



MONTGOMERY
COUNTY COMMUNITY COLLEGE

Medical Laboratory



Technician Program

STUDENT MANUAL

This Manual Has Undergone Legal Review

Revised April 2025

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INTRODUCTION

The purpose of this manual is to give you information you will need throughout the Medical Laboratory Technician Program. This manual is intended as a supplement to the College Catalog and website and does not negate the information they contain. When policy is not specifically mentioned in this manual, the College policy applies. As new policies or procedures are instituted, you will be notified.

Please keep this manual for your reference. As you receive additional information, attach it to the manual. If you have questions at any time, please see the Program Director.

GENERAL INFORMATION

ACCREDITATION

The Montgomery County Community College Medical Laboratory Technician Program is fully accredited as of April 21, 1982 by the Committee on Allied Health Education and Accreditation of the American Medical Association. The accreditation is now awarded by the National Accrediting Agency for Clinical Laboratory Sciences. The Program was most recently awarded continuing accreditation for ten years on October 31, 2020.

Accreditation is a regulatory process designed to monitor the quality of an educational program. Students attending accredited programs have some assurance that their education is an appropriate means of meeting their career objectives. Graduation from an accredited program or institution is a requirement of most examinations which certify laboratory personnel.

NAACLS accredits biomedical sciences (BMS), cytogenetic technologist (CG), doctorate in clinical laboratory science (DCLS), diagnostic molecular scientist (DMS), histotechnician (HT), histotechnologist (HTL), medical laboratory assistant (MLA), medical laboratory microbiologist (MLM), medical laboratory scientist (MLS), medical laboratory technician (MLT), pathologists' assistant (PathA), phlebotomist (PBT), and public health microbiologist (PHM) educational programs. NAACLS is recognized by the Council for Higher Education Accreditation (CHEA).¹ NAACLS can be contacted at 5600 N. River Road, Suite 720, Rosemont, IL 60018 (773-714-8880), www.naacls.org.

PROGRAM ORGANIZATION

The Medical Laboratory Technician Program is sponsored by Montgomery County Community College which is empowered to confer an AAS degree upon students who satisfactorily complete the required curriculum. The College cooperates with eight area hospitals and two commercial laboratories: Jefferson Abington Hospital, Chestnut Hill Hospital, Jefferson Einstein Montgomery Hospital, Grand View Hospital, Health Network Laboratories, Health Network Laboratories—Cedar Crest Site, Mercy Fitzgerald Hospital, Suburban Community Hospital, Pottstown Hospital, and Holy Redeemer Hospital to provide students with clinical learning experiences. These affiliations are formalized by legal contracts between the College and each laboratory. A copy of each contract is on file, reviewed annually and available for inspection upon request.

The program faculty consists of a Program Director responsible for overall administration of the Program; one full-time faculty member who teaches two or more courses and supervises the on-site laboratory; and part-time instructor(s) responsible for instruction in their area(s) of expertise. Each laboratory has designated a certified Medical Technologist/Medical Laboratory Scientist to be a Clinical Site Liaison who is responsible for student activities in his/her laboratory. The Clinic Site Liaisons are employed by the laboratory but report to the Program Director on student-related matters. Laboratory personnel designated as Clinical Instructors teach students during clinical practica.

FACULTY

The Program Director is Debra Lynn Eckman-Drabick, M.S., MT (ASCP). The Director's office is located in the Health Sciences Center, Room 1708. The telephone number is 215-641-6487. This telephone is attached to an answering machine. The email address is deckman@mc3.edu.

¹ Guide to Accreditation, NAACLS. Adopted October, 2024. Revised February, 2025.

The full-time faculty member is Debra Eckman-Drabick, MS, MT (ASCP). Her office is Health Sciences Center, Room 1708 and her phone # is 215-641-6487. Her teaching areas are a course entitled Introduction to Medical Laboratory Technology, Clinical Chemistry Laboratory, Hematology Laboratory, Immunohematology Lecture and Laboratory, Professional Issues in MLT, and MLT Seminar.

Part-time instructors are appointed on a semester basis. Current part-time faculty members and their teaching responsibilities are:

Joyce Hill, B.S., MT (ASCP)	Intro to MLT Laboratory
Awatef Elshafey, MLS (ASCP), MHA	Professional Issues
Selami Veseli, MT (ASCP), CC (NRCC)	Hematology Lecture and Laboratory
Laura Throne, B.S., MT (ASCP)	Immunohematology Laboratory
Wendy White, M.S., MT (ASCP)	Clinical Chemistry Lecture and Laboratory

The MLT microbiology courses are taught by instructors in the biology department.

The Medical Director is Irwin Hollander, M.D. He may be reached at Grand View Hospital, telephone number 215-453-4680.

The MLT Department office is located in the Health Sciences Center, Room 1700. The office is staffed with a team of administrative assistants, Sonya Latimore, whose telephone number is 215-641-6437, Tanya Tinsley, whose telephone number is 215-641-6339 and Debbie Tang, whose telephone number is 215-641-6471.

CLINICAL AFFILIATES

Grand View Hospital 700 Lawn Avenue Sellersville, PA 18960 Telephone: 215-257-3611	Clinic Site Liaison: Laboratory Director:	Pat Christoforetti, BS, MT (ASCP) Dr. Irwin Hollander
Chestnut Hill Hospital Germantown Avenue Philadelphia, PA 19118 Telephone: 215-248-8459	Clinic Site Liaison: Laboratory Director	TBD Dr. Andrew So
Jefferson Einstein Montgomery Hospital 559 W. Germantown Pike East Norriton, PA 19403 Telephone: 484-622-1453	Clinic Site Liaison: Laboratory Director	Francine Meutcheho, MLS (ASCP), MSHA Dr. Michele Heayn
Pottstown Hospital 1600 East High Street Pottstown, PA 19464 Telephone: 610-327-7000	Clinic Site Liaisons: Laboratory Director:	Jamie Boyer, BS, MT (ASCP) Kate Heimbach, MT (ASCP) Dr. Charu Thakral
Jefferson Abington Hospital 1200 Old York Road Abington, PA 19001-3788 Telephone: 215-481-4933	Clinic Site Liaison: Laboratory Director:	Julie Negado, BS, IMT (ASCP) Dr. Herbert Auerbach

Holy Redeemer Hospital
1648 Huntingdon Pike
Meadowbrook, PA 19046
Telephone: 215-938-3650

Clinic Site Liaison: Norhan Sobhi, MS, MLS (ASCP)^{cm}
Ritu Rana, BA, MLT (ASCP)^{cm}
Laboratory Director: Dr. Leon Fagel

Health Network Laboratories
794 Roble Road
Allentown, PA 18109
Telephone: 484-425-5531

Clinic Site Liaison: Katie Moore, MLS (ASCP)^{cm}
Laboratory Director: Dr. Jordan Olsen

Health Network Laboratories – Cedar
Crest Site
1200 South Cedar Crest Blvd.
Allentown, PA 18103
Telephone: 610-402-8181

Clinic Site Liaison: Laura Bailey, BS, MLT, SSB (ASCP)
Laboratory Director: Dr. Jordan Olsen

Suburban Community Hospital
2701 DeKalb Pike
Norristown, PA 19401
Telephone: 610-292-6501

Clinic Site Liaison: Lori Kempa-Check, MT, BB (ASCP)
Laboratory Director: Dr. Peter Farano

Mercy Fitzgerald Hospital
1500 Lansdowne Avenue
Darby, PA 19023
Telephone: 610-237-3509

Clinic Site Liaison: Channie Lee, BS, MT (ASCP)
Laboratory Director: Dr. Lorenzo Galindo

PROFESSIONAL DEVELOPMENT

Professional development is an integral part of the MLT curriculum. Clear guidelines are communicated to students so that their behavior conforms to standards of professional practice. (See Appendix B, Affective Competencies.)

Students are expected to respect the confidentiality of information. Personal confidences and private information concerning patients and obtained while practicing or studying laboratory medicine must be regarded as privileged communication. Abuse of this privilege is unethical.

Students may not accept gratuities or gifts for any services rendered.

Solicitation in the laboratory (on campus or at hospitals) is prohibited.

PLEDGE TO THE PROFESSION

As a clinical laboratory professional, I strive to:

- Maintain and promote standards of excellence in performing and advancing the art and science of my profession
- Preserve the dignity and privacy of others
- Uphold and maintain the dignity and respect of our profession
- Seek to establish cooperative and respectful working relationships with other health professionals
- Contribute to the general well-being of the community

I will actively demonstrate my commitment to these responsibilities throughout my professional life.

(The American Society for Clinical Laboratory Science)

ESSENTIAL FUNCTIONS

In addition to the academic admission requirements for students entering the MLT Program, the following Essential Functions are also expected of all students:

- Students must be able to visualize objects through a microscope and differentiate color, shape and structure of organisms and cells. Students must be able to detect color changes on reagent strips and during chemical analyses.
- Students must possess sufficient motor skills and manual dexterity to obtain and manipulate specimens, reagents, glassware, instruments and equipment with accuracy, speed and precision in such a manner that does not endanger themselves and others.
- Students must possess effective written and oral communication skills in order to accurately transmit information to patients, physicians and other healthcare professionals. Students must possess the ability to read, write, and speak in English.
- Students must demonstrate professional attitudes and behaviors. Students must be able to use reasonable judgment under stressful conditions to make decisions that impact patient care. Students must be able to work independently as a member of a team to maintain the highest standards in the delivery of patient care.
- Students must be able to move easily from one location to another in the Laboratory to do testing and through patient areas to perform phlebotomy.

Students must be able to fulfill these essential functions of the job without endangering patients or other health care workers. Students with disabilities may be eligible for accommodations. Prior to the start of the Program, students may contact the Director of Services for Students with Disabilities in the Disability Services Center, College Hall 225, at 215-641-6575 for more information. At the West Campus, contact the Coordinator of Disability Services in South Hall at 610-718-1853.

While the MLT Program will make every effort to work with students with disabilities to accommodate their disability-related needs, the MLT Program is not required to provide accommodations that fundamentally alter or waive essential program or technical requirements. Individuals unable to meet these Essential Functions, with or without reasonable accommodation, will not be able to complete the program and are counseled to pursue alternate careers.

THE INSTRUCTIONAL PROGRAM

MISSION STATEMENT

It is the mission of the MLT Program to respond to the needs of the community by educating students to perform a wide variety of clinical laboratory procedures and prepare these students to perform competently as Medical Laboratory Technicians upon graduation.

PHILOSOPHY

Medical Laboratory Technicians must function in many different situations and at various levels of responsibility in increasingly complex laboratories. In order to provide students with the greatest potential for effective performance and professional growth, traditional academic courses and specialized laboratory courses are integrated into a total educational experience.

GENERAL OBJECTIVES/GOALS

The MLT Program is designed to prepare graduates who can

- collect and prepare clinical specimens for analysis
- operate, perform quality control and maintain laboratory instruments
- perform a variety of diagnostic analyses according to prescribed methodology
- monitor and assess the quality of data generated
- recognize problems which may occur during testing and perform basic repair on laboratory equipment
- describe principles, reactions, and reagents for each method studied
- relate test results to other patient information to the extent required for understanding the analyses
- demonstrate behavior and attitudes consistent with those of laboratory professionals

Specific learning objectives for each course, lesson and clinic assignment are derived from these general objectives and the Statements of Competence. (See Appendices C-G.)

CURRICULUM

The MLT curriculum is planned as a comprehensive program in which the clinical and didactic components are coordinated in a cumulative four-semester experience. Credit is awarded for a combination of liberal arts courses, basic science courses, clinical laboratory science courses and clinical laboratory experience. Students are referred to the current college catalog for detailed program and course descriptions. Students must complete the course of study outlined in the catalog in effect during the semester in which they were admitted to the program. Substitution of required courses is by permission of the Program Director only.

Completion of the program via part-time study is possible, and is especially desirable for students who must work or who have family obligations. It is recommended that in this case students take general education courses prior to enrolling in the MLT courses to extend the curriculum over a greater number of semesters.

The curriculum is a closely structured unit combining sequential and cumulative courses with non-traditional clinical experience. Because of this structure, it is strongly recommended that students anticipate completing their MLT courses in the four consecutive semesters immediately preceding

their application for certification. For students whose progression through the MLT courses is interrupted by academic or personal difficulties, there is no guarantee that space will be available when they want or are allowed to return. Students are urged to balance their academic abilities with their financial needs when planning their studies. MLT Faculty are available to advise students. Employment during the academic year is strongly discouraged because of the difficulty of the curriculum.

SERVICE AS CLINICAL SUBJECTS

Students in MLT courses may occasionally be required to act as subjects for laboratory tests such as venipuncture, capillary puncture, and urinalysis. Only students with documented medical reasons will be excused from such practice. Students who refuse to participate will incur lowered grades.

CLINIC PROGRESSION

Students who progress to the sophomore year without interruption in course sequence or timeframe due to academic or personal difficulties have been assured of placement at the clinic. The number of clinical places available depends upon the capacity of the laboratories at the affiliated hospitals. Every attempt will be made to place students at an affiliated laboratory for the sophomore year. Students whose progression is interrupted by academic or personal difficulties will be placed in sophomore clinic if a clinic position is available. First priority goes to those students who have progressed to the sophomore year without interruption. Second semester clinic sophomores return to school one week earlier in January than other students. Students may visit a series of enrichment sites throughout this semester.

CLINIC ASSIGNMENT GUIDELINES

If the number of students who are eligible for clinic exceeds the number of clinic site seats available during a given academic year, students will be ranked and assigned using the following criteria in this order:

1. Full-time students will be given priority over part-time students.
2. Grade point average – those with higher grade point averages will be given preference over those meeting the minimum matriculation requirements.
3. Number of credits completed within the MLT curriculum – those with the greatest number will be given priority.
4. Length of time students are on wait list for clinical practicum – students on the waitlist for a longer period of time will be given preference.

TRANSFER

This curriculum is designed as a two-year terminal degree career program. Students who anticipate transferring to upper division programs should see an advisor as soon as possible to discuss the transferability of credits. Information about upper-level MLS programs is available in the MLT office, in the Student Success Center in College Hall, and presented in a seminar as part of the curriculum.

POLICY ON PROGRAM DISMISSAL

Effective Fall, 1992

Revised May, 2018

This policy applies to the following courses:

MLT110	MLT126	MLT235	MLT246	BIO130
MLT123	MLT233	MLT244	CHE131	BIO141
MLT124	MLT234	MLT245	CHE132	BIO241
MLT125	BIT124			

1. If a student receives a grade of less than "C"*, the student must repeat the course and earn a grade of "C" or better. No course may be taken more than two times without permission of the Program Director.
2. If a student receives two grades of less than "C"*, the student will be dismissed from the program due to unsatisfactory academic performance.

* A "W" will be treated as a grade less than "C" if at the time of withdrawal the student was earning a grade less than "C".

A student will only be considered for readmission to the program upon written request to the Program Director.

Students interested in readmission to the program are limited to one (1) readmission and will be evaluated on an individual basis.

An attachment to the letter should include a complete and comprehensive Academic Plan that details in-depth strategies that will be put into place by the student to assure success if readmission is granted.

Students must complete the MLT program within four academic years once they are admitted into MLT 110.

NON-ACADEMIC POLICIES

SAFETY

Because students will be exposed to a variety of hazards (e.g., infectious agents, chemicals, etc.) throughout the program, safety is heavily emphasized in course instruction. Through proper education, risks to students are minimized. Students who have questions about the risk of HIV, hepatitis, etc. should contact the faculty. **Students are responsible for purchasing safety goggles.** (See Appendix N for Program Safety Procedures.)

Students are responsible for knowing and following all laboratory safety procedures both at the College and at the Clinic Site as long as they are enrolled in the Program. Safety is taught as part of the curriculum. Students will be required to sign a Safety Contract prior to beginning the laboratory component of MLT 110. Procedures unique to a clinic site, such as those for isolation rooms or nurseries, are taught at the clinical site. **Students must speak English in the student laboratory or clinical site at all times so that instructors can assist students quickly in an emergency.**

LABORATORY ACCIDENTS

Anyone involved in a laboratory accident must document the incident. A standard accident report form must be completed. Forms are available in the MLT office. Accident reports must be returned to the Program Director who will then contact Public Safety. Students will be provided information on baseline testing, treatment, etc. related to the exposure. All accident report forms are filed in the student file in the MLT office and the office of Public Safety.

Students are expected to report all injuries involving biohazardous materials. The person supervising the student will provide first aid and contact the Program Director who will carry out the procedures established in the "Student, Employee and Patient Occupational Exposure Policy." A copy of this Plan will be available on CastleBranch. Students will sign an acknowledgement form indicating they have received a copy of this document. The acknowledgement form will be kept CastleBranch. Every effort will be made to assure confidentiality of records. Information will be released only when appropriate authorization is obtained.

LIABILITY INSURANCE

Students are required to purchase professional liability insurance and to show proof of coverage prior to beginning the MLT clinical courses. Information and applications are provided to students beginning their sophomore year via CastleBranch prior to the start of MLT 235.

UNIFORMS

Uniforms must be worn for all MLT laboratory courses on campus, in the clinical site, and during all enrichment site visits. MLT students will wear a standard uniform of black scrub pants and tops. The goal remains to ensure that MLT student attire reflects the tradition of "professional appearance" and recognizes the current attire in most clinical laboratories.

Hair must be composed of natural or synthetic hair materials and must be clean and neatly arranged with no extremes of style and a natural color; not necessarily student's natural hair color. It must clear the uniform collar and be controlled in such a way that it will not cause contamination. Religious or culturally required head and or facial coverings must be in either white, black or navy and must be a solid color. No prints or embellishments e.g. bows, flowers are permitted. Students who are required, for religious or cultural reasons to wear a head and/or facial covering in clinical are aware that the facility/hospital may restrict and/or limit student participation in some areas where a head covering may pose a safety risk to patients, staff, or the student.

A lab coat must be worn as the outermost garment. Disposable lab coats will be distributed to students on the first day of class.

Students ID's will serve as identification while on campus, in clinical, and during all Program-related activities.

All students are required to wear white leather shoes. Shoes must be of oxford or moccasin type. No open-toe, backless, sandal styles or clogs are permitted.

CHILD ABUSE HISTORY CLEARANCE AND CRIMINAL RECORD CHECKS POLICY

I. Policy

The Health Sciences Division is committed to providing meaningful experiential learning opportunities for all students enrolled in its Health Programs as a means to reinforce discipline specific knowledge and assist in developing appropriate professional skills and attributes. To this end the Health Programs enter into agreements with various persons and agencies to assist in providing student learning opportunities. A component of these agreements requires maintenance of student records regarding Child Abuse History Clearance, Pennsylvania Criminal Record Check, and FBI Criminal History Background Check as may be applicable.

II. Procedure

- a. Students will complete and submit evidence of a Child Abuse History Clearance, Pennsylvania Criminal Record Check, and FBI Criminal History Background Check/Exemption Statement to CastleBranch or the discipline specific Program Office as described in the Program Handbook. All current fees prevail.

- b. The Child Abuse History Clearance

- i. The student will follow the directions posted on CastleBranch or distributed by their Program Director to complete and submit the Child Abuse History Clearance.

A positive Child Abuse History Clearance report will exclude a student from participation in the clinical component of a Health Program at Montgomery County Community College regardless of when the offense occurred.

- c. The Pennsylvania Criminal Record Check

- i. The student will follow the directions posted on CastleBranch or distributed by their Program Director to complete and submit the Pennsylvania Criminal Record Check.

If a record exists, you will receive the background check in the mail. You must submit the original report and all attachments provided by the State Police to CastleBranch or the specific Program office.

- d. FBI Criminal History Background Check

- i. The student will follow the directions posted on CastleBranch or distributed by their Program Director to complete and submit the FBI Criminal History Background Check,

- e. The Pennsylvania Older Adults Protective Services Act identifies offenses that make a person ineligible for employment as a Health Care Provider. A Criminal Record check and/or a FBI Criminal History Background Check that discloses these offenses, regardless of the date, will prohibit a student from participating in the clinical component of a Health Program at Montgomery County Community College.

f. You will be denied participation in any clinical course(s) and/or clinical based learning opportunities, thus immediately withdrawing you from the Health Program, if have any of the following:

i.a history of a prohibitive offense(s) as identified in the Pennsylvania Older Adults Protective Services Act on your Criminal Record Check and/or FBI Criminal History Background Check

<https://www.aging.pa.gov/organization/advocacy-and-protection/Documents/Older%20Adults%20Protective%20Services%20Act.pdf>

ii.a pending charge of a prohibitive offense without disposition as identified in the Pennsylvania Older Adults Protective Services Act on your Criminal Record Check and/or FBI Criminal History Background Check

iii.a positive Child Abuse History Clearance report or a pending charge of Child Abuse without disposition

iv.you are currently on probation or parole

g. The Child Abuse History Clearance, Pennsylvania Criminal Record and FBI Criminal History Background checks documentation must be current while the student is enrolled in the Health Program and are required to be updated annually. The original Child Abuse History Clearance, Pennsylvania Criminal Record Check and FBI Criminal History Background Check reports should be submitted to CastleBranch or the appropriate Program Office and will be placed in the student's file.

h. It is the student's responsibility to immediately notify the Program Director or Dean of Health Sciences of any events or changes in the Child Abuse History Clearance, Pennsylvania Criminal Record, and FBI Criminal History Background Check which may affect continued eligibility to participate in the clinical component of the Health Program.

i. A student with a potential concern regarding the Child Abuse History Clearance, Pennsylvania Criminal Record Check, and FBI Criminal History Background Check, is encouraged to contact the discipline specific Health Program Director to discuss the matter in confidence.

Originated: April, 2007
Revised April, 2008
Revised October, 2008
Revised November, 2008
Revised April, 2009
Revised November, 2010
Revised August, 2011
Updated: September, 2012
Updated: October, 2012
Reviewed: August, 2014

Revised: January 2015
Revised: May 2016
Revised: February 2017
Revised: April 2017
Revised: March 2018
Revised: April 2018
Revised: February 2020
Revised: August 2020
Revised: October 2020

PERSONAL CARE

Conservative habits are essential. Use of cosmetics is restricted to those suitable for daytime wear in a hospital. Use of jewelry is limited to watches, wedding/engagement rings and button earrings. Hair longer than shoulder length or hair which falls onto working materials must be tied back. Beards must be short. Nails must be kept short and only clear/light-colored polish may be used. **No false nails are permitted.**

Students should take extra precautions to guard against body odors, clothing odors (due to cigarette smoke or other causes), or bad breath since these can be unpleasant for patients as well as co-workers.

The following are prohibited in the student laboratory, in clinic and at enrichment site visits: Tongue rings, any facial jewelry, and gauges. All tattoos MUST be covered at all times.

*When a clinical site has a dress code more restrictive than this policy, the student is expected to adhere to the more restrictive code.

ATTENDANCE

Attendance is required at and recorded for all scheduled instructional periods. (An instructional period is defined as any scheduled class, student laboratory, clinic assignment, review day, or enrichment site visit). Students absent for medical reasons may be expected to furnish a note from a physician. If a student misses more than three clinic days during MLT 235, they will be required to withdraw from the course. If a student is late more than three times during MLT 235, they will be required to withdraw from the course. (Each clinic site will define lateness.) If a student misses more than two days or is late more than three times during a rotation of MLT 245, the student will be required to withdraw from the course. A rotation is defined as, for example, hematology. Students are not excused from tests because of absence. There may be no provision for making up work missed due to absence.

Absences due to extraordinary circumstances will be evaluated on an individual basis provided that students inform the faculty.

STUDENTS ARE EXPECTED TO NOTIFY INSTRUCTORS AT THE COLLEGE **AND CLINIC OF ANTICIPATED ABSENCE AS SOON AS POSSIBLE AND TO FURNISH A REASON.**

WEATHER EMERGENCY

Students are expected to be present for all classes and clinic assignments, even in inclement weather, unless the College is closed. In the event of snow, students should listen for MCCC's school number 320 for closing information. For class cancellation due to weather conditions or other emergency situations, listen to KYW 1060 AM, WNPV 1440 AM or WPAZ 1370 AM on the radio, check the home page of the College web site (www.mc3.edu) or call 215-641-6300 for Central Campus information and select option #1. You may also opt to have emergency notification sent via email or text messaging. To enroll visit <http://www.mc3.edu/txt/>. Do not report to the clinic if the College is closed. **If there is a delayed opening, students will report to class or clinical at the following times: 1 hour delay = 9:00 AM; 2 hour delay = 10:00 AM.**

PROMPTNESS

All instructional periods begin promptly at the time scheduled. Students are expected to be seated and ready to participate in class at that time. All conditions which might delay students, such as weather, traffic, parking, elevators and lavatory visits should be considered when planning arrivals. Prompt return from breaks is also expected.

Students who arrive late are responsible for work missed. (See "Attendance") The opportunity to make up quizzes or exams missed because of lateness is at the instructor's discretion. Lateness at the College and Clinic is recorded in the student's files.

TRANSPORTATION

Transportation to all classes, clinical assignments and enrichment site visits is the responsibility of the student. It is recommended that students have the use of a car in good working order and have a plan of alternative transportation in case of car trouble. In general, car pooling may not be feasible for clinical assignments, and public transportation schedules are too infrequent to be reliable.

CELL PHONE USE

Students are required to silence all cell phones during class hours. Students who fail to do so will be given a warning for the first offense. Subsequent offenses will result in the students being asked to leave class when the offense occurs. Students who have three offenses during a semester will only be permitted to return to class after meeting with the Program Director. Students may request an exception to this policy for extenuating circumstances. The instructor, at his or her discretion, may approve this exception **prior** to class. Students should not make a habit of requesting exceptions to this policy.

HEALTH RECORDS POLICY

I. Policy

The Health Sciences Division is committed to providing meaningful experiential learning opportunities for all students enrolled in its Health Career Programs as a means to reinforce discipline specific knowledge and assist in developing appropriate professional skills and attributes. To this end the Health Career Programs enter into agreements with various persons and agencies to assist in providing student learning opportunities. A component of these agreements requires maintenance of student records regarding health status.

II. Procedure

- A. Students submit the appropriate Physical Examination Form, Immunization Record and Health History/Emergency Contact Sheet to CastleBranch or the individual Program office annually.
- B. The Physical Form requires.....
 - 1. The Physician/Nurse Practitioner/Physician Assistant completes the Physical Examination form and Immunization Record. The student completes the Health History/Emergency Contact Sheet.

2. Results of Tuberculosis Exposure Screening or chest x-ray or symptom screening.
 3. A statement regarding ability to undertake the specified Health Career Program. A statement of limited cognitive/mental or physical activity must be followed by a detailed description.
 4. Selected immunizations. Student must have begun the Hepatitis B series of injections and provide date of inoculation(s) or a signed Declination Statement waiver.
 5. Urine drug screening with accompanying laboratory report. A negative finding is expected in order to be eligible for participation in the clinical component of the specified Health Career Program. A positive result may require retesting at a College designated site to ensure standardization of test results for all students.
- C. Submission of a completed Physical Form with accompanying laboratory reports by the required due date results in health clearance for experiential learning opportunities in the specific Health Career Program.
- D. Influenza Vaccination Documentation
1. Enrolled Students: Students enrolled in a Health Career Program each year submit the Influenza Vaccination Documentation form to CastleBranch or the appropriate individual Program office at a date designated by the Program.
 2. Entering Students: Students accepted to begin a Health Career Program in January submit the Influenza Vaccination Documentation form to CastleBranch or the appropriate individual Program office at a date designated by the Program.
- E. Students with disabilities may be eligible for reasonable accommodations. Prior to the start of the Program, please contact the Disability Services Center, College Hall 225, (215) 641-6575, for more information. At the West Campus, contact the Coordinator of Disability Services in the Student Success Center at (610) 718-1853.

Originated: June, 2004
 Updated: March, 2007
 Updated: October, 2007
 Updated: April, 2008
 Updated: January, 2011
 Updated: August, 2012
 Updated: October, 2012
 Updated: November 2013
 Updated: January, 2015 for May, 2015 Implementation
 Updated: April, 2018
 Updated: April 13, 2018
 Updated: June 1, 2018

NOTE: All health form requirements, including PPD testing, titers and drug screens must be completed within six months of starting the MLT Program.

IMPAIRED STUDENT PERFORMANCE IN THE LABORATORY AND/OR CLINICAL SETTING POLICY

I. Policy

The Division of Health Sciences is committed to providing safe and meaningful learning experiences for students and so must provide for the safe and effective care of clients by students in the laboratory and/or clinical setting. The presence or use of substances, lawful or otherwise, which interferes with the judgment or motor coordination of HS division student in the laboratory or clinical setting results in unacceptable risk for clients, colleagues, the College and the healthcare agency. Illegal or unauthorized manufacture, sale, possession or use of alcoholic beverages and/or controlled substances by students while engaged in any part of educational experiences poses an unacceptable risk for clients, colleagues, the College and the healthcare agency and is strictly prohibited. Any behavior resulting in the impairment of the student's judgment or motor coordination resulting from unmanaged medical conditions is also included under the terms of this policy.

II. Procedure

A. On Campus: Didactic

Students are expected to adhere to the College's Student Code of Conduct (<http://www.mc3.edu/component/content/article/93-about-us/policies/sa-4/125-student-code-of-conduct>) the rules and regulations of the Pennsylvania Board of Professional and Occupational Affairs <https://www.dos.pa.gov/ProfessionalLicensing/Pages/Bureau-of-Professional-and-Occupational-Affairs.aspx> and the ethical standards of relevant professional organizations. Violation of the College's Student Code of Conduct will follow the procedure as stated in the document. In addition, the Division Dean will be notified and at her/his discretion, further action may then be taken.

B. On and Off Campus: Laboratory/Clinical

1. Any student who may be exhibiting a reasonable suspicion of impaired performance will be asked to immediately leave the educational setting and will be placed on probationary status. Reasonable suspicion may include, but is not limited to, the student exhibiting signs of physical or mental impairment such as: slurred speech, incoordination, unsteady gait or balance, drowsiness, impaired judgement, attention, memory of social function: irritability, paranoia, belligerence, euphoria, dilated or constricted pupils.
2. If necessary, in order to assure safety for the student in his/her immediate egress from the laboratory or clinical setting, the student's Emergency Contact Person will be notified to come and pick up the student. The student will be required to remain at the site, but away from client contact, until said Emergency Contact Person arrives whether on or off the College campus. Should faculty or designated clinical supervisor feel the student's overall safety, physical and psychological well-being are at risk, the faculty or designated clinical supervisor may send the student to the Emergency Department at the clinical agency, if

available. If no Emergency Department is available at the clinical site, and the faculty or designated clinical supervisor feel the student is in a life-threatening situation, 911 will be called.

3. The clinical faculty, designated clinical supervisor, or the program Director and/or coordinator may request the student complete a serum/urine toxicology screen following removal from the clinical area.
4. The clinical faculty or designated clinical supervisor will complete the College's ACCIDENT/ILLNESS/INJURY form and submit it to the Program Director and/or Coordinator (copy) and Director of Public Safety (original).
<https://mymccc.mc3.edu/facultystaffresources/emergency/layouts/15/WopiFrame.aspx?sourcedoc=/facultystaffresources/emergency/Forms%20and%20Reports/Accident%20Injury%20Illness%20Report%20Form.doc&action=default>
5. The student will not be permitted back into the laboratory/clinical setting until the following conditions have been met if appropriate:
6. The student:
 - i. Meets with Program Director and/or Coordinator.
 - ii. Provides a serum/drug screen deemed as clean by a verified provider, if appropriate
 - iii. Agrees to random drug/alcohol screening to protect client safety, if appropriate.
 - iv. Along with the Director and/or Coordinator develop a written plan for student monitoring and safe clinical performance.
 - v. The student will be referred to appropriate support services by the Program Director or designee.
 - vi. The Program Director, Clinical supervisor or designee reserves the right to require assessments as appropriate and/or verification of ongoing treatment of identified substance abuse or medical condition which has caused impaired student performance. Said assessment and/or verification must be obtained from the student's Primary Care Practitioner and/or appropriate professional expert at the student's expense.
7. Students who exhibit impaired behavior and do not follow the policy, submit a written plan, or adhere to drug/alcohol testing as requested may be dismissed from the program.
8. This policy shall not limit or be in lieu of any other College discipline in accordance with all other College policies governing student behavior and conduct.

Originated – November 2006
Updated – April 2007
Updated – October 2010
Updated - November 2010
Updated – August 2014
Updated – July 2020

SERVICE WORK

The clinic sites must provide sufficient staff support to supervise students and carry out normal service functions to ensure that students are not used as substitutes for, or replacement of, clinic site personnel during academic hours. Service work by students in the clinical setting outside of academic hours is noncompulsory and will not impact course grades. If a student feels that the clinic site is not abiding by these requirements, he/she must contact the MLT Program Director immediately.

TEACH OUT PLAN

In the event of a Program closure, the following "Teach Out Plan" will be implemented:

Lack of Enrollment/Funding

Students currently enrolled in the Program will be permitted to complete the AAS MLT Degree. Students will be given two academic years to do so. Notification of Program closure will be posted on the MLT web page.

Natural Disaster

In the event of an emergency, students will be relocated to an alternate campus site (Pottstown Campus). Area colleges will also be notified for use of classroom space, if needed. Students in clinical will be reassigned to an alternate site. Clinical affiliates have agreed to take an additional student if this becomes necessary.

The ASCLS Educational Scientific Assembly also discussed this issue and program directors have agreed to support one another in the event of an emergency.

EVALUATION

BASIS FOR EVALUATION

Students are evaluated on the basis of their ability to meet goals described in the MLT "Statements of Competence" (see Appendices C-G). Evaluation in all components of the program is based on three areas of achievement: cognitive ability which consists of knowledge and understanding, psychomotor ability which is skill related and affective behavior which is related to attitudes and traits. Satisfactory evaluation in each of the three areas described is required for promotion. High achievement in any one area does not compensate for deficiencies in other areas.

DESCRIPTION OF EVALUATION METHODS

Cognitive Evaluation is based upon written assignments, quizzes, and examinations. These include class quizzes, assignments made in lectures and/or student laboratory, clinic quizzes, pre-tests, unit examinations, and final examinations.

Quizzes are given in all MLT lecture courses. They are based on the objectives of the previous lectures and on previously learned material. A multiple choice format is generally used but other formats may be utilized. Graded quizzes are returned to students within one week. A grade of zero will be recorded for all missed quizzes. If a student misses a quiz because of lateness, the faculty member will decide whether or not it is possible or desirable to administer the quiz later.

Unit examinations are given in all MLT lecture courses and dates are specified in the course schedule. They cover large units of instruction and are usually in a multiple-choice format. Scores are given to students within one week.

Makeup exams may be given at the discretion of the instructors for justifiable, reported absences. The format may vary.

Students who wish to review previous Unit exams and Quizzes may do so on Canvas. The exams and quiz answers are made available to students once the assessments close. These remain available until the end of the semester.

Final examinations are given in all MLT lecture courses during exam week. They cover the entire semester's work. Format and procedures for review are the same as those for unit exams.

NOTE: No opportunity is routinely given to students to make up exams which are missed. In such cases a zero is recorded. Any exception to this policy requires a decision by the Program Director and other faculty members.

Assignments are given to students in most MLT courses, either in the handout for each lecture or announced by the instructor. Assignments may include reading, problem solving, lab reports, journal reviews, compositions, case studies, etc. Graded assignments are returned to students within one week.

Each faculty member will be responsible for correcting and grading the lab reports in her/his content area. Corrected reports will be returned to students within one week of the due date. Grades will be reported based on 100%; in most cases 50% will be given for answers to interpretation and 50% for results. Homework that is late will receive a deduction for each day

late. The amount of the deduction may vary with instructor and will be announced in class and in the individual course syllabus.

The following items (where applicable) will be used to evaluate and grade lab reports:

- a) answers to questions from interpretation section of lab procedure, including correctness, thoroughness and completeness of responses.
- b) accuracy and precision of results of analyses.
- c) calculations, analyses and interpretations of data (e.g., data, reduction, statistical calculations, graphs, etc.).
- d) neatness of any/all of above.
- e) grammar, spelling, and English composition of any/all of above.

The faculty expects that students will write complete sentences or paragraphs whenever possible, as opposed to writing phrases or words, unless directed otherwise. Points will be deducted for misspelled words and grammatical errors.

Clinic pretests and quizzes are given in all MLT Clinical courses. They are announced in advance and graded promptly. Students are encouraged to review exams and quizzes, but are not permitted to keep them. Students must successfully complete a pretest with a grade of 70% or higher before they are permitted to report to their clinic site assignment. Students may attempt a pretest up to **THREE** times. If they fail to achieve a passing grade of 70% by the third attempt, they will **not** be permitted to start their clinic rotation and will receive a non-passing grading for the clinic course. Students may opt to withdraw from the course and should refer to the College's Registration Calendar to determine if this is possible based on the deadline dates established for each semester. For the purposes of calculating a course grade, students who require two or more attempts to pass a pretest will receive the average of the pretest scores or 70%, whichever is lower.

Psychomotor evaluation is based upon instructor observation of student performance of specified tasks or skills. Psychomotor evaluation methods include competency checklists, laboratory practicals, task performance at the clinic, and daily clinic and student lab review forms.

Practical examinations are given in all MLT laboratory courses. They are scheduled in advance and cannot be made up. Scores are available within one week of the exam.

Affective evaluation is based upon instructor observations of manifestations of student's attitudes. Standards are described in "Statements of Competency" (see Appendices C-G). Evaluation methods include the Daily Clinic Review and Daily Laboratory Review forms.

GRADING SYSTEM

One letter grade is given for each MLT course which reflects the student's overall performance in the course.

Students must achieve a grade of "C" or better in all MLT courses, Chemistry for the Technologies, Anatomy & Physiology, Microbiology, and Molecular Techniques courses in order to qualify for progression to the next MLT course and for graduation.

CRITERIA FOR PASSING MLT 110

The following 2 components (designated A and B) are used in determining the letter grade for MLT 110.

% of total grade

50% A. STUDENT LABORATORY COMPONENT*

<u>%</u>	<u>evaluation method</u>
40	Daily laboratory review form average
20	Competency evaluation average
40	Laboratory reports/homework average

50% B. LECTURE COMPONENT*

<u>%</u>	<u>evaluation method</u>
33	Quiz average
33	Exam average
34	Final exam
Assignments/homework will be averaged and are considered one quiz grade.	

To pass the course, all of the following conditions must be met:

1. an overall average 70.
2. an average of 70 in each of the two components.
3. acceptable average rating in each of the criteria on the daily laboratory review form.

CRITERIA FOR PASSING MLT 123 (Lecture Course)

<u>% of total grade*</u>	<u>evaluation method</u>
33%	Quiz average
33%	Unit exam average
34%	Final exam

CRITERIA FOR PASSING MLT 125 and 233 (Lecture Courses)

<u>% of total grade*</u>	<u>evaluation method</u>
30%	Quiz average
30%	Unit exam average
30%	Final exam
10%	Assignments

CRITERIA FOR PASSING MLT 244 (Lecture Course)

<u>% of total grade*</u>	<u>evaluation method</u>
50%	Assignments (4)
20%	Exam average
20%	Final exam
10%	Discussion board posts

CRITERIA FOR PASSING MLT 124 and 126 (Laboratory Courses)

<u>% of total grade*</u>	<u>evaluation method</u>
20%	Daily laboratory review average
60%	Practical exam average
20%	Lab reports/homework

CRITERIA FOR PASSING MLT 234 (Laboratory Course)

<u>% of total grade*</u>	<u>evaluation method</u>
20%	Daily laboratory review average
60%	Practical exam average
20%	Lab reports/homework

CRITERIA FOR PASSING MLT 235 (Clinical Practicum)

<u>% of total grade*</u>	<u>evaluation method</u>
20%	Pre-test average
20%	Quiz average
15%	Daily clinic review average
45%	Summative clinic review average

A 70% average must be obtained in each clinical area (rotation) in order to pass.

CRITERIA FOR PASSING MLT 245 (Clinical Practicum)

<u>% of total grade*</u>	<u>evaluation method</u>
15%	Pre-test average
15%	Post-test average
10%	Quiz average
15%	Daily clinic review average
45%	Summative clinic review average

A 70% average must be obtained in each clinical area (rotation) in order to pass.

CRITERIA FOR PASSING MLT 246 (Seminar)

<u>% of total grade*</u>	<u>evaluation method</u>
30%	Written assignments
40%	Case study presentation
30%	Lab Week Presentation

* The instructor reserves the right to adjust this distribution

ACADEMIC PROGRESS AND GRADUATION

STUDENT ACADEMIC CODE OF ETHICS

The College provides an environment that fosters critical thinking and judgment. Students adhere to an Academic Code of Ethics by refraining from participation in acts of academic dishonesty <http://www.mc3.edu/about-us/policies/110>.

STUDENTS IN SELECTIVE ADMISSIONS PROGRAMS WITH A XF GRADE ON THEIR TRANSCRIPT

I. Policy

The Health Sciences Division is committed to providing meaningful learning experiences for students in their pursuit of knowledge. The Health Sciences Division adheres to a steadfast commitment to academic ethics in an environment that fosters critical thinking and learning. It is expected that students will adhere to the **College's Student Code of Ethics Policy** <https://www.mc3.edu/about-mccc/policies-and-procedures/student-academic-code-of-ethics>. Therefore, students with an XF on their transcript must follow the procedures outlined below to resolve the XF, in addition to also meeting all other eligibility requirements, to be considered for selective admissions in to Health Sciences Division programs.

II. Procedures

1. An XF grade on a student transcript denotes academic misconduct.
2. Students may not enroll in one of the Health Sciences selective admissions programs if they have an XF on their transcript.
3. Should a student have earned an XF in any course at the college or as a transfer credit, the X must be successfully removed from the transcript in order to be considered for admission.
4. A student may appeal to have the grade changed from an XF to an F.
5. One year after an XF grade has been entered on the student's transcript, a student may appeal to have the grade changed to an F if they have not committed any subsequent violations of the Code of Ethics
6. The students should fill out the **XF-to-F Grade Appeal Form**. *Note: Requests for XF-to-F Grade Appeal prior to Fall 2019 will be reviewed on a case by case basis by the Academic Progress Committee.*
7. Students using that form will have to:
 - Demonstrate completion of Curriculum Committee-approved academic ethics training.
 - Submit a personal essay on the importance of academic honesty.
 - Complete any learning modules related to ethics training as assigned
 - Provide a note from a faculty member, coordinator, or dean testifying to the student's commitment to academic honesty and conduct.

Originated – April 2021

STUDENT CODE OF CONDUCT

A student in violation of the Student Code of Conduct Policy will be reported to the Judicial Officer to initiate the Code of Conduct proceedings. The purpose of the Student Code of Conduct is to guide students to understand their responsibilities in regard to appropriate behavior and respect for others in the college community. The policy addresses the behavior expectations of students on College premises, at clinical sites, and/or while attending College-sponsored activities on or off campus. It also provides the standards for ensuring the College provides due process to students through the judicial process. The policy and procedure is found at <http://www.mc3.edu/about-us/policies/125>

ACADEMIC PROGRESS

Through frequent evaluations and feedback, students are notified of their progress in the MLT course. Students who do not make satisfactory progress are warned via Starfish alerts and given every opportunity to improve. Faculty members are available to help students with academic problems. Perkins'-funded supplemental instruction is available to all students enrolled in MLT courses. Schedules are posted at the beginning of each semester.

Students who experience academic or personal difficulties should consult an advisor or counselor as soon as possible before making any decision to withdraw from a course or the program. In many cases, withdrawal may be avoided. Students are expected to notify the Program Director of their intent to withdraw.

Students who leave the program in good standing and wish to re-enter the program at a later date may do so only if space is available in the relevant courses. Students are considered for re-entry to the program upon receipt of a letter to this effect. The letter should be addressed to the Program Director.

In Clinical courses (MLT 235 and 245), students receive summative clinical evaluations at the end of each three- or four-week clinical rotation. Therefore, an unsatisfactory clinical evaluation at the end of any three- or four-week rotation could result in the student receiving a low grade for the entire MLT course. (Under extenuating circumstances, an "I" grade may be given, and the student given the opportunity to complete a rotation.)

Students who are involved in any of the following activities, or those listed in the College's Student Code of Conduct, whether on campus, at a clinical site, or at any MLT Program-related activity, will be immediately reported through Starfish. This will begin the College's Student Code of Conduct disciplinary process. Please refer to this policy for a list of sanctions that can result due to a violation for these and other Unacceptable Behaviors:

- Academic Dishonesty (Refer to Academic Code of Ethics)

- Abuse of confidential information

- Violation of ethical principles

- Failure to admit error

- Insubordination

- Theft

- Intoxication

- Use of narcotics

- Willful destruction of property

GRADUATION

It is the student's responsibility to give notice of anticipation of graduation.

Students must submit the required electronic "Application for Graduation" form to the Office of Admissions & Records. The deadlines for submission can be found on the College's Website.

* Issuance of the degree is not contingent upon students passing any type of external certification or licensure examination.

GRADE APPEAL

The College provides an appeal process for a student who believes that a recorded final grade does not accurately reflect his/her performance in a course. As the initiator of the process, the burden of proof is on the student to demonstrate otherwise. It is incumbent upon the student to strictly adhere to the established grade appeal procedures in an attempt to resolve the issue.

The policy can be found at:

<http://www.mc3.edu/about-mccc/policies-and-procedures/grade-appeal>

STUDENT AFFAIRS

STUDENT RECORDS

The College accords all the rights under the Family Educational Rights and Privacy Act of 1974 to its students. A copy of this entire policy can be found at <http://www.mc3.edu/about-mccc/policies-and-procedures/family-educational-rights-and-privacy-act>. In addition to the official records kept elsewhere in the College, students' files are maintained in the MLT office. While the student is in the program, current files are kept which include, but are not limited to, formative and summative evaluation, advising records, copies of official letters, records of grades and attendance, and accident reports. Formative evaluations and files are kept for 4 years after graduation, and are then shredded.

The MLT office also keeps a record of students' addresses and telephone numbers. It is the student's obligation to notify the Program Director of changes.

Students who wish to review their file in the MLT office should make an appointment with the Program Director. Records may not be removed from the Department Office.

CERTIFICATION

Students who complete the MLT program and receive their degrees are recommended for certification examinations by the Program Director.

Several different agencies certify laboratory personnel. Students are encouraged to keep informed of their options and to seek information on their own initiatives, either directly from certifying agencies or by reviewing the laboratory literature. The faculty is prepared to assist students by sharing information but cannot recommend any one certifying body. Also, a certification seminar is given as part of the MLT 246 course.

PROFESSIONAL SOCIETIES

The American Society for Clinical Laboratory Scientists (ASCLS) is the professional society which represents laboratory personnel. It is through this society that students are best kept informed of the advances and issues which will affect their future jobs. Students are encouraged to join when they are admitted to the program. (Membership fees for students are nominal.) Other professional societies are open to student membership but none so directly serve the MLT or permit a voice in policy as does ASCLS.

PROFESSIONAL MEETINGS

Many professional organizations hold meetings throughout the year. Information about meetings may be obtained from the professional societies, publications, faculty, and the clinical affiliates. Students are encouraged to attend these whenever possible.

SERVICES

HEALTH / HEALTH INSURANCE

Health maintenance and care is an individual responsibility of the student. A physical examination is required within six months prior to enrollment in MLT and subsequently each year while enrolled in the Program. (See Health Records Policy) Students must provide proof of current health insurance before beginning the Clinical Practicum courses (MLT 235 and MLT 245).

Hepatitis Vaccine

The Medical Director and the Program Director of the MLT Program strongly recommend that students be actively immunized against Hepatitis B before entering the program. A letter to students on this subject is included in Appendix I in this manual. If a student refuses Hepatitis B vaccination, they must sign a letter of declination.

Medical emergencies

Students are expected to notify the Program Director of any medical condition which might lead to a medical emergency, and of the name and telephone number of the person to contact in such cases.

Workmen's Compensation

Students injured while working in the laboratories must report to a laboratory supervisor or student Clinical Coordinator immediately. All injuries, regardless of severity, must be reported. Workmen's Compensation benefits do not extend to students in affiliated hospitals.

Emergency Services

Emergency care is available for students who become ill during the period of clinical assignment when immediate attention is required. The cost of care will be determined by the policy of each hospital. Costs incurred will generally be the responsibility of the students.

Laboratory Services

No laboratory tests will be done on students except upon written request of a physician and at the student's expense. Written results will be sent to the requesting physician.

ADVISING

When the College announces the official period for advising for registration purposes, the MLT faculty will post information regarding appointments for students.

At the scheduled appointment time, the faculty will assist the students with course selections and the registration process. No student will be permitted to register for MLT courses without the approval of his/her MLT faculty advisor. Students should consult the posted schedule of classes prior to their appointment.

Prior to acceptance into the MLT Program, students designated as pre-MLT majors, should contact their assigned MLT advisor: Donnette Stewart (dstewart@mc3.edu), Corissa Reilly (creilly1@mc3.edu), Hedy Linderliter (hhinderl@mc3.edu), Jennifer Gordon (jgordon@mc3.edu), Lori Davidson (ldavidso@mc3.edu), Iris Lieberman (iweinstein@mc3.edu) and Janet Fithian (jfithian@mc3.edu) .

Students are encouraged to think about their course selections and plan in advance. Students who are uncertain of their plans should make an appointment to discuss them with a faculty advisor or a counselor well before the registration period.

Students are encouraged to discuss any problems (with their advisor) which might interfere with progress in the program or to seek information about policies or procedures.

MLT EDUCATIONAL RESOURCES

The MLT Program has an extensive collection of books, periodicals, slide sets, films, videotapes, etc. for student use in the student laboratory and library. (See Appendix H.) In addition to required assignments, students are urged to use these collections for supplemental help and the library facilities as a quiet place for study.

APPENDICES

APPENDIX A: TERMINAL COMPETENCIES OF GRADUATES - GENERAL TOPICS

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

1. Demonstrate interest in their field.*
2. Demonstrate dependability.*
3. Demonstrate effective interpersonal skills.*
4. Communicate effectively.*
5. Demonstrate integrity.*
6. Display a professional demeanor.*
7. Present a professional appearance.*
8. Follow safety procedures outlined by institution.
9. Collect blood by venipuncture and capillary puncture from a variety of patients.
10. Identify patients and maintain specimen identity throughout all laboratory procedures.
11. Follow specimen collection and handling procedures.
12. Use medical terminology.

* These competencies have been described in the attached document, "Affective Competencies."

APPENDIX B: AFFECTIVE COMPETENCIES OF GRADUATING STUDENTS

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

INTEREST IN THE FIELD

MLT's are expected to have a sincere interest in the field of medical laboratory technology which is reflected in day to day attitudes and behaviors. Because it is a constantly changing profession, the MLT must be sufficiently self-motivated to keep pace with rapid technological advances and other changes.

The MLT who is interested in his/her work and learning will demonstrate initiative in beginning tasks and will follow them through to completion without prompting from instructors. An eagerness or enthusiasm for learning new tasks is another characteristic. Students are encouraged to regularly read medical technology journals, participate in professional societies and discuss current issues in the field.

DEPENDABILITY

To ensure the smooth and orderly functioning of the laboratory, it is important for the MLT to be dependable. As students, MLT's must develop the discipline needed to report to instructional assignments on time, to return promptly from breaks, and to complete work thoroughly and without delay. When unavoidable absence or lateness is anticipated, dependable MLT students will notify their instructors in advance to minimize any inconveniences or other problems.

In a broader sense, dependability will be attained by the MLT when she/he has gained the total trust of instructors and supervisors. This will occur when the student MLT displays all of the knowledge, skills, and attitudes characteristic of the competent MLT.

INTERPERSONAL SKILLS

The ability to relate well to a variety of people is important for the medical laboratory technician (MLT), who must work as part of a medical team and provide services to patients.

MLT students must be able to ask for and willingly accept the guidance and feedback of instructors, just as practicing MLT's must work under the supervision of department supervisors and pathologists. Cooperation with colleagues in the performance of daily tasks is also necessary, as laboratory work is often a team effort, especially when emergencies arise. Being sensitive to the needs of other staff members and offering needed assistance is an expected trait for the MLT. In their contacts with other medical personnel (nurses, physicians, etc.) MLT's should strive to represent the laboratory and their profession in the best possible way through courteous behavior and cooperation.

Most importantly, patients have the right to services performed not only skillfully but with the proper professional attitude. When drawing blood from patients, MLT's must be aware of the nature of their illnesses or other conditions, and respond accordingly. MLT's must be able to interact appropriately with a diverse variety of patients; well or ill, young or old, infirm or able. Patients need reassurance, communication, and courtesy from MLT's.

COMMUNICATION

MLT's must be able to effectively exchange information both in writing and verbally.

Much information is transmitted both between various groups in the hospital and within the clinical laboratory. As a member of the health care team, the MLT is required to participate in this exchange.

MLT's must be able to appropriately communicate to patients the nature of the blood collection procedures to be performed, taking into consideration the patient's age and emotional and physical states.

In the laboratory, MLT's must be able to use appropriate symbols and words to report the results of the analyses performed in such a way that there is no doubt as to their meaning. Clerical errors can have serious consequences for the patient and cannot be tolerated in the work of the MLT. MLT's must be able to convey information verbally in a clear and concise manner with other members of the health care team both in person and over the telephone, often when time is limited. MLT's must be able to follow both written test procedures and the verbal instructions of their supervisors.

INTEGRITY

MLT's are expected to uphold the moral principles of their profession by exhibiting honesty and adhering to the accepted code of medical ethics.

MLT's must report only those test results which they feel reflect their best work, and openly admit to a supervisor when they are unsure. Recognizing personal limitations, double checking results, and asking for help when necessary are all actions characteristic of an honest worker.

Because MLT's have access to patient records, they are expected to use this information only when it directly relates to the work they are performing. Confidential information about patients, gained while performing one's job, should never be disclosed outside of the laboratory. Even within the laboratory or hospital, discretion should be used when discussing patient cases with colleagues. The results of all laboratory tests are considered privileged information and are therefore confidential.

Laboratory tests can only be performed upon the orders of a licensed physician who has the medical knowledge to accurately interpret the results. For this reason, MLT's should never perform tests which have not been ordered by a doctor, or report results directly to a patient. Using the laboratory facilities for the performance of unauthorized tests can be considered stealing revenue from the laboratory.

DEMEANOR

Students in the MLT program are expected to display professional conduct which is worthy of admiration, praise, and respect. Personal concerns must not be allowed to interfere with work, responses to stress should be appropriate, and emotions should be held in check while carrying out duties. The MLT should be self-confident and perceived as positive and pleasant by others.

Students must remember that demeanor is regarded as a reflection of their professional personalities. Patients, colleagues, other allied health professionals, and physicians observe demeanor before they are able to factually determine one's competence. Students have a responsibility to enhance their reputations as laboratory professionals, thus contributing to high regard for the profession itself.

APPEARANCE

It is important for MLT's to present a professional appearance at all times. Often people are judged solely by their physical appearance; other times, it makes a lasting first impression. Often there is an inference that people who care about their looks also care about their jobs. Unfortunately, such judgments may be made of MLT's irrespective of their professional competence. MLT's are expected to be neat, clean, and well-groomed, as they must work in close physical proximity to patients and co-workers. The wearing of personalized scrubs and labcoat while in the MLT program, help identify the student as a member of a distinct professional group within the hospital, and thus worthy, at least outwardly, of the respect of others.

APPENDIX C: TERMINAL COMPETENCIES OF GRADUATES - BLOOD BANK

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

1. Evaluate suitability of specimens for analyses requested.
2. Use a specimen accession system.
3. Process specimens according to requirements of analyses and observe priorities in regard to urgency of request.
4. Perform routine tests in blood banking.
 - a. When given a choice, select the appropriate procedures.
 - b. Organize samples, equipment, and reagents.
 - c. Follow laboratory procedures in a manual.
 - d. For the following, describe the principles on which tests are based and quality control required.
 - 1) screening, identification, and titration of common antibodies
 - 2) compatibility testing
 - 3) processing of patient and donor specimens
 - 4) routine component preparation
 - 5) Rh immune globulin
 - 6) testing for red cell antigens
 - 7) transfusion reaction work-ups
 - 8) other routine tests
5. Record and interpret results of analyses using appropriate terms, taking special care to write records neatly and clearly.
6. Evaluate validity of tests.
 - a. Detect errors and their sources.
 - b. Determine acceptability of control values.
7. Operate common laboratory instruments and equipment. (See list below #1-7).
 - a. Prepare instruments for operation.
 - b. Identify malfunctions.
 - c. Follow routine maintenance procedures.
 - d. Describe principles of operation and applications.
 - 1) centrifuges
 - 2) microscopes
 - 3) refrigerators/freezers
 - 4) water baths and heating blocks
 - 5) cell washers
 - 6) segmenters
 - 7) plasma separator

8. Prepare, handle, and store reagents.
9. Work safely.
10. Discuss the relationship between data obtained (limited to test results of competency #4) and other pertinent information.
 - a. Outline patterns of inheritance of the ABO, Rh, and other major blood group systems.
 - b. Describe acquired immune/hemolytic disorders related to blood banking.
 - c. Interpret incompatible crossmatches and discrepancies in testing in blood bank and relate the causes of each.
 - d. Discuss hemolytic disease of the newborn and its prevention.
 - e. Discuss transfusion reactions, their prevention, and treatment.

APPENDIX D: TERMINAL COMPETENCIES OF GRADUATES - CHEMISTRY AND URINALYSIS

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

1. Evaluate suitability of specimens for analyses requested.
2. Use a specimen accession system.
3. Process specimens according to requirements of analyses and observe priorities in regard to urgency of request.
4. Perform routine tests in chemistry and urinalysis
 - a. When given a choice, select the appropriate procedure.
 - b. Organize samples, equipment, and reagents
 - c. Follow laboratory procedures in a manual.
 - d. Describe the principles on which tests are based for the following classes of substances: (details shown on task list for each course)
 - 1) carbohydrates
 - 2) proteins and amino acids
 - 3) non-protein nitrogenous substances
 - 4) lipids
 - 5) enzymes
 - 6) electrolytes
 - 7) therapeutic drugs
 - 8) miscellaneous body fluids and/or the following organ functions: (task list)
 - 9) kidney
 - 10) liver
 - 11) heart
 - 12) thyroid
5. Record results of analyses in appropriate units.
 - a. Record patient values.
 - b. Record control values using laboratory's quality control.
6. Evaluate validity of tests.
 - a. Detect errors and their sources.
 - b. Determine acceptability of control values.
7. Operate common laboratory instruments and equipment. (see list below #1-8).
 - a. Prepare instruments for operation.
 - b. Identify malfunctions.
 - c. Follow routine maintenance procedures.

- d. Describe principles of operation and applications.
 - 1) spectrophotometers
 - 2) automated analyzers (discrete, centrifugal, and continuous flow)
 - 3) electrophoresis equipment and densitometers
 - 4) ion-selective electrodes
 - 5) centrifuges
 - 6) osmometers
 - 7) automatic pipettors
 - 8) refractometer
- 8. Prepare, handle, and store reagents.
- 9. Work safely.
- 10. Discuss the relationship between data obtained (limited to test results of competency #4) and other pertinent information.
 - a. Describe clinical pathology of common diseases.
 - b. Describe physiological conditions which lead to abnormal results.
 - c. Identify reference values.
 - d. Explain high and low values.
 - 1) diabetes
 - 2) cardiovascular diseases
 - 3) urinary tract diseases
 - 4) respiratory diseases
 - 5) liver diseases
 - 6) thyroid disorders
 - 7) neoplasias

APPENDIX E: TERMINAL COMPETENCIES OF GRADUATES - HEMATOLOGY AND HEMOSTASIS

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

1. Evaluate suitability of specimens for analyses requested.
2. Use a specimen accession system.
3. Process specimens according to requirements of analyses and observe priorities in regard to urgency of request.
4. Perform routine tests in hematology and hemostasis.
 - a. When given a choice, select the appropriate procedure.
 - b. Organize samples, equipment, and reagents.
 - c. Follow laboratory procedures in a manual.
 - d. Describe the principles on which tests are based and quality control required for the following: (details shown on task list for each course)
 - 1) CBC
 - 2) Differential
 - 3) Platelet counts
 - 4) Prothrombin time
 - 5) Activated partial thromboplastin time
 - 6) Cell counts on other body fluids (urine, CSF, etc.)
 - 7) Other routine tests
5. Record results of analyses in appropriate units.
 - a. Record patient values.
 - b. Record control values using laboratory's quality control system.
6. Evaluate validity of tests.
 - a. Detect errors and their sources.
 - b. Determine acceptability of control values.
7. Operate common laboratory instruments and equipment. (see list below #1-6)
 - a. Prepare instruments for operation.
 - b. Identify malfunctions.
 - c. Follow routine maintenance procedures.
 - d. Describe principles of operation and applications.
 - 1) automated cell counters
 - 2) microscopes
 - 3) centrifuges
 - 4) coagulation instruments

8. Prepare, handle and store reagents.
9. Work safely.
10. Discuss the relationship between data obtained (limited to test results of competency #4) and other pertinent information.
 - a. Discuss clinical pathology of common diseases. (listed below)
 - 1) neoplastic disorders
 - 2) acquired anemias
 - 3) hemoglobinopathies
 - 4) inherited disorders
 - 5) platelet disorders
 - 6) coagulation factor disorders
 - 7) vascular defects
 - b. Relate physiological conditions which lead to abnormal results.
 - c. Identify reference values.
 - d. Explain high and low values.

APPENDIX F: TERMINAL COMPETENCIES OF GRADUATES - IMMUNOLOGY

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

1. Evaluate suitability of specimens for analyses requested.
2. Use a specimen accession system.
3. Process specimens according to requirements of analyses and observe priorities in regard to urgency of request.
4. Perform routine tests in immunology.
 - a. When given a choice, select the appropriate procedure.
 - b. Organize samples, equipment and reagents.
 - c. Follow laboratory procedures in a manual.
 - d. Describe the principles on which tests are based for the following:
 - 1) various antigen and antibody reactions
 - a) agglutination
 - b) hemagglutination
 - c) agglutination inhibition
 - d) precipitin test
 - e) fluorescent antibody test
 - f) complement fixation
 - g) RIA
 - h) ELISA
 - 2) various conditions
 - a) infectious diseases
 - b) immune disorders
 - c) pregnancy
5. Record results of analyses in appropriate units.
 - a. Record patient values.
 - b. Record control values using laboratory's quality control system.
6. Evaluate validity of tests.
 - a. Detect errors and their sources.
 - b. Determine acceptability of control values.
7. Operate common laboratory instruments and equipment. (see list below #1-6)
 - a. Prepare instruments for operation.
 - b. Identify malfunctions.
 - c. Follow routine maintenance procedures.

- d. Describe principles of operation and applications.
 - 1) microscopes
 - 2) centrifuges
 - 3) microtitration equipment
 - 4) incubators
 - 5) automatic pipettes and dilutors
 - 6) water baths and heating blocks
- 8. Prepare, handle, and store reagents.
- 9. Work safely.
- 10. Discuss the relationship between data obtained (limited to test results of competency #4) and other pertinent information.
 - a. Describe clinical pathology of common diseases.
 - b. Describe physiological conditions which lead to abnormal results.
 - c. Identify reference values.
 - d. Explain high and low values.
 - 1) immune disorders
 - 2) infectious diseases
 - 3) pregnancy

APPENDIX G: TERMINAL COMPETENCIES OF GRADUATES – MICROBIOLOGY

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

1. Evaluate suitability of specimens for analyses requested.
2. Use a specimen accession system.
3. Process specimens according to requirements of analyses and observe priorities in regard to urgency of request.
4. Perform routine tests in microbiology:
 - a. Isolate a variety of bacteria and fungi from various clinical specimens using accepted protocols.
 - 1) select media appropriate to the specimen following standard protocol
 - 2) apply principles of aseptic technique
 - 3) obtain isolated viable colonies by dilution streaking
 - 4) choose the correct environmental conditions for incubation
 - b. Interpret results of routine cultures.
 - 1) recognize commonly isolated bacteria and yeast by colony morphology and growth characteristics
 - 2) evaluate microorganisms received as to significance (normal flora vs. potential pathogen)
 - 3) refer questionable or unfamiliar isolates to supervisor for verification
 - c. Select, perform and interpret appropriate subculture techniques according to established procedures.
 - 1) make necessary transfers and subcultures using aseptic techniques
 - 2) perform and interpret results of biochemical tests needed for identification
 - d. Using information obtained through gross and microscopic morphology, growth characteristics and biochemical tests, accurately identify commonly isolated bacteria and yeast.
 - e. Determine necessity for and perform antibiotic susceptibility testing according to established methods and interpret results.
 - f. Perform and accurately interpret results of gram stains.
 - g. Prepare concentrations and stain and read acid-fast smears.
 - h. Concentrate specimens and make wet mounts for recovery of intestinal parasites. Recognize common potentially pathogenic parasites.
5. Record results of analyses in appropriate units.
 - a. Record patient values.
 - b. Record control values using laboratory's quality control system.
6. Perform the tests used to evaluate media, reagents, and procedures for quality control.

7. Operate common laboratory instruments and equipment (see list below #1-5).
 - a. Prepare instruments for operation.
 - b. Identify malfunctions.
 - c. Follow routine maintenance procedures.
 - d. Describe principles of operation and applications.
 - 1) microscopes
 - 2) incubators
 - 3) centrifuges
 - 4) refrigerators
 - 5) biological safety cabinets
8. Prepare bacteriological media and reagents according to specifications.
9. Work safely.
10. Correlate all analyses and patient information to determine genus, species, and stain for commonly isolated bacteria and yeasts.
 - a. gross and microscopic morphology
 - b. growth characteristics
 - c. biochemical tests
 - d. quantitative results
 - e. serological tests

APPENDIX H: MLT DEPARTMENT/ LIBRARY RESOURCES

MLT Department Textbook List

Textbooks

Author	Title	Publisher	Publication Year
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MLT 106 - Phlebotomy

McCall, Ruth	Phlebotomy Essentials	Jones & Bartlett Learning	2023
McCall, Ruth	Phlebotomy Exam Review	Jones & Bartlett Learning	2023
McCall, Ruth	Student Workbook for Phlebotomy/Essentials	Jones & Bartlett Learning	2023

MLT 110 – Introduction to MLT

Turgeon, Mary Louise	Clinical Laboratory Science	Elsevier	2022
Garza & Becan - McBride	Phlebotomy Simplified	Pearson	2019

MLT 123/124 – Immunohematology Lecture and Laboratory

Howard, Paula	Basic & Applied Concepts of Blood Banking and Transfusion Practices	Mosby, Inc.	2025
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MLT 125/126 – Hematology Lecture and Laboratory

Carr & Rodak	Clinical Hematology Atlas	Elsevier	2021
Turgeon, Mary Louise	Clinical Hematology Theory and Procedures	Jones & Bartlett Learning	2020

Author	Title	Publisher	Publication Year
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MLT 233/234 – Clinical Chemistry Lecture and Laboratory

Sunheimer, Robert	Clinical Laboratory Chemistry	Pearson	2020
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Brunzel, Nancy A	Fundamentals of Urine and Body Fluid Analysis	Elsevier	2023
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MLT 235 – Clinical Practicum I

No additional textbooks required

MLT 244 – Professional Issues in MLT

Harmening, Denise M	Laboratory Management: Principles and Processes	D.H. Publishing & Consulting, Inc.	2021
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MLT 245- Clinical Practicum II

Harr, Robert	Medical Laboratory Science Review	F.A. Davis Company	2019
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MLT 246 – MLT Seminar

No additional textbooks required

Author	Title	Publisher	Publication Year
BIO 141/241 – Clinical Microbiology I and II			
Abbus, Lichtmann & Pillai	Basic Immunology: Functions And Disorders of the Immune System	Saunders Elsevier	2023
Dannessa-Delost, Maria	Introduction to Diagnostic Microbiology for the Laboratory Sciences	Jones & Bartlett Learning	2022
Larone, Davise H	Medically Important Fungi: A Guide to Identification	ASM Press	2023
Stevens, Christine	Clinical Immunology & Serology: A Laboratory Perspective	F.A. Davis Company	2021
Tille, Patricia M.	Bailey & Scott's Diagnostic Microbiology	Elsevier Mosby	2022
Tortora, Gerard J, et.al	Microbiology: An Introduction	Benjamin Cummings	2023

*This list is subject to change.

MLT Department Student Laboratory Resources

Author	Title	Publisher	Publication Year
Bishop, Fody & Schoeff	Clinical Chemistry – Principles, Techniques and Correlations	Wolters Kluwer	2018
Brunzel, Nancy A.	Fundamentals of Urine & Body Fluid Analysis	Elsevier	2018
Ciesla, Betty	Hematology in Practice	FA Davis	2018
Fung, Mark K., et. al	Technical Manual	AABB	2017
Harmening, Denise	Modern Blood Banking & Transfusion Practices	FA Davis	2019
Stevens/Miller	Clinical Immunology and Serology – A Laboratory Perspective	FA Davis	2017
Strasinger/DiLorenzo	The Phlebotomy Textbook	FA Davis	2019
Stasinger/DiLorenzo	Urinalysis & Body Fluids	FA Davis	2021
Sunheimer/Graves	Clinical Laboratory Chemistry	Pearson	2018
Tille, Patricia M.	Bailey & Scott’s Diagnostic Microbiology	Elsevier	2017
Tortura, Gerard, J, et.al	Microbiology: An Introduction	Benjamin Cummings	2018
Turgeon, Mary Louise	Clinical Hematology Theory & Procedures	Wolters Kluwer	2018

Videos/CDs/DVDs	Number
Basic Venipuncture	RB45.15.B37
Preventing Analytic Errors	RB45.15.P74
Avoiding Phlebotomy- Related Lawsuits	RB45.15.A86
Preanalytic Errors: Real People, Real Suffering	
Nightmare on Phlebotomy Street	

Note : The College also has an online subscription with the Center for Phlebotomy Education. Links for the videos listed above are made available to students via Canvas.

A Decision-Making Framework for Clinical Ethics	R725.5D43
Bloodborne Pathogen: Final Rule	RA642.B56
Documentation: The Process	RT50.D63
Fluid and Electrolyte Imbalance: An Overview	RC630.F67
Privacy and Security: The New HIPAA Rule	RA395.A3P75
Professional Behavior in Healthcare Professions: Effective Communication with Patients	R727.3P76
Test Taking Techniques	RT73.N688
Tucked in Tight: Honoring the Aging Patient	RA564.8T83

Online Periodicals	Publisher	Coverage from	Coverage to*	Access Database
Analytical Cellular Pathology	IOS Press	Volume 13, Number 1 (1997)	Present (9 month embargo)	Academic Search Complete, DOAJ
Archives of Pathology and Laboratory Medicine	College of American Pathologists	Volume 127, Number 1 (2003)	Present	Academic Search Complete , CINAHL Health Source Nursing Academic Edition
Clinical Chemistry and Laboratory Medicine	De Gruyter	Volume 41, Number 1 (2003)	Present	PubMed
Clinical Genetics	Wiley-Blackwell	Volume 55, Number 1 (1999)	Present (1 year embargo)	PubMed (Free Full Text is limited)
Clinical Laboratory Reference	NP Communications, LLC	Volume 40, Number 11 (2008)	Present	CINAHL with Full Text
Clinical Laboratory Science	American Society for Clinical Laboratory Science	Volume 17, Number 1 (2004)	Present	CINAHL with Full Text "Published ahead of print to present at http://clsjournal.ascls.org/content/early/recent "
Clinical Physiology & Functional Imaging	Wiley-Blackwell	Volume 18, Number 1 (1998)	Present (1 year embargo)	PubMed (Free Full Text is limited.)
Critical Reviews in Clinical Laboratory Science	Taylor & Francis	Volume 39, Number 1 (2002)	Present (18 months embargo)	Academic Search Complete
Hemoglobin	Taylor & Francis	Volume 25, Number 1 (2001)	Present (18 month embargo)	Academic Search Complete
Histopathology	Wiley-Blackwell	Volume 31, Number 1 (1998)	Present (1 year embargo)	Academic Search Complete (Free Online ISSN 1540-2649)
Internet Journal of Hematology	Internet Scientific Publications LLC	Volume 1, Number 1 (2003)	Present	http://ispub.com/IJHE
Laboratory Medicine (also in print)	American Society for Clinical Pathology	Volume 31, Number 1 (2000)	Present	https://academic.oup.com/labmed/issue
MLO: Medical Laboratory Observer	NP Communications, LLC	Volume 33, Number 9 (2001)	Present	Academic Search Complete , CINAHL, Health Source, Nursing Academic Edition
Pathology International	Wiley-Blackwell	Volume 48, Number 1 (1998)	Present (1 year embargo)	Academic Search Complete

Online Periodicals	Publisher	Coverage from	Coverage to*	Access Database
Platelets	Taylor & Francis	Volume 10, Issue 1 (1999)	Present (18 month embargo)	Academic Search Complete
Transfusion	Wiley-Blackwell	Volume 43, Number 1 (2003)	Present (1 year embargo)	Pubmed
Transfusion Medicine	Wiley-Blackwell	Volume 8, Number 1 (1998)	Present (1 year embargo)	Academic Search Complete
Ultrastructural Pathology	Taylor & Francis Ltd	Volume 23, Number 1 (1999)	Present (18 month embargo)	Academic Search Complete ; Health Source Nursing Academic Edition

APPENDIX I: LETTER TO STUDENTS – HEPATITIS VACCINE

MLT Program

To newly admitted MLT students:

The MLT Department recommends that students be actively immunized against Hepatitis B before entering the program in the Fall. This is because a student can expect to be in constant contact with blood and body fluids in all areas of the clinical laboratory. Also, students will draw blood from patients and during the procedure, there is a possibility that an accidental "stick" involving a known or unknown carrier will occur.

Furthermore Hepatitis B can be a serious infection. It often has a protracted course of 2-3 weeks of illness followed by several weeks of convalescence, with the possibilities of serious sequelae and of becoming a carrier.

Occasionally there are objections to vaccination. Some of these are given together with an answer to the objection.

1. This vaccine costs too much.
Actually, it costs less, is more effective, and provides longer lasting immunity than Hepatitis B immune globulin (HBIG) which is the only other substance that can be given to prevent this disease.
2. The vaccine might transmit other infections.
There have been no instances of this vaccine transmitting another infection. (This includes AIDS.)
3. Hepatitis can be prevented by giving gamma globulin after exposure.
 - a. The fact that exposure has occurred is not always apparent.
 - b. Gamma globulin is not effective and HBIG is only 75% effective in preventing Hepatitis.
 - c. Protection only lasts 8 weeks.
 - d. HBIG can be more than twice as expensive as the vaccine.

If you decide to receive this immunization, you should contact your personal physician. If you have any questions you may call me at 215-453-4680.

Sincerely,

Irwin Hollander, M.D.
MLT Medical Director

/wp

APPENDIX J: MLT 110, 124, 126, 234 LABORATORY REVIEW FORM

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

Student: _____ Instructor: _____
(Last) (First)

Date: _____ Subject: _____

This form is to be used as a learning/teaching tool for the purpose of alerting us to problems as they arise. Circle the number which best describes the student's work and behavior for this lab period. All categories marked "acceptable" should be documented on the reverse side of the sheet. Please fill out the form **each day** as soon as the student finishes his/her work and share your comments and evaluation with him/her. Be as fair and accurate as possible.

	Ideal	Very Good	Good	Acceptable (Minimally Competent)	Improvement Needed (Less Than Minimally Competent)	Unacceptable
1. Prepared in advance and demonstrated adequate knowledge of the subject.	12	10	8	6	4	0
2. Correctly performed all steps of procedure.	16	13	10	8	4	0
3. Performed the procedure in an acceptable period of time.	8	7	6	4	2	0
4. Obtained acceptable results.	16	13	10	8	4	0
5. Demonstrated competence in previously learned skills.	12			8	4	0
6. Used and maintained equipment properly.	4			3	2	0
7. Maintained a clean and organized work area.	4			3	2	0
8. Conserved laboratory reagents and supplies.	4			3	2	0
9. Observed all safety precautions.	4			3	2	0
10. Reported to the lab on time and returned promptly from breaks.	4			3	2	0
11. Dressed appropriately. (Refer to policy manual)	4			3	2	0
12. Was cooperative, acted in trustworthy, ethical and professional manner.	4			3	2	0
13. Accepted guidance of supervisors without resentment and actively sought it when necessary.	4			3	2	0
14. Communicated well, followed verbal directions and asked appropriate questions.	4			3	2	0

Comments:

APPENDIX J

ANECDOTAL RECORD FORM

SUBJECT: _____

INCIDENT (FACTS):

POSSIBLE DIAGNOSIS

GOALS TO REMEDY

DISCUSSED WITH STUDENT: YES _____ NO _____

ANECDOTAL RECORD FORM

SUBJECT: _____

INCIDENT (FACTS):

POSSIBLE DIAGNOSIS

GOALS TO REMEDY

DISCUSSED WITH STUDENT: YES _____ NO _____

ANECDOTAL RECORD FORM

SUBJECT: _____

INCIDENT (FACTS):

POSSIBLE DIAGNOSIS

GOALS TO REMEDY

DISCUSSED WITH STUDENT: YES _____ NO _____

APPENDIX K: (DLR) RATING DESCRIPTORS (MLT 110, 124, 126, 234)

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

	Ideal/Very Good	Good/Acceptable, Minimally Competent	Improvement Needed, Less Than Minimally Competent	Unacceptable
INITIATIVE	self-starter; works without prompting; offers to help others; looks for added responsibility	knows what needs to be done; requires little direction; does what's required	needs direction; needs occasional reminder to complete tasks; doesn't expend extra effort	requires constant supervision; needs frequent reminder for completion of tasks
ORGANIZATION	extremely well-organized; can arrange priorities & organize work station	usually has work organized; needs some help with priorities	needs occasional help in keeping work in order and setting priorities	frequently disorganized; has trouble keeping work in order; has trouble setting priorities
QUALITY OF WORK	consistently accurate results; repeats not usually necessary; can correct own mistakes	makes few errors; able to recognize own errors	average number of errors; needs help recognizing and correcting mistakes	frequent errors; careless worker; can't judge quality of work
QUANTITY OF WORK	finishes all assigned work in good time; goes on to other tasks	finishes required work in time allotted	usually able to finish assigned work; may occasionally need help or more time	unable to finish assigned tasks in reasonable time
PROBLEM SOLVING	easily relates previous learning to current work without help from instructor; uses sound judgment	needs some help from instructor when faced with new problem, but can apply knowledge	usually able to relate previous learning to current task, but needs much prompting from instructor	unable to relate previous experience to current task; requires constant supervision
KNOWLEDGE & PREPARATION	demonstrates extra study; consistently applies lecture and lab to clinic work; always prepared; uses resources appropriately	shows evidence of outside study related to assigned work; applies lecture and lab material	little outside study; needs much prompting from instructor; has difficulty applying lecture and lab; doesn't use resources	unprepared; no review; cannot apply lecture and lab material to clinic; can't use resources
SAFETY	always follows policy	occasionally makes careless mistakes or acts thoughtlessly	occasionally acts without regard to safety policy	knowingly disregards safety policy
WRITTEN WORK	worksheets and reports always neat; handwriting is clear; no spelling errors	needs some improvement in neatness, but results are legible	needs reminders to improve neatness; results are legible; makes frequent spelling errors	reports and worksheets are sloppy; transposes figures; handwriting illegible
VERBAL SKILLS	expresses self clearly and concisely; uses correct medical or technical terms	makes self understood; clear and technical terms, but concise; attempts to use medical or technical terms	doesn't use medical or talks excessively; is not makes self understood	avoids communication; understood by others
ETHICS	handles confidential information in appropriate manner; performs tests only with doctor's orders			indiscriminately discusses confidential information; performs tests without doctor's orders
TRUST-WORTHINESS	admits errors and seeks to correct them; reports only results known to be accurate		admits errors, but lets others correct them	does not recognize or correct mistakes; covers up; allows personal feelings to outweigh professional ethics
SKILLS WITH PATIENTS	actively contributes to patients' mental and physical comfort	respects patients' feelings and needs	aloof but polite	indifferent; rude; abrupt
SKILLS WITH SUPERVISORS/INSTRUCTORS	actively seeks and positively appreciates guidance; uses feedback to correct deficiencies	accepts and responds appropriately to criticism	passively accepts most criticism	rejects and is defensive of criticism; refuses to perform tasks

	Ideal/Very Good	Good/Acceptable, Minimally Competent	Improvement Needed, Less Than Minimally Competent	Unacceptable
SKILLS WITH COLLEAGUES	shows appropriate interest in and concern for a variety of people; cooperative and helpful	cooperative; doesn't interfere with others' work	has difficulty relating to some people, but work doesn't suffer	can't work with others; aloof; indifferent; uncooperative
APPEARANCE	complies with dress code; neat, clean, well-groomed	complies with dress code; not as neat or clean as expected of professional	complies with dress code, but uniform wrinkled, shoes not bright; not well-groomed	doesn't comply with dress code; personal hygiene neglected
DEMEANOR	self-confident, positive, pleasant; emotions under control; works well under stress	usually good-natured; fairly self-confident	occasionally moody, impatient; not very positive or confident	can't function under stress; lets personal life interfere with work; easily flustered
DEPEND- ABILITY	ready to work at assigned time; returned promptly from breaks	on time but not ready to work	late due to personal emergency, but notified in advance	late or absent; no excuse; late returning from break

APPENDIX L: DAILY CLINIC REVIEW (DCR), SECOND YEAR (MLT 235 & 245)
MONTGOMERY COUNTY COMMUNITY COLLEGE
MLT PROGRAM

Student _____ Instructor _____
 (last name) (first name)

Date _____ Hospital _____ Department _____

This form is to be used as a learning/teaching tool for the purpose of providing feedback to the student. Circle the number in the space which best describes the student's performance, then sum the numbers. (Complete descriptions of each rating are found in the DCR Rating Descriptors.) Please fill out the form each day as soon as the student finishes work and share your comments and evaluation with her/him. Be as fair and accurate as possible. Students: Place your initials by your name to indicate that you have read this.

	<u>Very Good</u>	<u>Good, with minor deviation</u>	<u>Acceptable- minimally competent</u>	<u>*Acceptable- less than minimally competent</u>	<u>Unacceptable</u>
WORK PRACTICES					
initiative	10	8	7	6	0
organization	10	8	7	6	0
quality of work	10	8	7	6	0
quantity of work	10	8	7	6	0
problem solving	10	8	7	6	0
knowledge/preparation	10	8	7	6	0
safety	10	8	7	6	0
COMMUNICATIONS					
written reports	3	2		1	0
verbal skills	3	2		1	0
INTEGRITY					
ethics	3				0
trustworthiness	3			1	0
INTERPERSONAL SKILLS					
with patients	3	2		1	0
with supervisors/instructors	3	2		1	0
with colleagues	3	2		1	0
PERSONAL TRAITS					
appearance	3	2		1	0
demeanor	3	2		1	0
dependability	3	2		1	0
					<u> </u> sum

* "Acceptable-less than minimally competent" is only applicable during the beginning of a practicum.

COMMENTS: Please use this space to identify the student's strengths and weaknesses.

DAILY TASK RECORD

Procedures performed	# successful	# attempted	Instructor's initials	Procedures observed	#

Venipunctures Successful _____ Attempted _____

Capillary punctures Successful _____ Attempted _____

Instructor's initials _____

APPENDIX M: (DCR) RATING DESCRIPTORS, SECOND YEAR (MLT 235 & 245)

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

	Very Good	Good, With Minor Deviation/ Minimally Competent	Acceptable, Less Than Minimally Competent	Unacceptable
INITIATIVE	self-starter; works without prompting; offers to help others; looks for added responsibility	knows what needs to be done; requires little direction; does what's required	needs direction; needs occasional reminder to complete tasks; doesn't expend extra effort	requires constant supervision; needs frequent reminder for completion of tasks
ORGANIZATION	extremely well-organized; can arrange priorities & organize work station	usually has work organized; needs some help with priorities	needs occasional help in keeping work in order and setting priorities	frequently disorganized; has trouble keeping work in order; has trouble setting priorities
QUALITY OF WORK	consistently accurate results; repeats not usually necessary; can correct own mistakes	makes few errors; able to recognize own errors	average number of errors; needs help recognizing and correcting mistakes	frequent errors; careless worker; can't judge quality of work
QUANTITY OF WORK	finishes all assigned work in good time; goes on to other tasks	finishes required work in time allotted	usually able to finish assigned work; may occasionally need help or more time	unable to finish assigned tasks in reasonable time
PROBLEM SOLVING	easily relates previous learning to current work without help from instructor; uses sound judgment	needs some help from instructor when faced with new problem, but can apply knowledge	usually able to relate previous learning to current task, but needs much prompting from instructor	unable to relate previous experience to current task; requires constant supervision
KNOWLEDGE & PREPARATION	demonstrates extra study; consistently applies lecture and lab to clinic work; always prepared; uses resources appropriately	shows evidence of outside study related to assigned work; applies lecture and lab material	little outside study; needs much prompting from instructor; has difficulty applying lecture and lab; doesn't use resources	unprepared; no review; cannot apply lecture and lab material to clinic; can't use resources
SAFETY	always follows policy	occasionally makes careless mistakes or acts thoughtlessly	occasionally acts without regard to safety policy	knowingly disregards safety policy
WRITTEN WORK	worksheets and reports always neat; handwriting is clear; no spelling errors	needs some improvement in neatness, but results are legible	needs reminders to improve neatness; results are legible; makes frequent spelling errors	reports and worksheets are sloppy; transposes figures; handwriting illegible
VERBAL SKILLS	expresses self clearly and concisely; uses correct medical or technical terms	makes self understood; clear and technical terms, but concise; attempts to use medical or technical terms	doesn't use medical or talks excessively; is not makes self understood	avoids communication; understood by others
ETHICS	handles confidential information in appropriate manner; performs tests only with doctor's orders			indiscriminately discusses confidential information; performs tests without doctor's orders
TRUST-WORTHINESS	admits errors and seeks to correct them; reports only results known to be accurate		admits errors, but lets others correct them	does not recognize or correct mistakes; covers up; allows personal feelings to outweigh professional ethics
SKILLS WITH PATIENTS	actively contributes to patients' mental and physical comfort	respects patients' feelings and needs	aloof but polite	indifferent; rude; abrupt
SKILLS WITH SUPERVISORS/ INSTRUCTORS	actively seeks and positively appreciates guidance; uses feedback to correct deficiencies	accepts and responds appropriately to criticism	passively accepts most criticism	rejects and is defensive of criticism; refuses to perform tasks

	Very Good	Good, With Minor Deviation/ Minimally Competent	Acceptable, Less Than Minimally Competent	Unacceptable
SKILLS WITH COLLEAGUES	shows appropriate interest in and concern for a variety of people; cooperative and helpful	cooperative; doesn't interfere with others' work	has difficulty relating to some people, but work doesn't suffer	can't work with others; aloof; indifferent; uncooperative
APPEARANCE	complies with dress code; neat, clean, well-groomed	complies with dress code; not as neat or clean as expected of professional	complies with dress code, but uniform wrinkled, shoes not bright; not well-groomed	doesn't comply with dress code; personal hygiene neglected
DEMEANOR	self-confident, positive, pleasant; emotions under control; works well under stress	usually good-natured; fairly self-confident	occasionally moody, impatient; not very positive or confident	can't function under stress; lets personal life interfere with work; easily flustered
DEPEND- ABILITY	ready to work at assigned time; returned promptly from breaks	on time but not ready to work	late due to personal emergency, but notified in advance	late or absent; no excuse; late returning from break

APPENDIX N: SAFETY PROCEDURES FOR THE MLT PROGRAM AND LABORATORY

MONTGOMERY COUNTY COMMUNITY COLLEGE Medical Laboratory Technician Program

Purpose of the Safety Program

1. To protect the health and well-being of the students and faculty while working in the student laboratory.
2. To eliminate the spread of potentially infectious agents outside of the laboratory.
3. To protect the College housekeeping staff who clean the facilities.
4. To teach students the principles of safety and asepsis so they can work safely at the clinical sites and in their future employment.

Safety Hazards

Safety hazards in the MLT student and clinical laboratories include biohazards, chemicals, fire and electricity. Biohazards are those agents capable of transmitting infectious diseases, such as blood, urine and body fluids or inanimate objects contaminated with these substances. Microbiological cultures are also potential biohazards. Biohazards are encountered routinely by Phlebotomy students. Potentially harmful chemicals used in the lab include acids and bases, alcohols and other caustic or poisonous chemicals. Because open flames are not used in the MLT student laboratory, the risk of fire is limited to only that associated with the operation of electrical equipment. If used properly, electrical equipment (analytical instruments) should pose no danger for students.

The risks to students are minimized through education. Lectures, reading assignments and lab exercises continually present safety information. Students' work in the lab is closely monitored by instructors. CLINICAL SPECIMENS FROM PATIENTS WITH HEPATITIS B OR AIDS ARE NEVER INTENTIONALLY BROUGHT INTO THE STUDENT LABORATORY. Furthermore, the use of harmful chemicals is minimized whenever possible and analytical instruments are maintained in good working order.

Safety Guidelines for Students

1. Eating, drinking, smoking and gum chewing are prohibited in the MLT student lab. There should be no hand to mouth contact for any reason.
2. Non-latex gloves are to be worn for all work with blood, urine, or other body fluids. Gloves which become obviously contaminated or torn should be discarded and a new pair obtained.
3. Hands are to be washed using antiseptic before leaving the lab and anytime they are soiled with a biohazard.

4. Lab surfaces (bench tops, floors, etc.) which have been contaminated with a biohazard via a spill or splash are to be disinfected for five minutes before being cleaned with paper towels
5. The work surface of the lab stations are to be covered with protective mats at all times. Used mats are changed at the end of each lab period and discarded in biohazard bags.
6. Students will keep a small biohazard bag at their lab stations and place non-sharp contaminated disposable items directly into them. These bags are then placed in the larger biohazard bags at the end of the lab period. Sharp or rigid biohazards are discarded into large, red containers on the bench tops.
7. All disposables contaminated with biohazards (e.g., tissues, pipet tips, etc.) are to be discarded directly into biohazard bags or rigid containers. (Instructors will notify students when clinical specimens may be discarded.)
8. Contaminated non-disposable glassware is to be placed in specially marked containers of disinfectant.
9. Mouth pipetting is prohibited. Suction bulbs, aspirators, or automatic pipettes must be used at all times.
10. Students may not wear street clothes in the lab. Proper uniforms and lab coats must be worn, long hair must be tied back, and nails must be kept short.
11. Safety goggles are to be worn for all work with chemicals.
12. Students may not operate any electrical equipment (instruments, etc.) until instructed in their proper use.
13. Centrifuges must be closed and balanced for operation and should never be opened until they have come to a complete stop.
14. Reagent labels, product literature and lab procedures should be read carefully before beginning work.
15. All clinical specimens must be handled as if they are infectious and necessary safety precautions taken. (Note: It is never known with certainty if specimens are free of hepatitis B or AIDS viruses!)
16. Venipuncture needles should not be resheathed after use. Special devices for removing and discarding needles are provided in the lab.
17. Broken glass will be discarded in a special rigid container.
18. All cases of accidents, personal injury (even if very minor) or lab spills need to be reported to the instructor immediately.
19. Students are expected to concentrate on their work, keep alert and use common sense at all times.

Fire Procedure (Steps are to be followed in the order listed below.)

1. Remove any persons in immediate danger.
2. Sound the fire alarm which is located on the wall beside the restrooms and across the hall from the elevator on the second floor of the Health Sciences Center.
3. Phone the College switchboard by dialing 6666 and report the fire location. The closest phone is in the MLT lab.
4. If feasible, fight the fire using the fire extinguisher which is located outside the MLT lab on the wall, in either direction as you exit the lab.