Medical Laboratory Technician

Description: The Medical Laboratory Technician curriculum prepares students for positions as technicians in hospital laboratories, physician offices, pharmaceutical companies, private laboratories or other types of clinical laboratory facilities.

Technicians perform clinical laboratory procedures in chemistry, blood banking, microbiology, immunology, hematology, coagulation and other areas of the clinical laboratory, developing data used by a physician to determine the presence and extent of disease, as well as monitoring the patient's treatment.

The student will spend time in clinical laboratories during their course of study to become familiar with the instrumentation, workload and day-to-day operations of the clinical laboratory.

Accreditation: The Medical Laboratory Technician program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).* Graduates of the MLT curriculum are eligible to take the "MLT" ASCP Board of Certification Exam.

* 5600 N. River Road Suite 720 Rosemont, IL 60018 773-741-8880 www.naacls.org

Student Learning Outcomes:

Upon completion of this program graduates will be able to:

- Collect biological samples safely and according to standard operating procedures
- Analyze biological samples safely and according to standard operating procedures
- Demonstrate a broad knowledge of basic laboratory tests for all lab departments in preparation for a certification exam
- Apply professional and ethical behaviors in the clinical laboratory setting
- Use problem solving skills to integrate laboratory data for patient diagnosis.

Program Entry Requirements: Admission is selective and requires that potential students fulfill all College admission requirements. Applicants for the program must have:

- 1. High school diploma or general education diploma (GED).
- 2. A minimum of one year of high school biology and chemistry or their applicable equivalents within the last 10 years with a grade of "C" or better.

- 3. Applicants must demonstrate readiness for ENGL101 and FMNT 118 as determined by the College's placement tests or by successfully completing identified developmental course work.
- 4. Minimum grade point average of 2.25

Applicants must be 18 years of age on or before the first day of the semester in which they begin the program.

Applicants who complete and meet the aforementioned requirements will be eligible to continue in the admissions process and will be contacted, via e-mail, concerning the scheduling of an admissions interview with the Program Director (or designee). A scheduled interview does not guarantee admission. Upon completion of the admissions interview, the Program Director (or designee) will review and score all applicants with particular attention to:

- 1. Cumulative grade point average
- 2. Strength of secondary/post-secondary academic curriculum
- 3. Allied Health pre-entrance examination score
- 4. Personal interview

Conditions for Acceptance: All applicants are notified in writing regarding the admissions decision. All offers of acceptance are contingent upon successful completion of the following:

- 1. Acknowledgement of Core Performance Standards for Health Care Career Programs and physical demand analysis: https://www.myccp.online/medical-laboratory-technician-program
- 2. Clinical education requires the following:
 - Activity Tolerance: Move quickly and/or tolerate long periods of standing and/or sitting. Perform tasks accurately under time constraints.
 - Mobility: Ability to ambulate without assistive devices in confined areas, reach laboratory benchtops and equipment.
 - Motor Skills: Reach, manipulate, and operate equipment, instruments, and supplies to include VP needles and micropipettes.
 - Students who are registered with the <u>Center on Disability</u> must inform the Program Director if accommodations are required.
- 3. Completion of criminal background check, child abuse clearance, and drug screening:

Criminal Background Checks:

- Any felony conviction within the past 10 years will result in denial of admission to the MLT program.
- Any felony conviction more than 10 years old will be evaluated based on the nature of the offense, length of time since the offense and any explanatory letters/materials submitted by the applicant or student.
- Any misdemeanor will be evaluated based on the nature of the offense, length of time since the offense and explanatory letter/materials submitted by the

applicant or student. (Any punishment over one year indicates a felony according to federal sentencing guidelines.)

Drug Screening Clearance:

• The MLT program requires participation in clinical education. Clinical affiliates of the MLT program require evidence of a negative drug screening test in order for a student to participate in the clinical education part of the MLT program at their facility. Therefore, any student with a positive drug screening test cannot be admitted into the MLT program.

The College, in its admissions process, will consider information regarding criminal convictions and/or crimes of moral turpitude. Admission is conditional pending receipt and evaluation of a Pennsylvania State Police and F.B.I. criminal background check, child abuse check and drug screening test.

- 4. Additional conditions for acceptance into the program include:
 - Documentation of a complete physical examination (health form), including required laboratory tests (TB test, proof of immunity). All health information is kept confidential.
 - Documentation of up to date immunizations prior to clinical assignment. Additional immunizations (e.g., influenza) and antibody titers may be necessary.
 - Documentation of current health insurance coverage, which must be maintained throughout the Program.
 - Attendance at scheduled Program orientation prior to entry.
 - Purchase of MLT student uniform.

Additional Expenses: Additional expenses for students in the program include travel to clinical facilities, purchase of uniforms, shoes, laboratory coats, required textbooks, a physical examination and inoculations.

Reconsideration: An applicant who believes that an error of fact has been made in terms of the information provided to the decision making committee can request reconsideration by the committee. This request must be made in writing within ten days from the date of the letter notifying the applicant of the decision. The reconsideration should address what the applicant considers to be errors of fact.

Following reconsideration by the decision making committee, the applicant can appeal the committee's decision to the Vice President for Academic and Student Success, whose decision is final. Any official change or the initiation of any governmental proceeding affecting the information revealed by the required criminal or child abuse background check must be reported immediately to the MLT curriculum coordinator.

Disciplinary Action: Involvement in any incident which resulted in a disciplinary action against a student at Community College of Philadelphia or any post-secondary institution is considered in the admissions process. The MLT program reserves the right to deny

admission to any applicant who has a history of violating College rules and regulations or who has been previously suspended or expelled from the College or any other post-secondary educational institution.

Dismissal from the Program:

The MLT Program reserves the right to dismiss any student:

- who fails to observe the regulations of College and its clinical affiliates,
- whose skills, attitude and behavior are viewed as inconsistent with professional standards,
- whose general conduct is detrimental to the College and its clinical affiliates,
- who does not meet the scholastic requirements of the MLT Program. A student who earns a grade of "D" or lower in any MLT course will be dismissed from the program.
- who fails to complete all general science prerequisites prior to entering the second year of the program.

Readmission Policy:

- The MLT program is intended to be completed in 18 months beginning in September of each year. In order to progress through the program, students must complete all curriculum courses with a grade of "C" or better and maintain a GPA of 2.25 or higher. Eligible students seeking program readmission must do so within twelve (12) months of program separation.
- Program readmission is not guaranteed and is dependent upon program capacity and availability. A student must be eligible for readmission according to the College standards. Students who request to be considered for program readmission must meet the current admissions criteria and requirements at the time the request for readmission is placed. Readmitted students must follow the curriculum requirements at the time of their return to the program.
- Eligible students may apply for readmission only once. Students must submit a letter to the Program Director requesting a temporary leave from the Program

Students Eligible for Readmission:

- Students who withdraw from the MLT program in good academic standing (grade "C" or better in all completed curriculum courses and GPA of 2.25 or higher)
- Students who are dismissed from the MLT program due to a grade "D" or lower in any MLT academic course, with a GPA at time of readmission request of 2.25 or higher

Students Ineligible for Readmission:

• Students who are dismissed from the MLT program due to a grade "D" or lower in any clinical MLT course (MLT 102 and MLT 295)

• Students who are dismissed from the MLT program due to inappropriate conduct and/or violations of the College's academic integrity policy, clinical code of conduct, moral/ethical standards, professional standards or performance standards.

Process for Readmission Consideration:

In order to be considered for Program readmission, the applicant must:

- Successfully complete all MLT Program prerequisite requirements.
- Submit a letter to the Program Director requesting a readmission to the Program.
- Have a minimum grade point average (GPA) of 2.25 for all college classes
- Successfully complete a comprehensive written exam. The exam content will include current material from courses which the student previously completed.
- Repeat previously completed courses as recommended by Program faculty. Curriculum analysis is conducted annually, and course content may change to ensure Program alignment with the ASCP exam Content.

The results of the written exam, as well as the student's prior academic progress, will be evaluated by faculty to determine the student's potential for success in the program and semester placement. MLT courses are offered chronologically and only once a year, therefore a readmission date will be based on the semester in which the courses are being offered. The program must be completed within three (3) academic years after a student's initial enrollment. Readmission is not guaranteed and is dependent upon available space.

Students seeking readmission into the MLT Program must contact the Program Director in writing at least 6-12 months prior to start of the requested entering semester.

Program of Study and Graduation Requirements: To qualify for the Associate in Applied Science (A.A.S.) degree as a medical laboratory technician, a student must complete 63 credit hours as prescribed, attain a grade point average of 2.0 or better, and earn no grade below "C" in each MLT course and in each science course.

Course Sequence

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
MLT 102 - Phlebotomy		4 credits	
ENGL 101 - English Composition I		3 credits	Writing/Research/Info Lit 1
BIOL 108 - Essentials of Human Anatomy and	For BIOL 109, BIOL 106 or high school	4 credits	Scientific Reasoning

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
Physiology or BIOL 109 and BIOL 110 Anatomy and Physiology*	biology and chemistry within 10 years For <u>BIOL 110</u> , <u>BIOL</u> <u>109</u> with a "C" or better		
FNMT 118 - Intermediate Algebra	FNMT 017 or FNMT 019 completed or FNMT 118 (or higher) placement	3 credits	Quantitative Reasoning
CHEM 110 - Introductory Chemistry or CHEM 121 - College Chemistry I	For <u>CHEM</u> 121, <u>CHEM 110</u> with a "C" or better and <u>FNMT 118</u>		

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
CIS 103 - Computer Applications & Concepts		3 credits	Tech <mark>nological</mark> Comp <mark>etency</mark>
MLT 155 - Clinical Hematology	BIOL 108 or BIOL 110 which may be concurrently* and MLT 102, which may be taken concurrently	4 credits	
ENGL 102 - The Research Paper	ENGL 101 with a grade of "C" or better	3 credits	Writing/Research/Info Lit 2
CHEM 118 - Introduction to Biochemistry or CHEM 122 - College Chemistry II	For CHEM 118: CHEM 101, CHEM 110 or CHEM 121 with a grade "C" or better. For CHEM 122: CHEM 121 with a grade "C" or better	4 credits	
BIOL 241 - Principles of Microbiology	BIOL 106 or BIOL 108 or BIOL	4 credits	

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
	109 or BIOL 123 with a grade "C" or better		

Summer 1

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
MLT 205 - Immunohematology and Immunology	BIOL 108 or BIOL 109 and BIOL 110 and MLT 155	4 credits	

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
MLT 225 - Clinical Chemistry	BIOL 108 or BIOL 109 + BIOL 110, CHEM 110 and CHEM 118 or CHEM 121 and CHEM 122, MLT 205 + FNMT 118 (all with a grade "C" or better)	4 credits	
MLT 245 - Clinical Microbiology	BIOL 241, CHEM 110 and CHEM 118 or CHEM 121 and CHEM 122 MLT 205 (all with a grade "C" or better)	4 credits	
SOC 101 - Introduction to Sociology or GEOG 103 - Introduction to Human Geography		3 credits	Cultural Analysis and Interpretation

Semester 4

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
ENGL 115 - Public Speaking or ENGL 116 - Interpersonal Communication or ENGL 117 - Group and Team Communication or ENGL 118 - Intercultural Communication or AH 116 - Interpersonal and Professional Skills in the Health Care Setting	ENGL 101, which may be taken concurrently	3 credits	Oral Communication/Creative Expression
MLT 265 - Current Topics in Medical Laboratory Sciences	MLT 225 and MLT 245 (both with grade "C" or better)	3 credits	
MLT 295 - Clinical Practice	MLT 225 and MLT 245 and MLT 265, which may be taken concurrently	6 credits	

Minimum Credits Needed to Graduate: 63

Courses and Completion Sequence:

The following courses and sequence of courses is designed for the optimal success and completion of the <u>Medical Laboratory Technician</u> degree/certificate. Any alterations should be discussed with your academic advisor.

Course Number and Name	Credits	Advisory Notes
ENGL 101 - English Composition I	3 credits	Writing, Research, Info Lit 1 Must earn a grade of "C" or better to register for ENGL 102
CHEM 110 - Introductory Chemistry or CHEM 121 - College Chemistry I	4 credits	Scientific Reasoning Must earn a grade of "C" or better. CHEM 121 is recommended for students planning to transfer into a bachelor's degree program. Must earn a grade of "C" or better to be considered for a select program.
FNMT 118 - Intermediate Algebra		Quantitative Reasoning Meet with an advisor to determine if you should take a higher level math course
BIOL 108 - Essentials of Human Anatomy and Physiology or BIOL 109 and BIOL 110 Anatomy and Physiology		Option to take BIOL 108 or BIOL 109 for MLT program. Must receive a grade of "C" or better. Students in this program must take either BIOL 108 or both BIOL 109 & BIOL 110. Students who choose the two-semester 109 & 110 sequence should take BIOL 241 in the summer between the second and third semester. Must earn a grade of "C" or better. Students who have completed BIOL 109 and BIOL 110 earning a grade of "C" or better do not have to take BIOL 108. Students are recommended for students to take BIOL 109 and BIOL 110 if planning to transfer for a bachelor's degree. Prerequisites for BIOL 109: BIOL 106 or high school biology and chemistry within 10 years

Course Number and Name	Credits	Advisory Notes
		For BIOL 110: BIOL 109 with a of "C" or better
MLT 102 - Phlebotomy		Must earn a grade of "C" or better. Math placement of FNMT 017. Co-requisite for MLT 155.

Course Number and Name	Credits	Advisory Notes
ENGL 102 - The Research Paper	3 credits	Writing, Research, Info Lit 2 Must earn a grade of "C" or better. Prerequisite: ENGL 101 with grade of "C" or better.
CIS 103 - Computer Applications & Concepts	3 credits	Technological Competency Students must earn a grade of "C" or better demonstrating they have met minimum requirements of course.
MLT 155 - Clinical Hematology	4 credits	Must earn a grade of "C" or better. Prerequisite for MLT 205. Prerequisites: BIOL 108 or BIOL 110, which may be taken concurrently; MLT 102 may be taken concurrently.
BIOL 241 - Principles of Microbiology	4 credits	Must earn a grade of "C" or better in the course. Prerequisite for MLT 205 Prerequisites: BIOL 106 or BIOL 108; BIOL 109 or BIOL 123 with a grade of "C" or better.
CHEM 118 - Introduction to Biochemistry or CHEM 122 - College Chemistry II	4 credits	Prerequisites for CHEM 118: CHEM 101, CHEM 110 or CHEM 121 with a grade of "C" or better. CHEM 122 is recommended for students planning to transfer into a bachelor's degree program. Prerequisites for CHEM 122: CHEM 110 with a "C" or better and FNMT 118 and CHEM 121 with grade of "C" or better

Summer 1

Course Number and Name	Credits	Advisory Notes
MLT 205 - Immunohematology and Immunology	4 credits	Must earn a grade of "C" or better. Prerequisite for MLT 225 and MLT 245 Students must complete this course in their first summer session, as it is a prerequisite to MLT 225 and MLT 245. Prerequisites: BIOL 108 or BIOL 109 and BIOL 110 and MLT 155

Semester 3

Course Number and Name	Credits	Advisory Notes
SOC 101 - Introduction to Sociology	3 credits	Cultural Analysis & Interpretation Most transfer institutions require a sociology course.
MLT 225 - Clinical Chemistry	4 credits	Must earn a grade of "C" or better. Prerequisite course for MLT 265 and MLT 295. Prerequisites: BIOL 108 or BIOL 110 FNMT 118 CHEM 110 and CHEM 118 or CHEM 121 and CHEM 122 MLT 205
MLT 245 - Clinical Microbiology	4 credits	Must earn a grade of "C" or better. Prerequisite course for MLT 265 and MLT 295. Prerequisites: BIOL 241 with grade of C or better. CHEM 110 and CHEM 118 or CHEM 121 and CHEM 122.

Course Number and Name	Credits	Advisory Notes
ENGL 115 - Public Speaking or ENGL 116 - Interpersonal Communication or ENGL 117 - Group and Team	3 credits	Must earn a grade of "C" or better for transfer. Use academic advisors to direct students to the appropriate course based on transfer requirements. Prerequisites for ENGL 115, ENGL 116, ENGL 117, and ENGL 118: ENGL 101, which may be taken concurrently

Course Number and Name	Credits	Advisory Notes
Communication or ENGL 118 - Intercultural Communication or AH 116 - Interpersonal and Professional Skills in the Health Care Setting		
MLT 265 - Current Topics in Medical Laboratory Sciences	3 credits	Must earn a grade of "C" or better. Prerequisites: MLT 225 and MLT 245
MLT 295 - Clinical Practice	6 credits	Prerequisites: MLT 225 and MLT 245. MLT 265 may be taken concurrently.