Chemistry I	5
ENG 102	English Composition II	3
<b>Social/Behavioral Science Elective</b>		3
CLT 110	Clinical Microscopy	3
CLT 112	Clinical Hematology	3.5
<b>Total</b>		<b>17.5</b>
<b>First Summer Semester</b>		
BIO 265	Microbiology	4
CLT 114	Clinical Immunology	2.5
<b>Total</b>		<b>6.5</b>
<b>Third Semester</b>		
BIO 113 or CHM 170	Molecular & Cellular Biology or Elementary Organic Chemistry	4-5
CLT 210	Clinical Chemistry	3.5

CLT 212	Clinical Microbiology	3.5
CLT 220	Clinical Lab Technology Practicum II	5
<b>Total</b>		<b>16-17</b>
<b>Fourth Semester</b>		
<b>Required Humanities/Fine Arts Course</b>		3
CLT 214	Clinical Immunohematology	3
CLT 222	Clinical Lab Technology Pract III	5
CLT 230	Clinical Lab Technology Conference	1
<b>Total</b>		<b>12</b>
<b>Program Total</b>		<b>67-73.5</b>

## Clinical Laboratory Assistant - Basic Vocational Specialist

Course	Title	Credit Hours
<b>First Semester</b>		
CLT 101	Phlebotomy	3.5
CLT 105	Clinical Lab Assistant Skills I	2
CLT 106	Clinical Lab Assistant Skills II	3
<b>Total</b>		<b>8.5</b>
<b>Second Semester</b>		
CLT 120	Clinical Lab Technology Practicum I <sup>1</sup>	1.5
<b>Total</b>		<b>1.5</b>
<b>Program Total</b>		<b>10</b>

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Students with one year of full-time phlebotomy experience may apply for proficiency credit for CLT 120 Clinical Lab Technology Practicum I.

All CLT courses numbered 100 and above may be applied to the major field and elective requirement in the Associate in Arts and Associate in Science degrees.

### CLT 100 Intro to Clinical Lab Technology (2.5) 2,1

This introductory course will familiarize the student with the professional responsibilities of the clinical laboratory technician. Units on medical terminology, laboratory safety, infection control, use of diagnostic equipment, and quality control will be covered. Students develop basic phlebotomy skills in preparation for CLT 120. (1.2) Proficiency Credit Available (2 ME) Pass/No Credit Not Available

### Clinical Laboratory Technology Program

**SPECIAL NOTE:** Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$487.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Acceptance into Clinical Laboratory Technology program or program director consent

**Semester(s) Offered:** Fall

**CLT 101 Phlebotomy (3.5) 2,3**

Students will learn basic techniques for blood specimen collection. Units on anatomy and physiology of the circulatory system, medical terminology, specimen processing, laboratory safety, infection control, quality control, and professional skills will also be covered. Students who wish to become certified as phlebotomy technicians must also complete 1.5 credits of CLT 120. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**Clinical Laboratory Technology Program**

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**In-District Tuition/Fees:** \$622.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Admission into the Phlebotomy or Medical Assisting program.

**Semester(s) Offered:** Fall, Spring and Summer

**CLT 105 Clinical Lab Assistant Skills I (2) 1,2**

The Clinical Laboratory Assistant is an important member of the clinical laboratory team. CLAs are responsible for specimen collection and processing, reagent preparation, instrument maintenance, and performance of basic laboratory tests. Units on medical terminology, laboratory safety, infection control, use of diagnostic equipment, quality control, customer service skills, and laboratory information systems will be covered. (1.2) Proficiency Credit Available (2 ME) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$370 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Acceptance into Clinical Laboratory Assistant program or program director consent

**Semester(s) Offered:** Spring

**CLT 106 Clinical Lab Assistant Skills II (3) 2,2**

This course builds on the skills learned in CLT 105. Students will perform basic laboratory procedures in urinalysis, hematology, chemistry, microbiology, and immunology. Students who successfully complete CLT 105 and CLT 106 will be granted credit for CLT 100 in the Clinical Laboratory Technician program. (1.2) Proficiency Credit Available (2 ME) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$505 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in CLT 105 or program director consent

**Semester(s) Offered:** Spring

**CLT 110 Clinical Microscopy (3) 2,2**

Students will learn basic microscopy techniques used in performing body fluid analyses. Anatomy and physiology of the urinary system, renal disease states, diagnostic test principles and procedures, and clinical correlation of lab results will be covered. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$555 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in BIO 240 or BIO 246 and CLT 100 or CLT 106 or program director consent

**Semester(s) Offered:** Spring

**CLT 112 Clinical Hematology (3.5) 2,3**

Students will learn basic lab techniques used in performing hematology/hemostasis analyses. Hematopoiesis, hematologic disorders, diagnostic test principles and procedures, instrumentation, and clinical correlation of lab results will be covered. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$622.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in BIO 240 or BIO 246 and CLT 100 or CLT 106 or program director consent

**Semester(s) Offered:** Spring

**CLT 114 Clinical Immunology (2.5) 2,1**

Students will learn basic lab techniques used in performing serologic analyses. The immune system, the immune response in health and disease, diagnostic test principles and procedures, and clinical correlation of lab results will be covered. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$487.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in BIO 240 or BIO 246 and CLT 100 or CLT 106 or program director consent

**Semester(s) Offered:** Summer

**CLT 120 Clinical Lab Technology Practicum I (.5-1.5) 0,1.5**

(0, 1.5-1.5) Practicum I will provide the student with supervised clinical experience in a phlebotomy setting. Students who have completed CLT 101 and earn 1.5 credits of CLT 120 are eligible to take a national certification exam for phlebotomy technicians. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$352.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Program director consent

**Semester(s) Offered:** Fall, Spring and Summer

**CLT 210 Clinical Chemistry (3.5) 2,3**

Students will learn basic lab techniques used in performing biochemical analyses. Units on carbohydrates, proteins, lipids, enzymes, hormones, electrolytes, and toxicology will include diagnostic test principles and procedures, instrumentation, and clinical correlation of lab results. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$622.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in CHM 142 and CLT 100 or CLT 106 or program director consent

**Semester(s) Offered:** Fall

**CLT 212 Clinical Microbiology (3.5) 2,3**

Students will learn sterile techniques used to isolate and identify microorganisms. Antibiotic susceptibility testing and clinical correlation of lab results will be covered. Supplemental units on parasitology, mycology, and virology will be introduced. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$622.5 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in BIO 265 and CLT 100 or CLT 106 or program director consent

**Semester(s) Offered:** Fall

**CLT 214 Clinical Immunohematology (3) 2,2**

Students will learn basic lab techniques used in blood typing, compatibility testing, and antibody identification. Other functions of the blood bank including donor blood collection, screening, and component processing will be covered. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$555 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in CLT 114 or program director consent

**Semester(s) Offered:** Spring

**CLT 220 Clinical Lab Technology Practicum II (5) 0,15**

Practicum II will provide the student with supervised experience in a clinical laboratory. Student rotations will be scheduled in hematology and chemistry departments. (1.2) Proficiency Credit Available (EIST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$825 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in CLT 110, CLT 112 and CLT 210 or program director consent

**Semester(s) Offered:** Fall

**CLT 222 Clinical Lab Technology Pract III (5) 0,15**

Practicum III will provide the student with additional supervised experience in a clinical laboratory. Student rotations will be scheduled in immunology, microbiology, and blood bank departments. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

**SPECIAL NOTE:**Students enrolled in this program are required to have the following: 1) criminal background check, 2) drug test, 3) lab tests to prove immunity to common illnesses, 4) TB test, 5) health insurance, 6) uniform, 7) fully vaccinated for COVID-19. Explore the Clinical Laboratory Technology Program and come to an **information session**.

**In-District Tuition/Fees:** \$825 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in CLT 114, CLT 212, and CLT 214 or program director consent

**Semester(s) Offered:** Spring

**CLT 230 Clinical Lab Technology Conference (1) 1,0**

This capstone course will cover management and education topics related to clinical laboratory science. Students will prepare resumes, design and operate a mock laboratory, and review for certification exams. (1.2) Proficiency Credit Available (2 EST) Pass/No Credit Not Available

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**In-District Tuition/Fees:** \$285 (effective 2024/25 academic year)

**In-district tuition rates are subject to change based on Board approval.**

**Prerequisite:** Grade of C or better in CLT 120 and CLT 220 or program director consent

**Semester(s) Offered:** Spring