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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.

The full-time faculty member is Debra Eckman-Drabick, MS, MT (ASCP). Her office is HealHer office is

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

Clinic Site Liaison: Norhan Sobhi, MS, MLS (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

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

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, bleeding time, 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 g912 0 611.144 304.85 Tm0r/F

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 for each semester they are registered in 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.

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

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

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" above.) 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.

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

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

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' mailboxes within one week of due date. Grades will be reported based on percentage of 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.

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)

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

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

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.

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

Prior to acceptance into the MLT Program, students designated as pre-MLT majors, should contact Donnette Stewart (dstewart@mc3.edu), Corissa Reilly (creilly1@mc3.edu), or Nicole Howard (nhoward@mc3.edu) for advising appointments.

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.

APPENDICES

COMMUNICATION

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

APPENDIX C: TERMINAL COMPETENCIES OF GRADUATES - BLOOD BANK

MONTGOMERY COUNTY COMMUNITY COLLEGE
Medical Laboratory Technician Program

1. Evaluate suitability of specimens for analyses requested. OF

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.

- 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

- 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.

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.

7.

APPENDIX H: MLT DEPARTMENT/ LIBRARY RESOURCES

MLT Department Textbook List

Textbooks

Author	Title	Publisher	Publication Year
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Author	Title	Publisher	Publication Year
MLT 233/234	Clinical Chemistry Lecture and Laboratory		
Sunheimer, Robert	Clinical Laboratory Chemistry	Pearson	2018
Brunzel, Nancy A	Fundamentals of Urine and Body Fluid Analysis	Elsevier	2023

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

MLT Department Library/Student Laboratory Resources

Author	Title	Publisher	Publication Year
Bishop, Fody & Schoeff	Clinical Chemistry – Principles, Techniques and Correlations	Wolters Kluwer	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
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, /Span 47 12 Tf1 0 0 1 540.07 180.89 Tm0 0 1 540.07 207.77 T			

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 sequellae 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.

	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-	complies with dress code;	complies with dress code,	doesn't comply with dress

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
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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

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.