



**McCann School of Business and Technology
Allentown, PA**

Medical Laboratory Technician

**Student Handbook
Effective November 2019**

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Program Officials and Faculty

Executive Director	Virginia Carpenter, M.S.
Director of Education	Tamara Smith, Ph.D.
Full-Time Faculty and Program Director	Siddra Dar M.S., MLS (ASCP)CM
Adjunct Instructor	Mary Borsevich, B.S., (ASCP)
Adjunct Instructor	Bernard Klemchak, M.H.A (AMT)

**McCann School does classify faculty by rank or tenure.*

Introduction

The Medical Laboratory Technician Program (“MLT”) at McCann School of Business and Technology awards an Associate in Specialized Technology Degree (“AST”). The Medical Laboratory Technician program provides training for an entry-level career in the clinical laboratory field. Medical Laboratory Technicians perform complex chemical, biological, hematological, immunologic, microscopic and bacteriological tests. They microscopically examine blood and other body fluids; make cultures of body fluid and tissue samples, to determine the presence of bacteria, fungi, parasites, or other microorganisms; analyze samples for chemical content or a chemical reaction and determine concentrations of compounds such as blood glucose and cholesterol levels. They also type and crossmatch blood samples for transfusions. Medical Laboratory Technicians supervise laboratory assistants.

Mission Statement

The mission of the MLT Program is to provide knowledge and skills including sufficient didactic material and laboratory practice to students so that graduates can demonstrate entry-level career readiness as an MLT and are prepared to pass the national certification examinations. The program also seeks to ensure students are aware of the importance of continuing education in their field.

Program Description

The MLT program at McCann School of Business & Technology requires completion of 97 quarter credits. Upon admission each individual student’s coursework is scheduled. Each course is completed in 5 week modules. All of the core courses offer lab work at the campus which prepares students for hands on skills. After completion of all MLT courses, students are required to complete an externship or clinical placement at the clinical site. Students are awarded an Associate in Specialized Technology degree upon successful completion of the program.

Curriculum Outline

The total number of credits for completion of the MLT program at McCann School of Business & Technology is 97. All of the MLT courses are offered on ground and during the day. Each course is completed in 5 weeks long module. All of the MLT courses have required lab courses.

MLT Core lecture and associated lab courses:

Lecture Course: GS 280 Microbiology
Associated Lab Course: ML 201 Microbiology Laboratory

Lecture Course: ML 105 Clinical Chemistry
Associated Lab Course: ML 107 Clinical Chemistry Laboratory

Lecture Course: ML 120 Hematology
Associated Lab Course: ML 121 Hematology Laboratory

Lab Course: ML 200 Body fluid Analysis Laboratory

Lab Course: ML 205 Immunology/Serology Laboratory

Lecture Course: ML 210 Immunohematology
Associated Lab Course: ML 211 Immunohematology Laboratory

Other Courses:

AHS1310 Allied Health Orientation
GS201 Career Management
GS235 Critical Thinking
GS280 Microbiology
IT100 Introduction to Computers
MA100 Medical Orientation
MA105 Medical Law & Ethics
MA110 Medical Terminology
MA111 Anatomy & Physiology
MA112 Anatomy & Physiology
MA160 Healthcare Regulation
MA161 Phlebotomy Theory
MA261 Phlebotomy Clinic
MH205 College Algebra
ML225 Medical Lab Review

General Education Courses:

COM1101 Interpersonal Communications
ENG1101 English Composition I
MTH1101 College Mathematics

Externship: ML 255 Externship and Seminar

MLT students attend a clinical practicum (ML 255 Externship and Seminar) off campus after completing MLT core courses. During the practicum, students rotate through various departments within the laboratory: Chemistry, Hematology, Coagulation, Urinalysis, Microbiology, Blood Bank, and Immunology.

The clinical practicum schedule is designed by clinical facility coordinator and the MLT program director and may vary from site to site. Usually the scheduled hours are from Monday-Friday between 6AM to 5 PM.

The MLT program director will take student's preference into consideration, but students cannot be guaranteed a particular site.

The Clinical Facility must be accredited by at least one of the following agencies: CLIA, CAP, JACHO, and COLA.

Completion of Student Lab Paperwork

During externship students are required to maintain the daily journal and record the tasks they complete at the clinical site. At the end of externship, students complete a presentation and share with other students their clinical experience. The clinical site is provided with the time sheet to record the clinical hours.

Learning Outcomes/Goals for Graduates

1. Graduates will demonstrate the entry level competency in all areas of medical laboratory and will explain the importance of laboratory safety and regulatory compliance.
2. Graduates will analyze laboratory results to diagnose disease and recommend treatment for pathologic conditions.
2. Graduates will demonstrate effective written and verbal communication skills.
3. Graduates will demonstrate mastery of laboratory methodologies, including problem solving and troubleshooting techniques, for the major areas currently practiced by a modern clinical laboratory.
4. Graduates will engage in continued professional development.

Upon completion of program requirements, MLT students are eligible to sit for the ASCP Board of Certification examination. The granting of a degree from McCann School

of Business & Technology is not contingent upon passing the national certification examination.

McCann School does not guarantee third-party certifications. Certification requirements for taking and passing certification examinations are not controlled by McCann School but by outside agencies and are subject to change by the agencies without notice.

MLT Basic Competencies/Career Entry Skills

Upon graduation, and at the time of employment, a medical laboratory technician will be able to demonstrate the following entry-level competencies:

Medical Laboratory Technicians will be proficient in:

- a. Collecting, processing and analyzing biological specimens and other substances according to established guidelines.
- b. Performing analytical tests on blood, body fluids, and other substances.
- c. Recognizing variables that affect procedures and results, and taking appropriate actions within predetermined limits when corrections are indicated.
- d. Performing and monitoring quality assurance and quality control within predetermined limits.
- e. Performing preventive maintenance of equipment and troubleshooting when required.
- f. Applying and following the principles of safety.
- g. Demonstrating professional conduct and interpersonal communication skills with clients including patients, laboratory personnel, other healthcare professionals.
- h. Interacting with other health care personnel and recognizing the role of each member of the health care team for comprehensive patient care.
- i. Relating laboratory findings to common disease processes.
- j. Establishing and maintaining continuing education as a function of growth and maintenance of professional competence.

Program Requirements

A.) Essential Cognitive Functions

The MLT student must possess the following intellectual skills:

- communicate effectively in written and spoken English
- possess and apply mathematical skills
- possess the psychological health required for full utilization of
- abilities: reasoning, sound judgment, analytic ability

B.) Essential Psychomotor Functions

The MLT student must be able to:

- move freely from one location to another in physical locations such as the clinical laboratory, patient care areas, corridors, and elevators
- possess sufficient eye motor coordination to allow delicate manipulations of specimens, instruments, and tools
- grasp and release small objects (test tubes, pipettes, microscope slides)
- manipulate other laboratory materials (reagents, manual and automated pipettes, etc.)
- identify and distinguish objects macroscopically and microscopically
- lift and move objects of at least 20 pounds
- possess a sense of touch and temperature discrimination
- use hands for repetitive activity

C.) Essential Affective Functions

- follow written and verbal directions
- work effectively under time constraints and under pressure
- work independently
- prioritize workload, according to laboratory department needs, when multitasking
- maintain alertness and concentration in a loud and hectic environment
- apply knowledge, skills, and values learned from course work and life experiences to new situations
- work safely with potential chemical, radiological, and biological hazards using universal precautions
- show respect for self and others
- projects an image of professionalism including appearance, dress, and confidence

D.) Professional Appearance/Uniforms

Students will be provided a lab coat for MLT student labs. Students must wear scrubs during lab time. Students are required to wear closed-toed, impervious, rubber soled shoes; long hair must be tied back.

Clinical Site Dress Code

Students are required to wear McCann specific scrubs when they attend their clinical externship. The clinical site will provide laboratory coats for use in the facility. Students will adhere to the dress code of the clinical site and are expected to dress neatly and professionally.

E.) Student Health Requirements

Before starting clinical rotation, students are required to provide proof of immunization, FBI clearance, PA state police clearance and child abuse clearance. In addition, a drug screen test will be required 30 days prior to start of clinical rotation.

Transfer Credits Accepted (Residency Requirement)

The total credits not earned in residency, including credit by transfer and credit by proficiency testing, may not exceed seventy five percent 75% of the total credit hours required for the completion of the program of study. A minimum of 25% of the student's total credit hours must be completed in residency.

Clinical Placement Policy

In the event that student enrollment exceeds the available clinical sites, the placement will be based on program admission date and successful completion of all core courses in the program. The MLT program director will take student's preference into consideration, but students cannot be guaranteed a particular site. Students should be prepared for potential changes to site assignment.

The following policy will be implemented in the event that student enrollment exceeds clinical placement availability:

If the number of students qualifying for practicum placement exceeds the clinical positions available, you may be placed on a waiting list for clinical assignments.

McCann School of Business & Technology has an ongoing relationship with many clinical sites. Program director and school administration reach out to local employers on an on-going basis to secure the clinical sites. However, clinical site availability may vary from time to time. Students will be assigned clinical placement based on availability, not location.

A list of available clinical sites will be provided to students before the start of externship or clinical placement. Currently the school is affiliated with the following sites. Please note that this list will be updated as needed.

- 1- Steward Easton Hospital
- 2- Miller Keystone
- 3- Patient First (*Not currently available - pending updated agreement*)
- 4- Quest Diagnostics
- 6- Principal Lab
- 7- Salib Oncology
- 8- Atlantic Health System

Instructor to student ratio at the clinical site is 1:2.

During the clinical rotation, students will NOT be considered an employee or an employee substitute of the clinical site. Students may shadow employees of the clinical site or do independent projects, but with adequate supervision by employees of the clinical site.

Program Progression

Students are expected to adhere to their academic plan. Failure to do so may delay their graduation.

Successful completion of all courses is required to progress through the program.

MLT Program Textbooks - Core Courses

Course	Textbook
Clinical Chemistry	Clinical Chemistry 2e, Edition: 2nd, Sunheimer & Graves, Pearson, 2018, ISBN: 9780134413327
Clinical Chemistry Lab	Clinical Chemistry 2e, Edition: 2nd, Sunheimer & Graves, Pearson, 2018, ISBN: 9780134413327
Microbiology	Microbiology: An Introduction, Edition: 13, Gerard J. Tortora; Berdell R. Funke, Pearson, 2018, ISBN: 9780134605180
Microbiology Laboratory	Clinical Laboratory Microbiology, Edition: 1st, Kiser, Pearson, 2011, ISBN: 9780130921956
Hematology	Clinical Laboratory Hematology, 3rd Edition, Edition: N/A, Shirlyn B. McKenzie, Pearson, 2015, ISBN: 9780133076011
Hematology Laboratory	Clinical Laboratory Hematology, 3rd Edition, Edition: N/A, Shirlyn B. McKenzie, Pearson, 2015, ISBN: 9780133076011

Body Fluid Analysis Laboratory	Fundamentals of Urine and Body Fluid Analysis, 4/e, Edition: 4th edition, Cheadle & Leventhal, FA Davis, 2012, ISBN: 9780323374798 Medical Parasitology: A self instructional text, Edition: 6th, Levanthal & Cheadle, F.A. Davis, 2012, ISBN: 9780803625433 ML20048
Immunology/Serology Laboratory	Clinical Immunology and Serology : A Laboratory Perspective 4th Edition, Edition: 4th, Christine Dorresteyn Stevens, F.A. Davis, 2016, ISBN: 9780803644663
ImmunoHematology	Basic and applied concepts of blood banking, Edition: 4/e, Paula R. Howard, Elsevier, 2016, ISBN: 9780323374781
ImmunoHematology Laboratory	Basic and applied concepts of blood banking, Edition: 4/e, Paula R. Howard, Elsevier, 2016, ISBN: 9780323374781
Medical Lab Review	Success! in Clinical Laboratory Science, Edition: 4th, Ciulla, Pearson, 2010, ISBN: 9780135126486
Externship and Seminar	Success! in Clinical Laboratory Science, Edition: 4th, Ciulla, Pearson, 2010, ISBN: 9780135126486

Program Admissions Criteria

Medical Laboratory Technician applicant must meet a minimum score of 18 or higher on the Wonderlic Scholastic Level Exam (SLE).

- If an applicant fails to meet the necessary score for admission, the applicant may be re-tested using an alternative test form and taking the test timed as before. There is no limit to the number of times an applicant may be re-tested.
- Complete the SmarterMeasures Learning Readiness Indicator. Applicants must score a minimum score of 60% on the Technical Competency sections. Applicants who do not score the minimum score on the Technical Competency Section are required to complete the Technology for Success (ORN0001)

supplemental student orientation and achieve a minimum score of 60% on the Technology for Success assessment.

- Basic Skills assessments are used to determine the students need for foundational coursework in the areas of English and Mathematics.

Through McCann School of Business and Technology Basic Skills Assessment and evaluation program, applicants who fall below minimum acceptable standards on the Wonderlic Basic Skills Test for Math and English will be required to enroll in foundations courses as an institutional requirement.

Foundation coursework, when required, is considered to be an institutional requirement that is necessary based on entrance examination results. These courses are in addition to the minimum credit hours needed for program completion. The minimum score on the WBST for Math is Level II and English is Level III.

Foundations courses are awarded grades of “S” (satisfactory) or “U” (unsatisfactory), which do not affect the student’s grade point average and, when required, are in addition to the English and Mathematics program requirements for MLT program as outlined in the catalog. A student who, after two attempts, does not successfully complete a foundations course may be considered as not making satisfactory progress and may be unable to continue as a matriculating student.

Students who require enrollment in foundations courses are informed during the admissions process, and, in some cases, these courses will extend a student’s program beyond the average completion time. Foundations courses are included in the enrollment status for the student when determining Title IV eligibility. Students needing foundations courses will incur respective charges for those courses which will add to the total cost of the program. Additional charges will be incurred should a foundations course need to be repeated.

- A Passed Background Check

In an effort to maintain a safe educational and working environment for students and staff, the school reserves the right to not accept applicants who are known to have/disclose certain types of criminal convictions in their backgrounds. Admitted students who are discovered to have misrepresented their criminal conviction history in the application process may be subject to immediate dismissal. Similarly, students who commit certain types of crimes while enrolled may be subject to immediate dismissal. The school reserves the right to conduct criminal background checks on applicants and students in circumstances deemed appropriate.

Please also see **Essential Functions Program Requirements** on page 6.

Confidentiality

Family Educational Rights and Privacy Act (FERPA)

All students sign the Authorization to Release Information form during the enrollment process. This form dictates to whom academic and financial aid information can be released. A student may request this form to be amended in writing to the Registrar's office.

Advising Services

Advising services are available to assist students in resolving educational, career, and vocational problems. General personal concerns relating directly to academic success can be addressed on campus whereas more serious concerns will be referred to the appropriate outside agency. The Director of Education, Student Resources Coordinator, Registrar and Program Director can help students plan their educational programs as well as adjust to the demands of school.

Tutorial Assistance

The school provides assistance for students experiencing academic difficulties. Faculty will make every effort to identify students in need of assistance. Students are urged to take the initiative to seek out of class help and to discuss their difficulties with their instructors. Tutors are available to work with students on an "as needed" basis at no charge to the student.

Program Outcomes

ASCP Certification Pass Rate:

**Based on information provided by the ASCP*

Graduated Between	Pass Rate
7/1/15 – 6/30/16	0%
7/1/16 – 6/30/17	67%
7/1/17 – 6/30/18	25%

Graduation Rate:

Slated to Graduate	Graduation Rate
7/1/16 – 6/30/17	71%
7/1/17 – 6/30/18	100%

7/1/18 – 6/30/19 40%

Placement Rate:

Graduated Between	Placement Rate
7/1/15 – 6/30/16	100%
7/1/16 – 6/30/17	10%
7/1/17 – 6/30/18	83%

The following chart reflects three year average outcomes for Medical Laboratory Technician students as reported to National Accrediting Agency for Clinical Laboratory Sciences (NAACLS):

Graduation Rate	Placement Rate	Certification Pass Rate
79%	90%	31%

*This is an average for the 3 year period