

# **Welcome**

## **MEDICAL LABORATORY TECHNICIAN PROGRAM HANDBOOK**





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## **Welcome to the Medical Laboratory Technician Program (MLT)**

Welcome to the Medical Laboratory Technician (MLT) program at Northeast Wisconsin Technical College (NWTC). The MLT Student Handbook will be your guide for information throughout your program studies. This handbook is a supplement to the College Student Handbook. The College Student Handbook is available online and is part of the NWTC Student Planner. Refer to the College Student Handbook for college-wide policies and procedures. Please take the time to read the policies and procedures in these handbooks.

This MLT Student Handbook contains policies specific for the Medical Laboratory Technician program. The specific program policies and requirements have been developed to help you succeed in the program and in your future profession as a Medical Laboratory Technician (MLT). These policies comply with the program's certification agency (National Accrediting Agency for Clinical Laboratory Science, NAACLS).

You have chosen a profession that offers many opportunities for personal and professional growth, giving service to patients, and career satisfaction. The laboratory field is a behind the scene profession that plays a major part in assisting the physician in the diagnosis and deciding the treatment for the patient. The medical laboratory scientist/technician is an essential part of the healthcare team.

Linda Muraski, MLT Program Instructor, and I look forward to working with each of you and preparing you for a rewarding career in the laboratory profession.

Students entering the MLT program must sign and submit the acknowledgement form at the back of this handbook indicating they have read, understand, and agree to comply with policies and procedures set forth in the handbook.

**Please keep this handbook for reference throughout your program.**

Karla K. Sampelle, MS, MT(ASCP)BB  
MLT Program Director/Instructor

## PROGRAM INTRODUCTION

This program prepares learners to act as entry level Medical Laboratory Technicians. The Medical Laboratory Technician is a member of the health care team who provides clinical information for disease prevention, medical diagnosis and treatment of the patient by processing specimens and performing laboratory tests. Medical Laboratory Technicians may also have responsibilities for information processing, training and quality control monitoring. They perform tests manually or with automated equipment or both.

Each year, a maximum of 14 students are admitted into the program in the Fall semester. The Medical Laboratory Technician–Associate Degree program is two (2) years in length consisting of two academic years and two summer sessions. It consists of 68 credits of coursework.

The student spends the first summer, three (3) semesters, plus an additional summer session, on campus (physically or virtually) taking general education, basic science and MLT core courses. MLT core courses on campus prior to the clinical semester consist of 26 credits of course work encompassing all laboratory areas, namely Phlebotomy, Hematology/Coagulation, Urinalysis, Microbiology, Immunology, Blood Bank, and Chemistry. These core courses consist of a lecture portion covering theory of test methodology and disease process. The laboratory component is taught in an on-campus laboratory with up-to-date equipment and supplies which allows students to practice basic skills and perform test procedures, in preparation for the clinical experience during the last semester.

Each student is then assigned to a clinical laboratory for an 18-week Experience. The first 3 weeks are completed in a simulated Microbiology lab on the NWTC campus with a fourth week preparing for the off campus clinical. After that, each student spends 32 hours a week for 14 weeks at their assigned clinical site(s). Students may be assigned to one facility for the entire Experience or to several facilities to complete their rotation requirements. All clinical sites do not have all required rotations available. Clinics do not have a blood bank to allow the student to complete the required blood bank activities.

<b>Student Setting</b>	<b>Student/Instructor Ratio</b>
Lecture Classroom	14:1
NWTC Student Lab	14:1
Clinical Site Lab during Clinical Experience	1:1 to 2:1

Graduates of the MLT Program are qualified to take the Board of Certification (BOC) examination from the American Society for Clinical Pathology (ASCP). Most Medical Laboratory Technicians work in hospital or clinic labs. Some may choose to work for veterinary laboratories, industrial labs, insurance companies, research facilities, environmental labs or in public health.

## **PROGRAM DESCRIPTION**

At career entry, the medical laboratory technician will be able to perform routine clinical laboratory tests (in the areas of hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics) as the primary analyst, making specimen oriented decisions using predetermined criteria, including a working knowledge of critical values. The level of analysis ranges from waived and point of care testing to complex testing encompassing all major areas of the medical laboratory.

The medical laboratory technician will have diverse functions in areas of preanalytical, analytical, post-analytical processes. The medical laboratory technician will have responsibilities for information processing, training, and quality control monitoring wherever medical laboratory testing is performed. Communications skills required will extend to frequent interactions with other members of the healthcare team within and outside of the laboratory, external relations, customer service and patient education.

## **MLT PROGRAM ACCREDITATION**

The NWTC Medical Laboratory Technician program is nationally accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). The NWTC MLT program received a 7 year reaccreditation in October of 2014. The next reaccreditation visit will occur during Spring 2021.

## **NATIONAL CERTIFICATION EXAMS**

A graduate of the Medical Laboratory Technician program is eligible to take a national certification exam. The most recognized exam is administered by the Board of Certification (BOC) of the American Society for Clinical Pathology (ASCP). Testing centers in Wisconsin are located in Green Bay, Milwaukee, Madison, and EauClaire. The exam is administered by computer. Most employers require that MLTs be certified within 6 months of graduation. The BOC fee will be paid with the final semester tuition. Registration to complete the BOC will take place during the final semester. Students will be required to complete the BOC within the time constraints ASCP states after registration.

## **Program Outcomes—Graduating Class of 2016**

<b>Program Entry Year</b>	<b>Students Accepted</b>	<b>Students Graduated MLT</b>	<b>Graduation Rate</b>	<b>Students taking ASCP BOC Exam</b>	<b>Exam Pass Rate</b>
<b>2015</b>	<b>14</b>	<b>10</b>	<b>71%</b>	<b>8</b>	<b>100%</b>

## MEDICAL LABORATORY TECHNICIAN FACULTY

### MLT Program Director:

Karla K. Sampsel, MS, MT(ASCP)BB  
Office HS108N  
(920) 498-5535

10-513-110	Basic Lab Skills
10-513-111	Phlebotomy
10-513-113	QA Lab Math
10-513-114	Urinalysis
10-513-120	Basic Hematology
10-513-121	Coagulation
10-513-130	Advanced Hematology
10-513-140	Advanced Topics in Microbiology

Coordinates the Clinical Experience 1, 2 and 3 and Phlebotomy Clinical

### MLT Program Faculty

Linda Muraski MT(ASCP) [linda.muraski@nwtc.edu](mailto:linda.muraski@nwtc.edu)  
Office HS108A  
(920) 498-6374

10-513-110	Basic Lab Skills
10-513-116	Clinical Chemistry
10-513-115	Basic Immunology Concepts
10-513-109	Blood Bank
10-513-170	Introduction to Molecular Diagnostics

### MLT Part-time Faculty

Patti Moore MS, MT(ASCP) [patricia.moore@nwtc.edu](mailto:patricia.moore@nwtc.edu)

10-513-133	Clinical Microbiology
10-513-151	Simulated Clinical Microbiology Lab – J term

### Advising Services

Erin Blaney, Academic Advisor [erin.blaney@nwtc.edu](mailto:erin.blaney@nwtc.edu)  
Phone: (920) 498-6383

### Administration for MLT Program

Riley McDermid, Associate Dean [riley.mcdermid@nwtc.edu](mailto:riley.mcdermid@nwtc.edu)  
Office HS310  
(920) 498-5606

Meghann McKinnon, Administrative Assistant [meghaan.mckinnon@nwtc.edu](mailto:meghaan.mckinnon@nwtc.edu)  
Office HS310  
(920) 498-6283



## **PROGRAM MISSION**

The mission of the Medical Laboratory Technician program is to offer an Associate Degree designed for entry level positions as a Medical Laboratory Technician, to prepare students to successfully take National Certification examinations, and to provide continuing education opportunities for all medical laboratory professionals throughout the surrounding communities.

## **PROGRAM OUTCOMES**

- A. Practice laboratory safety and regulatory compliance
- B. Collect and process biological specimens
- C. Monitor and evaluate quality control in the laboratory
- D. Apply modern clinical methodologies including problem solving and troubleshooting according to predetermined criteria
- E. Correlate laboratory results to diagnosis of clinical conditions and/or diseases
- F. Perform information processing in the clinical laboratory
- G. Model professional behaviors, ethics, and appearance

## **EXTERNAL STANDARDS**

National Accrediting Agency for Clinical Laboratory Sciences ( 5600 N. River Road, Suite 720, Rosemont, IL 60018) <http://www.naacls.org> . The curriculum includes principles of:

1. Methodologies for all major areas currently practiced by a modern clinical laboratory, including problem solving and troubleshooting techniques
2. Collecting, processing, and analyzing biological specimens and other substances
3. Laboratory result use in diagnosis and treatment
4. Communications sufficient to serve the needs of patients and the public
5. The required competencies to participate in the orientation of new employees
6. Quality assessment in the laboratory
7. Laboratory safety and regulatory compliance
8. Information processing in the clinical laboratory
9. Ethical and professional conduct
10. Significance of continued professional development

# NORTHEAST WISCONSIN TECHNICAL COLLEGE MEDICAL LABORATORY TECHNICIAN PROGRAM



## **ESSENTIAL FUNCTIONS FOR MEDICAL LABORATORY TECHNICIANS**

Students enrolling in and graduating from the Medical Laboratory Technician program must meet the essential function requirements of the academic program and of the corresponding MLT profession. They must complete programs consisting of academic study, simulated laboratory practice, and clinical laboratory experience. Students must be able to complete tasks assigned by instructors and clinical supervisors, and provide services that contribute to the well-being of patients. The essential functions of the MLT are as follows:

### **Observation**

The MLT student must be able to:

- observe laboratory demonstrations of techniques and instruments
- distinguish objects macroscopically
- use a microscope to discriminate among fine differences in structure and color (hue, shading, and intensity) in microscopic specimens
- read and comprehend text, numbers, and graphs displayed in print and on a video monitor

### **Physical**

The MLT student must be able to:

- move freely and safely about a laboratory
- perform moderately taxing continuous physical work, often requiring prolonged sitting or standing, over several hours
- travel to clinical laboratory sites for practical experience
- reach laboratory benchtops and shelves, patients lying in hospital beds or patients seated in specimen collection furniture
- maneuver phlebotomy and culture collection equipment to collect laboratory specimens from patients
- perform delicate manipulations on laboratory equipment and instruments necessary for complete and accurate diagnostic test results
- use an electronic keyboard to operate laboratory instruments and calculate, record, evaluate, and transmit data
- assist with lifting, carrying, and pushing/pulling objects weighing up to 50 pounds

### **Communication**

The MLT student must be able to:

- clearly, effectively, confidentially, and sensitively converse with patients regarding laboratory test orders and specimen collection instructions
- communicate with instructor, peers, laboratory staff, and other health care professionals orally and in recorded format
- communicate with patients and other health-care professionals by telephone

## **Intellect**

The MLT student must:

- read and comprehend technical and professional materials (textbooks, journal articles, handbooks, and procedure manuals)
- be able to perform basic and complex mathematical calculations
- interpret, comprehend, and follow oral, written, diagrammatic instructions
- analyze situations and make appropriate independent decisions
- make correct judgments in seeking supervisory help and consultation when appropriate in a timely manner

## **Behavior**

The MLT student must:

- be able to organize work and manage the use of time in order to complete technical tasks within realistic time limits
- possess the emotional health necessary to work accurately and safely under stressful circumstances
- be flexible and creative and adapt to professional and technical change
- follow established safety procedures in order to minimize risk of injury to self and co-workers
- be honest and forthright
- be able to critically evaluate his or her own performance, accept constructive criticism, and be responsible for improving performance
- possess attributes of integrity, responsibility, respect for others, compassion, ethical behavior
- work well independently as well as function well as a team member
- project an image of professionalism

## **Environmental**

The MLT:

- may be exposed to extreme hot and cold temperatures
- may be around moving instrumentation
- may be exposed to irritating fumes, toxic and caustic chemicals and solvents
- may be exposed to excessive noises and vibrations
- may be exposed to radiation or electrical energy
- may be exposed to potentially explosive materials
- may be exposed to flames
- must wear personal protective equipment: gloves, safety glasses, face mask/shield, protective clothing
- must adapt to working with unpleasant and infectious biological specimens

**ADMISSION AND RETENTION CERTIFICATION STATEMENT FOR ABILITY  
TO PERFORM ESSENTIAL FUNCTIONS/TECHNICAL STANDARDS  
IN HEALTH OCCUPATIONS**

I HAVE RECEIVED, AND HAVE CAREFULLY REVIEWED, THE ESSENTIAL FUNCTIONS/ TECHNICAL STANDARDS FOR THE MEDICAL LABORATORY TECHNICIAN PROGRAM IN THE HEALTH SCIENCES AND EDUCATION DIVISION AT NORTHEAST WISCONSIN TECHNICAL COLLEGE.

Based on this review, select the appropriate choice (A or B) below. Return completed certification to the Program Director for your Health Occupations Program.

**A. I CERTIFY THAT I MEET THESE ESSENTIAL FUNCTIONS/TECHNICAL STANDARDS FOR THIS SELECTED HEALTH OCCUPATION.**

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
NAME PRINTED OR TYPED

\_\_\_\_\_  
STUDENT IDENTIFICATION #

**B. I BELIEVE I COULD MEET THE ESSENTIAL FUNCTIONS/TECHNICAL STANDARDS FOR THIS SELECTED HEALTH OCCUPATION.**

I will contact the program to determine whether reasonable accommodations can be made for me to participate in this educational program, including any and all required labs and clinical practicums.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PRINTED OR TYPED

\_\_\_\_\_  
STUDENT IDENTIFICATION #

Essential Function(s)/Technical Standard(s) I am requesting to be evaluated include (list all that apply):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please contact the advisor or the associate dean for your program if you have questions. Thank you for your assistance.

# MEDICAL LABORATORY TECHNICIAN CURRICULUM

## SUMMER TERM

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** 10-890-101 College 101	1
* 10-501-101 Medical Terminology	3
++10-806-186 Intro to Biochemistry	4
<b>SEMESTER TOTAL</b>	<b>8</b>

## FIRST SEMESTER

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* 10-513-110 Basic Lab Skills	1
* 10-513-111 Phlebotomy	2
* 10-513-113 QA Lab Math	1
* 10-513-115 Basic Immunology Concepts	2
++ 10-806-177 Gen Anatomy & Physiology	4
10-809-198 Intro to Psychology	3
<b>SEMESTER TOTAL</b>	<b>13</b>

## SECOND SEMESTER

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* 10-513-109 Blood Bank	4
* 10-513-114 Urinalysis	2
* 10-513-120 Basic Hematology	3
* 10-513-121 Coagulation	1
10-801-136 English Composition 1	3
<b>SEMESTER TOTAL</b>	<b>13</b>

## SUMMER SEMESTER

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++10-806-197 Microbiology	4
10-801-196 Oral/Interpersonal Comm	3
<b>SEMESTER TOTAL</b>	<b>7</b>

## THIRD SEMESTER

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* 10-513-130 Advanced Hematology	2
* 10-513-116 Clinical Chemistry	4
* 10-513-133 Clinical Microbiology	4
10-809-172 Intro to Diversity Studies	3
<b>SEMESTER TOTAL</b>	<b>13</b>

## FOURTH SEMESTER

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* 10-513-140 Advanced Microbiology	2
*10-513-170 Intro to Molecular Diagnostics	2
* 10-513-151 Clinical Experience 1	3
* 10-513-152 Clinical Experience 2	4
* 10-513-153 Clinical Experience 3	3
<b>SEMESTER TOTAL</b>	<b>14</b>

<b>TOTAL CREDITS</b>	<b>68</b>
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**Curriculum Note**

\* No final grade lower than a "C" is acceptable in any of the courses marked with an asterisk. A student who withdraws or receives a grade lower than a "C" in a program course may apply for re-entry into the program. Students must follow the re-entry process.

++ No final grade lower than a "B" is acceptable in General Anatomy & Physiology, Intro to Biochemistry, and Microbiology. A student who withdraws or receives a grade lower than a "B" in these courses may apply for re-entry into the program. Students must follow the re-entry process.

\*\*The credit for 10-890-101, College 101 is an Institutional Requirement for graduation. Consequently, it is not part of the program credit requirements.

# MEDICAL LABORATORY TECHNICIAN

## CORE COURSE COMPETENCIES

**BASIC LAB SKILLS - 10-513-110**...explores health career options and the fundamental principles and procedures performed in the clinical laboratory. Learners will utilize medical terminology and basic laboratory equipment. Learners will follow required safety and infection control procedures and perform simple laboratory tests.

1. Adhere to safety and infection control policies
2. Use basic laboratory equipment
3. Investigate laboratory science occupations
4. Evaluate laboratory compliance with CLIA regulations
5. Perform waived testing
6. Apply medical terminology to lab procedures and practices

**PHLEBOTOMY - 10-513-111**...this course provides opportunities for learners to perform routine venipuncture, routine capillary puncture and special collection procedures.

1. Apply principles of patient test management
2. Control incidence of preanalytical variables in specimen collection
3. Perform capillary puncture
4. Perform venipuncture
5. Resolve problems related to specimen collection and processing
6. Process laboratory specimens
7. Explain special collection procedures
8. Perform special blood collection techniques
9. Explore legal issues related to phlebotomy

**QA LAB MATH - 10-513-113**...focuses on performing the mathematical calculations routinely used in laboratory settings. Learners will explore the concepts of quality control and quality assurance in the laboratory. Learners will review regulatory compliance requirements, and certification and continuing education programs.

1. Convert units of measurement
2. Calculate solutions and dilutions
3. Perform quality control calculations
4. Explain method selection
5. Assess the value of a continuous quality management process

**URINALYSIS - 10-513-114**...prepares learners to perform a complete urinalysis which includes physical, chemical and microscopic analysis. Learners will explore renal physiology and correlate urinalysis results with clinical conditions.

1. Summarize renal physiology
2. Perform physical analysis
3. Perform chemical analysis of urine
4. Summarize chemical reactions included in a macroscopic urinalysis
5. Use a UA instrumentation
6. Interpret QC data
7. Perform microscopic urinalysis
8. Correlate urinalysis results with disease states and conditions
9. Explore testing methods on misc. specimens

**BASIC IMMUNOLOGY CONCEPTS - 10-513-115...**provides an overview of the immune system including laboratory testing methods for diagnosis of immune system disorders, viral and bacterial infections.

1. Summarize the functions of the immune system
2. Characterize testing methodology used in immunodiagnostic testing
3. Correlate pathophysiology to immune disorders
4. Correlate lab results to disease states
5. Perform immunodiagnostic testing

**BASIC HEMATOLOGY - 10-513-120...**covers the theory and principles of blood cell production and function, and introduces the learner to basic practices and procedures in the hematology laboratory.

1. Diagram the structure of a cell
2. Summarize principles of platelet production and function
3. Summarize the production and function of each WBC type
4. Summarize the production and function of RBCs
5. Perform normal blood smear review and cell identification
6. Perform hematology calculations
7. Perform blood smear preparation and staining
8. Perform hemacytometer cell counts
9. Perform basic hematology procedures, including hematocrit, hemoglobin, ESR, and reticulocyte count
10. Operate hematology analyzer
11. Interpret hematology analyzer results
12. Perform quality control procedures

**COAGULATION - 10-513-121...**introduces the theory and principles of coagulation and explores mechanisms involved in coagulation disorders. Emphasis is placed upon laboratory techniques used to diagnose disease and monitor treatment.

1. Summarize theories and principles of hemostasis
2. Perform basic coagulation procedures
3. Correlate coagulation results with defects in primary hemostasis and bleeding and thrombotic disorders
4. Correlate defects in secondary hemostasis with bleeding and thrombotic disorders
5. Correlate defects in the fibrinolytic system with bleeding and thrombotic disorders
6. Explain principles and techniques of special coagulation procedures

**ADVANCED HEMATOLOGY - 10-513-130...**explores mechanisms involved in the development of hematological disorders. Emphasis is placed upon laboratory techniques used to diagnose disorders and monitor treatment.

1. Correlate hematology concepts and procedures with disorders of decreased RBC production
2. Correlate hematology concepts and procedures with increased RBC destruction
3. Correlate hematology concepts and procedures with non-malignant disorders of leukocytes
4. Correlate hematology concepts and procedures with acute leukemias and myelodysplastic syndromes



5. Correlate hematology concepts and procedures with chronic myeloproliferative disorders
6. Correlate hematology concepts and procedures with malignant lymphoproliferative disorders

**CLINICAL CHEMISTRY - 10-513-116...** Introduces clinical chemistry techniques and procedures for routine analysis using photometric, potentiometric and separation techniques. Topics in this course include pathophysiology and methodologies for carbohydrate, lipids, proteins, renal function and blood gas analysis.

1. Summarize the theory of chemistry methodologies
2. Perform chemical analysis using instrumentation
3. Evaluate renal function
4. Evaluate enzymatic reactions
5. Evaluate protein function
6. Evaluate carbohydrate function
7. Evaluate electrolytes
8. Evaluate hepatic function
9. Evaluate blood gases
10. Evaluate lipids
11. Evaluate cardiac function
12. Evaluate tumor markers
13. Evaluate endocrine function
14. Evaluate body fluids
15. Evaluate toxicology and TDM

**BLOOD BANK - 10-513-109...** Focuses on blood banking concepts and procedures including blood typing , compatability testing, work ups for adverse reaction to transfusions, disease states and donor activities.

1. Integrate principles of genetics and immunology to blood bank
2. Interpret QC testing
3. Interpret ABO test results including discrepancies
4. Interpret Rh test results including discrepancies
5. Interpret Anti-Human Globulin (AHG) results
6. Interpret antibody screening results
7. Interpret cross-match results
8. Identify other blood group systems
9. Interpret QC testing for advanced techniques
10. Interpret antibody identification results of Rh and other Blood Group Systems
11. Determine transfusion reactions
12. Determine autoimmune hemolytic diseases/conditions
13. Determine hemolytic disease of the newborn (HDN)
14. Identify blood donor requirements according to AABB standards
15. Correlate component therapy with disease states/conditions

**CLINICAL MICROBIOLOGY - 10-513-133**...presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, are also discussed.

1. Perform basic microbiological techniques
2. Examine collection, processing, and interpretation of results for various microbiological specimens
3. Perform routine Identification of Staphylococcus and Streptococcus
4. Perform routine Identification of Neisseria and Haemophilus organisms
5. Perform routine Identification of Enterics and other stool pathogens
6. Perform routine Identification of non-fermenters
7. Perform routine Identification of gram positive aerobic bacilli
8. Perform routine Identification of miscellaneous bacteria
9. Interpret susceptibility testing

**ADVANCED MICROBIOLOGY - 10-513-140**...overview of acid fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing and identification will be discussed.

1. Identify fungi
2. Identify parasitic helminthes
3. Identify parasitic protozoa
4. Identify acid-fast organisms
5. Identify anaerobic bacteria

**INTRODUCTION to MOLECULAR DIAGNOSTICS – 10-513-170**... introduces the principles and application of molecular diagnostics in the clinical laboratory.

1. Explore genetic principles of molecular diagnostics
2. Investigate the structure of human, bacterial, and viral genomes
3. Summarize specimen collection and processing requirements for molecular diagnosis and nucleic acid isolation techniques
4. Investigate nucleic acid identification and manipulation techniques
5. Investigate nucleic acid amplification techniques
6. Explore detection methods used in molecular diagnostics
7. Explain the utilization of molecular diagnostics in diagnosis of diseases and health conditions

**CLINICAL EXPERIENCE 1 , 2, 3 - 10-513-151, -152, -153**...clinical applications of knowledge and procedures in hematology/coagulation, urinalysis, microbiology, blood bank, chemistry/serology, preparation for MLT certification examinations.

1. Adhere to safety/infection control procedures
2. Investigate the use of Laboratory Information Systems (LIS)
3. Perform blood and other specimen collection
4. Operate laboratory equipment and instrumentation
5. Perform coagulation procedures
6. Perform immunological testing
7. Perform chemistry procedures

8. Perform urinalysis procedures
9. Perform immunohematological techniques
10. Perform hematology procedures
11. Perform microbiology procedures
12. Perform body fluid analysis
13. Correlate results of laboratory testing with conditions/diseases
14. Prepare for employment as an MLT

## **CLINICAL EXPERIENCE**

- Students will be required to purchase a uniform, pay for liability insurance included in student fees, provide their own transportation to assigned sites, and cover any other expenses related to clinical experiences. Dependent on availability of sites, students may need to travel distances for clinical experiences.
- Students are required to maintain a current Healthcare Provider CPR card to comply with affiliating agency requirements.
- Students will be required to show proof of annual flu vaccine.
- Students will be required to submit immunization documentation. A fee is charged for this service through Castle Branch. Additional information will be provided upon acceptance into the program.
- Students will be required to undergo background check using the process in Castle Branch.
- Some affiliating agencies may require a drug screen before student acceptance. The test fee through Castle Branch is the responsibility of the student.

## **JOB SHADOWING EXPERIENCE**

Students accepted into the MLT program will receive a letter describing the job shadow requirement along with participating lab list and job shadow verification form.

Each incoming student must complete a 3-4 hour job shadow experience in a hospital laboratory prior to the first day of Fall semester class with Fall program entry. Student will observe Medical Lab Technicians, Medical Lab Scientists, and other laboratory professionals in their work environment. It is an opportunity to ask questions and experience what it will be like to be a Medical Lab Technician. This experience is meant to solidify the MLT Program selection by the student.

Student will complete a form at the end of the job shadow, which must be turned in to an MLT faculty by the first day of Fall Semester. Students accepted near the beginning of the Fall semester are expected to complete the job shadow as soon as possible.

This experience will be discussed in during Welcome Day or the Basic Lab Skills course.

## **STUDENT EXPECTATIONS**

**Students are expected to adhere to all student policies found in the NWTC Student Handbook. Pay special attention to:**

Student Code of Conduct  
Academic Integrity Policy

### **Personal Appearance in On-Campus MLT Lab**

Professional standards of appearance are important to the overall quality of patient care. A high level of personal cleanliness is maintained as standard for employment in healthcare facilities. Poor oral hygiene, body odors, unkempt hair, and other signs of poor personal hygiene cannot be tolerated. For this reason, these same standards will be followed in our student lab.

- Hair must be neat and well-groomed. If hair extends over the collar, it must be pulled back.
- Keep jewelry to a minimum. Wear only wedding rings. Avoid wearing rings with high-set prongs, as these harbor bacteria, and may tear gloves. Do not wear dangling earrings.
- Do not wear heavy make-up, cologne, or perfume.
- Keep fingernails clear and well trimmed. Acrylic nails are not allowed.
- Wear lab coat at all times.
- See the Lab Attire rubric for additional clothing details. This will be posted in all MLT Program courses.

### **Student Behavior in On-Campus MLT Lab**

Because professionalism is expected in the clinical setting, we will practice these skills in our student lab.

- Adhere to professional appearance guidelines as listed above.
- Be prompt. You should be ready to start lab at the scheduled time.
- Exhibit a professional manner. You are expected to be cooperative, to be a good team member, to be pleasant and considerate of others, to keep a neat and orderly work area.
- Adhere to lab safety policies as discussed and posted in all MLT Program Blackboard courses.
- Practice the NWTC Employability Skills. These skills are graded as part of each course grade. The grading rubric will be discussed and posted in all MLT Blackboard courses.

## **ATTENDANCE AND PARTICIPATION IN PRE-CLINICAL MLT CLASSES**

The following attendance and grading policies are used in all NWTC MLT courses. These policies were adopted to promote professionalism and responsible work ethics.

### **Make-up Exam Policy**

No make-up exams will be given unless the student has made contact with the instructor via phone or email prior to the exam time regarding the need for a make-up exam.

Only **one make-up exam is allowed without point deduction**. Missed exams will be taken in the Assessment Center and must be made up within 3 days of the scheduled test date, or the resulting exam grade earned will be a zero. A second make-up exam will result in 10% point deduction of the earned score. NOTE: It is the student's responsibility to check on the Assessment Center hours of operation.

### **Late Work Policy**

Late work (lab report, written assignments, etc.) will receive a deduction of 10% of the possible points per day that it is late, and must be submitted within 1 week of the due date or zero points will be earned.

### **Employability Skills Rubric**

The total number of points is determined by the number of class meetings. See Employability Skills Rubric for grading criteria.

### **Make-up Labs**

Student must contact instructor to discuss the possibility of making up a missed lab. Making up labs is at the discretion of the instructor. All lab experiences are not able to be duplicated. A missed lab may result in a grade of 0 for that lab. Students are greatly encouraged to attend all class sessions. It is critical to attend all labs to get sufficient hands-on experience and practice of lab procedures.

## **GRADING POLICY FOR MLT PRE-CLINICAL COURSES**

Evaluation methods used in MLT Program courses include written exams and quizzes, laboratory unknowns, laboratory performance tests and practical exams, various class projects and written assignments, and observation of affective characteristics (safety, work ethics, attitudes).

All evaluation items are related to learning objectives as listed in course outlines.

The final grade for each course (except the Phlebotomy and Basic Lab Skills course) will be calculated as follows:

- **Lecture** component is 70% of the grade and is composed of unit exams and quizzes
- **Laboratory** component is 25% of the final grade and is composed of Performance tests, Lab Practicals, and other written assignments such as presentations, lab reports, personal reflection and surveys, and journal reports.  
**NOTE: ALL performance tests must earn a score that demonstrates competence.**
- **Employability Skills** points earned is 5% of the final grade
- **NOTE: 78% minimum scores must be earned in all categories to pass the course.**

**Grading scale:**

<b>A</b>	<b>93-100%</b>
<b>B</b>	<b>85-92%</b>
<b>C</b>	<b>78-84%</b>
<b>F</b>	<b>less than 78%</b>

## **AMERICANS WITH DISABILITIES ACT (ADA) ACCOMODATIONS**

<https://www.nwtc.edu/student-experience/disability-services>

The faculty is committed to providing each student with the opportunity to successfully complete the Medical Laboratory Technician Program. Therefore, it is important that students notify the appropriate faculty member if there is any reason that would interfere with their ability to complete course requirements or to participate in activities required for graduation. Reasonable requests for appropriate academic adjustments will be granted. Requests must be received prior to any scheduled activity (e.g., field trips or clinical experiences) or the third class session of any course. All requests will be held in confidence.

Please contact the Disability Services Office, in Room SC229, or call 920/498-6904 for more information regarding the support services available to you.

## **CREDIT FOR PRIOR LEARNING (<https://www.nwtc.edu/admissions/student-records/transfer-of-credit>)**

There are several ways to obtain advanced standing, including:

- Transfer of Credit for courses taken at another college
- Credit for Prior Learning is available for the Phlebotomy course by completing a theory written exam and skills demonstration. The process is available on the NWTC website.

Refer to the Policy Statement in the College Catalog and the Student Handbook for complete information. If you have skills and knowledge that may substitute for program courses, see the Academic Advisor to initiate your request.

## **TERMINATION/DISMISSAL**

The College reserves the right to terminate your enrollment in a program at anytime for sufficient reason. The Student Code of Conduct is used a basis for termination/dismissal. See the NWTC Student Handbook for specific details.

## **GRIEVANCE PROCEDURES**

The College Grievance Procedure is available in the the NWTC Student Handbook.



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**NWTC Academic Coaching Service (<https://www.nwtc.edu/student-experience/academic-coaching> )**

All credit students are eligible to request an academic coach (tutor) for any course. All instructors can refer students obtain an academic coach. Academic Coach Request Forms are located on the my.NWTC student portal. Once requested, the student will be contacted within 2 business dates.

Any student who would like to be considered to serve as an academic coach for fellow students in an MLT course should first contact their MLT course instructor. If recommended by your instructor, you will be directed to contact [nwtc.tutoring@nwtc.edu](mailto:nwtc.tutoring@nwtc.edu). NWTC pays academic coaches between \$8 and \$9 per hour depending on the number of students being coached at a session.

Academic Coaches are also available for general education and basic science courses.

Refer to Academic Coaching on the NWTC website under Student Services.

## **ALLIED HEALTH PROGRAMS STARFISH / EARLY ALERT PROCEDURE**

NWTC Allied Health Programs have identified the Starfish system as the formal **early alert mechanism** for early identification and intervention of learners struggling within program coursework. While faculty have the flexibility to utilize all of the features of Starfish, (referrals, flags, kudos) this procedure is meant to identify minimum expectations to link the struggling student with the resources and support systems available in order to achieve success in their educational goals. The Starfish Early Alert Procedure is intended to unify processes within Allied Health and Student Services to create a network of support for the learner.

### **Process:**

1. Upon first failure of any project, exam, quiz OR student falls below the minimum passing grade for the course, the instructor will raise the appropriate flag in Starfish. The instructor will make the first contact with the student to triage the intervention and determine the need for additional support or monitoring.
2. Student and instructor set up an agreed upon time for a meeting or meaningful contact.
3. Upon meeting with the student, the instructor will clear the flag and determine the appropriate next step, which could include continued monitoring, referral to academic advising, referral to counseling, referral to academic coaching, or referral to accommodations.
4. Instructor will monitor progress and issue Kudo upon improvement or another flag if issue(s) persist.

## **ALLIED HEALTH PROGRAMS STARFISH / EXIT INTERVIEW PROCESS**

The **Exit Interview Process** was established as a method of communication with a student that either failed, or withdrew from an Allied Health program. The purpose of the exit interview is to identify factors that influenced the student's inability to successfully complete the program as for program transition.

### **Steps:**

1. Upon student failure or withdrawal from a program, the Program Director completes and submits the Allied Health Program Exit To Do within the Starfish system. The Program Director should provide any appropriate notations or support service referrals in the Starfish system. When advising the student prior to the failure or withdrawal, the instructor should make the student aware that they will need to contact the Associate Dean to set-up a meeting.
2. Upon receipt of the Allied Health Program Exit to do, the Associate Dean sets up a meeting with the student if contact has not already been made.
3. The Associate Dean will conduct an Exit Interview with the student utilizing a standard questionnaire. The Associate Dean will provide the student with all options available to them and complete any appropriate referrals through the Starfish system.

## NWTC Allied Health Program Re-Entry Policy

The program student who has withdrawn or earned a non-passing grade in any of the program core courses must adhere to the following **procedure to re-enter a course and/or the program**.

1. Program Director or instructor will email the student informing them that they were unsuccessful in a core course.
2. Students who withdraw for a medical reason will inform the instructor or Program Director and must provide documentation from a medical professional of the reasons for the withdrawal. If an approved medical withdrawal is given, the student will not be placed in formal re-entry.
3. Program team will discuss students who have withdrawn or earned a non-passing grade from a core course. The program team reserves the right to request additional information from the student or request an interview with the student. At the interview, student suitability for re-entry will be discussed. The program team will determine re-entry criteria for the student and enter the information into the team re-entry spreadsheet. Based on the results of the program team, the student will be recommended or not recommended for re-entry, pending availability of space. If program re-entry is declined, the team will inform the Associate Dean about the decision.
4. The Program Director or instructor will issue the appropriate Starfish Success Plan (re-entry or exit) for the student and list re-entry criteria within the plan.
5. The program will inform the Associate Dean of the students who have been issued re-entry plans in Starfish.
6. The student will be sent a re-entry application from the Health Sciences Department Office by the end of the semester in which they withdrew or failed a course. The student will set up a meeting with the Associate Dean by contacting the Health Sciences Office at (920) 498-5543. If the completed re-entry form is not returned to the Health Sciences Office by the start of the next semester, the student will **not** be considered for re-entry.
7. Upon meeting with the Associate Dean and receipt of the completed re-entry application, the student's name will be placed on the re-entry list. The date of the re-entry meeting will be the official re-entry request date.
8. If the student has been out of the program for greater than 1 semester, the student may be asked to demonstrate retention of program material.
9. The student may be required to "audit" courses applicable to the level in which the student withdrew from the program. The auditing process is required to update clinical skills to a re-entry level. A cost will be incurred with the auditing process. Students auditing courses must meet the attendance and participation requirements of the course. A student may choose to re-take versus audit the course to achieve an improved grade, knowing that the final grade of the re-take stands.
10. If the student has been denied re-entry, the decision is final.

## **Academic Probation and Program Termination:**

A student allowed to re-enter the program will be considered on **Academic Probation** until completion of the program.

A final grade of a “C” is required to pass all core courses within the program. A student who fails a course during their second re-entry attempt will be dropped from the program and may not seek re-entry. A student who withdraws from a course, and then subsequently fails the same course upon repeating it, will be dropped from the program and may not seek re-entry.

## **PROGRAM PROGRESSION AND COMPLETION**

Full-time students should follow the course progression as published on the NWTC website. The MLT courses follow a logical sequence, where introductory and foundational science courses are prerequisites to advanced courses. Prerequisites for each course are published.

Part-time students should first take general education and science courses before beginning MLT program courses. Once first semester program courses are taken, the student is expected to follow each semester with all required program courses, so that MLT program coursework is completed in a two year period.

Students who are on the program wait list are encouraged to take general education and basic science courses, while waiting for program admission.

If a student withdraws or fails a pre-clinical MLT program course or a science course, he/she is allowed to repeat the course one time. However, the student will now be out of sequence and will have to complete the division re-entry process to get a slot in the needed class.

Policies for Clinical Experience completion are found in the grading policy in the Clinical Experience syllabus.

Students who complete all required MLT Program coursework with the required minimum grade will be granted an Associate Degree. The degree is not contingent on passing a certification exam. However, the graduate is eligible to take a national certification exam.

## **CLINICAL EXPERIENCE SCHEDULES**

The Clinical Experience takes place during the fourth semester. Clinical sites are available in many hospital and clinic labs throughout northeast Wisconsin. Students must have satisfactorily completed all preceding coursework to qualify for the Clinical Experience.

The Clinical Experience consists of a 18 week, 32-40 hour per week assignment to a clinical lab. The student rotates through the major departments within the lab. Clinical sites have flexibility to alter the following suggested rotation time:

Chemistry	4 weeks
Hematology/Coag/Urinalysis	5 weeks
Microbiology	3 weeks in simulation at NWTC, 1 week of review
Blood Bank	4 weeks
Student Choice	1 week

- The clinical hours are scheduled by individual sites based on typical staffing hours in each department. The scheduled hours will be day shift, Monday through Friday. Any hours during other shifts can be scheduled if needed to meet the learning objectives in that facility with the approval of the program director and the student.
- 2 off-shifts are scheduled during the choice week or during any of the rotations. The 2 off-shifts can be evening and/or night shifts. The purpose of this is to orientate students to the workflow in an off-shift.

Students may be assigned to a single lab for the entire Clinical Experience or to several labs to complete all rotations. For example, students assigned to a clinic lab for Hematology/Chemistry/Urinalysis/Phlebotomy rotations would do their Blood Bank rotation in a hospital lab. Students will do their Microbiology rotation in a 3 week NWTC simulation lab. With the evolution of work flow in the clinical laboratory, each site has flexibility in scheduling the break down of rotation time frames. Some sites use sister locations within the health care system to achieve all requirements.

## POLICY FOR CLINICAL PLACEMENT

1. Students must have completed the following clinical requirements by week 8 of the third semester (the semester prior to clinical):
  - Criminal Background Check clearance (**NOTE:** Completed by end of first semester)
  - CPR: American Heart Association "BLS Provider" or American Red Cross "Basic Life Support for Healthcare Providers" course. NOTE: Heartsaver courses will not be accepted.
  - Health requirements including updated yearly TB skin test and annual influenza vaccine
  - 78% average at Week 8 in all third semester courses
2. Students must have completed all preceding course work with grades of C or better in all core courses and science courses.
3. No special consideration can be given to those individuals with spouse, children, lack of transportation, etc.
4. The order of student placement will be determined by lottery. Students who have fulfilled the stated requirements will be asked to list preferred sites in order of preference. Preferred sites will be considered. There is no guarantee of placement at a preferred site. Final clinical placement decisions are at the discretion of MLT faculty. Students will be placed at the site most appropriate for individual learning needs.
5. It is expected that established clinical sites will continue to affiliate with Northeast Wisconsin Technical College. However, it is each individual lab's prerogative to terminate their affiliation agreement or refuse a student for a particular semester. Northeast Wisconsin Technical College will then make every effort to retain replacement clinical sites. In the unlikely event that a replacement site could not be identified, the following policy will go into effect:

Students will be placed in order assigned by lottery. In the unlikely event of an insufficient number of sites to place all eligible students, an attempt will be made to establish a site for a Fall clinical. If that is not possible, that student will be placed first the following Spring semester.
6. There is no scheduled Fall clinical. An attempt to find a Fall clinical placement would be made for a student out of sequence.
7. If there are adequate placement sites available for all students, but a student chooses not to accept one for any reason, that student will be placed the following spring semester only after all other students from that semester have been placed. There is a risk that this may further delay placement of the student.
8. If a student does not complete their clinical due to academic or disciplinary reasons, the student would need to go through the Allied Health Program re-entry process.

## **CLINICAL SITES**

The following hospitals and clinics have affiliated with the MLT program over the past several years. Affiliating agencies may change year to year.

- |  |                   |
|--|-------------------|
| 1. Aurora Baycare Medical Center       | Green Bay         |
| 2. Aurora Medical Center               | Oshkosh           |
| 3. Bay Area Medical Center             | Marinette         |
| 4. Bellin Health Hospital Center       | Green Bay         |
| 5. Bellin Medical Group Clinic         | Green Bay         |
| 6. Calumet Medical Center              | Chilton           |
| 7. St. Clare Memorial Hospital         | Oconto Falls      |
| 8. Door County Medical Center          | Sturgeon Bay      |
| 9. Holy Family Memorial                | Manitowoc         |
| 10. Prevea Health                      | Green Bay         |
| 11. St. Mary's Hospital Medical Center | Green Bay         |
| 12. St. Vincent Hospital               | Green Bay         |
| 13. ThedaCare Medical Center-Shawano   | Shawano           |
| 14. Dickinson County Memorial Hospital | Iron Mountain, MI |

## **STATEMENT OF POLICY ACCEPTANCE**

Please initial each statement:

\_\_\_\_\_ I have read and agree to adhere to the Student Expectations and Behaviors policy.

\_\_\_\_\_ I understand and agree to adhere to the MLT Laboratory Safety Policy. The policy is discussed and is posted in Blackboard.

\_\_\_\_\_ I have read and understand the Program Progression and Completion policies.

\_\_\_\_\_ I have read the Clinical Site Placement Policy for the Medical Laboratory Technician program.

\_\_\_\_\_ I understand and accept these policies.

Student Name \_\_\_\_\_  
(Please print neatly)

Student Signature \_\_\_\_\_ Date \_\_\_\_\_



