

NORTHWEST FLORIDA STATE COLLEGE



2022 - 2023

A.S. MEDICAL LABORATORY TECHNOLOGY
APPLICATION PACKET

Medical Laboratory Technology Associate in Science Degree Application Information Packet

Contents

General Program Information.....	2
Suggested Course Sequencing	3
Format of the Program	5
Further Educational Opportunities.....	5
Note on Employment.....	6
Program Director Information	6
Application checklist	7
Pre-MLT phase	7
Technical Education Phase.....	7
Final Acceptance Requirements	8
Requirements After Acceptance.....	8
Essential Functions.....	9
MLT Program Selective Registration Process.....	11

General Program Information

MLT Program Mission Statement

The mission of the Medical Laboratory Technology Program at Northwest Florida State College is to provide high quality didactic and clinical instruction in order to prepare students to work as competent medical laboratory technicians in all routine areas of the clinical laboratory. This program qualifies students to apply for a Medical Laboratory Technician License in the state of Florida and to take the national certification examinations (ASCP, AAB, and/or AMT). The program is committed to producing competent, committed, ethical technicians to serve the community of Northwest Florida.

What do Medical Laboratory Technicians do?

Medical Laboratory Technicians work collaboratively with physicians and medical laboratory scientists to perform a wide variety of medical lab tests used to diagnose disease or document normal findings. In the lab, MLTs employ the most sophisticated techniques and use advanced clinical equipment. While hospitals are a common employer of MLTs, diagnostic laboratories, physician offices, forensic laboratories, research labs, blood banks, and veterinary offices are all also possible work environments for a trained MLT.

Program Accreditation Status

Northwest Florida State College is seeking accreditation from the National Accrediting Agency for Clinical Laboratory Science, and Licensure from the Florida Board of Clinical Laboratory Science. Accreditation is required for students to challenge the national licensing board exam.

Program Structure

The Medical Laboratory Technology Program is a six-semester, 3-phase program with a total of 76 credit hours are required for graduation.

Pre-MLT phase (28 credits): The first and second semesters are dedicated to general education courses. These can be completed at any NWFSC campus or transferred in from another accredited institution.

Technical Education phase (33 credits): Includes 8 subject-specific lab classes. These are offered in a hybrid format with both part-time and full-time options. See format section below.

Clinical Education phase (15 credits): Students will complete three clinical practice internships and an online capstone course. Each clinical practicum is 4 credits, equating to 240 hours. Therefore, each student will complete 720 hours of internships over the course of 2 semesters.

Suggested Course Sequencing

Full Time

Semester	Course ID	Course Name	Credits
Pre-MLT Phase			
Fall Semester (Prerequisites)	MAC 1105	College Algebra	3
	ENC 1101	English Composition I	3
	BSC 1085C	Anatomy and Physiology I	4
		Core Social and Behavioral Science*	3
	POS 1041 AMH2020	American Government American History II	
Total			13
Spring Semester (Prerequisites)	CHM 1045C	College Chemistry 1	4
	BSC 1086C, BSC 1010C	Anatomy and Physiology II OR Principles of Biology I	4
		Core Humanities	3
	MCB 2010C	Microbiology	4
	Total		
Technical Education Phase			
1st Semester (Fall)	MLT 1022C	Introduction to Medical Technology	2
	TBD	Phlebotomy	2
	MLT 1300C	Hematology I	4
	MLT 1221C	Medical Microbiology	6
	MLT 1401C	Immunology/Serology	3
	Total		
2nd Semester (Spring)	MLT 1302C	Hematology II	4
	MLT 1610C	Clinical Chemistry	6
	MLT 1525C	Immuno-hematology	4
	MLT 1500C	Urinalysis and Body Fluids	2
	Total		
Clinical Education Phase			
3rd Semester (Summer)	MLT 2800L	Clinical Practicum I	4
	Total		
4th Semester (Fall)	MLT 2930	MLT Capstone (Online)	3
	MLT 2807L	Clinical practicum II	4
	MLT 2811L	Clinical practicum III	4
	Total		
Total Hours			76

*One of these courses must be taken to fulfill the civic literacy requirement

Part Time

Semester	Course ID	Course Name	Credits
Technical Education Phase			
1 st Semester (Fall)	MLT 1022C	Introduction to Medical Technology	2
	TBD MLT 1300C	Phlebotomy Hematology I	2 4
Total			8
2 nd Semester (Spring)	MLT 1302C	Clinical Chemistry	6
	MLT 1500C	Urinalysis and Body Fluids	2
Total			8
3 rd Semester (Fall)	MLT 1221C	Medical Microbiology	6
	MLT 1401C	Immunology/Serology	3
Total			9
4 th Semester (Spring)	MLT 1610C	Hematology II	4
	MLT 1525C	Immunoematology	4
Total			8

Notes on Suggested Course Sequencing:

Phlebotomy can also be taken during the Pre-MLT phase

College Algebra is a prerequisite to College Chemistry I

College Chemistry I is a prerequisite to Clinical Chemistry

College Algebra, College Chemistry I, and A&P I and II must be completed before taking any of the technical classes

Microbiology is a prerequisite to Medical Microbiology

Hematology I is a prerequisite to Hematology II

Immunology and Hematology I are prerequisites to Immunoematology

Priority registration will be given to students who have completed the entire pre-MLT phase

Format of the Program

Hybrid Format

The NWFSC MLT program is a hybrid, or web-blended, program. The technical education classes will be a combination of online lectures and face-to-face labs. Students will view all of their lectures online and then come to class 1 day per week for lab.

Technical Education Phase – Full Time Option

Full time students will complete all 8 technical education courses in 2 semesters. Full-time students will report to lab for 1 full day/week.

Technical Education Phase – Part Time Option

We understand that some students may not be able to take on a full 16 or 17 credit course load in one semester. Therefore, a part-time option is available. Part time students will take 2 classes per semester for 4 semesters and will report to lab either in the morning or the afternoon 1 day/week.

Clinical Education Phase

The clinical education phase requires a more substantial in-person time commitment. Students will be required to commute to clinical sites (which can include travel to several counties in the regional area) and therefore must have dependable transportation. Clinical Practicums require a 5 day/week time commitment. Hours may vary between semesters and clinical sites, but students should plan to work Monday-Friday, 8:00am-5:00pm.

Further Educational Opportunities

The AS degree program is a terminal degree program and is designed to prepare students for immediate entry into the medical laboratory workforce. This degree does transfer into a university or upper division of college through various MLT to MLS programs available throughout the country. Currently, an articulation agreement is being created that will allow transfer of the AS MLT degree from NWFSC into the University of West Florida for application towards a Bachelor's in Medical Laboratory Science. The UWF MLT to MLS program is completely online.

Please consult with the AS MLT Program Director for specific courses that must be included in the bachelor's degree program in order to meet certification requirements at the bachelor's degree level (Medical Technologist/Clinical Laboratory Scientist). Any student planning to pursue upper division coursework in the natural sciences (e.g. BS in Biology, BS in Chemistry) must complete their Associate in Arts degree requirements to be accepted in an upper division. Please be sure to let the program director know if you are including a baccalaureate degree program in your long-range educational goals!

Note on Employment

By Florida law (F.S. 483), students with a trainee license are at no time to be used as substitutes for licensed clinical laboratory personnel nor receive a salary as a trainee. The MLT curriculum is academically demanding. Employment is strongly discouraged during full-time clinical practicals.

Program Director Information

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Director, Medical Laboratory Technology

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Application checklist

See a Student Success Navigator for Advising or Guidance on the Application Process: Call 850-678-5111. We strongly recommend that you do NOT self-advise.

Pre-MLT phase

For students who have not completed all of the Pre-MLT classes

- Apply to NWF State College for an Associate of Science in Medical Laboratory Technology and be admitted as a Pre-MLT student.
- Register and begin required prerequisites (see curriculum 1st year fall and spring semesters) if needed.

Technical Education Phase

College Algebra, College Chemistry I, and Anatomy & Physiology I and II must be completed before applying to take any of the technical classes.

Students may be granted permission by the program director to apply to the technical portion if they are enrolled in prerequisites, in good academic standing, and will complete all requirements by the start of the technical classes. However, students should keep in mind that not completing the prerequisites, particularly the lab courses, before applying may affect their selection point totals. **See selection points system on the last page of this packet.**

- Attend an MLT Program Information Session - dates listed on program website. Five points will be awarded towards the application process for attendance.
- Submit official transcripts from all other postsecondary institutions attended including CLEP, AP, IB transcripts to NWFSC admissions office by the deadline listed on the MLT website. If you are currently taking classes at NWFSC, your transcripts will already be on file.
 - Students must have a grade of a C or higher in each prerequisite course and a cumulative GPA of 2.8 or higher in all required prerequisite courses (students currently enrolled in prerequisite courses can receive conditional acceptance pending confirmation of meeting the requirements).
- Submit all MLT Program Application materials by the date listed on the MLT website including (all forms submitted through the NWFSC application portal):
 - Drug Screen & Criminal Background Check Policy Statement
 - Signed Essential Functions of an MLT Student Form
 - Work Verification Form or military service proof (if applicable)
 - Proof of residency of Okaloosa or Walton County (if applicable)

All eligible applicants are accepted unless the number exceeds the available slots, in which case a points system will be used to select students and alternates. Students will be notified of their conditional acceptance, or placement on an alternate list. If a student declines, the program will notify alternates based on ranking (see points system below). **Letters are sent electronically via**

email to the email indicated on the program application. It is the applicant's responsibility to monitor the email account for official notification of the application status.

Final Acceptance Requirements

- If conditionally accepted: send confirmation of achieving a minimum of 2.8 cumulative GPA in prerequisite courses and a C or better in all prerequisites.

Requirements After Acceptance

In order to participate in the clinical portion of the program, students will be required to meet additional criteria. These requirements will be discussed during the MLT Orientation scheduled prior to the beginning of the term as they must be completed within certain time frames per our clinical affiliates. Completing them too far in advance may mean that students must repeat them to be in compliance. **Do not begin this process until notified by the Program Director or Clinical Education Coordinator.**

Healthcare professionals must keep ALL immunizations current. OSHA requires immunization against Hepatitis B for all individuals in a workplace environment where the potential exposure to blood exists.

Students admitted to the program must have an immunization record on file and a current TB test before they can enter practicum. Hepatitis B vaccinations must be completed before entering Practicum.

1. **ANNUAL FLU SHOT:** Have documentation of annual flu shot administered during the current flu season. If a student chooses not to have the flu shot, a signed declination/waiver form is required.
2. **HEPATITIS B:** Begin the Hepatitis B series. The vaccine for Hepatitis B is highly recommended. There must be documentation of 3 vaccinations or positive antibody titer (lab report required). If a student chooses not to have the vaccine, a signed declination/waiver form is required.
3. **TB TEST:** Complete a 1 Step TB Skin Test or Chest X-ray. There must be documentation of one of the following: a) negative 1 step test in the past 6 weeks; OR b) negative Quantiferon Gold Blood Test (lab report required) in the past 6 weeks. If either test is positive, a clear chest x-ray (with lab report) is required.
4. **TETANUS:** Provide proof of a Tetanus booster within the past 10 years.
5. **VARICELLA (CHICKEN POX):** Provide documentation of one of the following: a) 2 vaccinations; OR b) positive antibody titer (lab reports required).
6. **MEASLES, MUMPS, & RUBELLA (MMR):** Provide documentation of one of the following: a) 2 vaccinations; OR b) positive antibody titers for all 3 components.

7. **COVID-19:** Have documentation of the COVID-19 vaccine. The vaccine is highly recommended. If a student chooses not to have the vaccine, a signed declination/waiver form is required.

Essential Functions

The Medical Lab Program reserves the right to deny admission or require withdrawal of any student who, in the judgment of the department, gives evidence of being unable to perform the responsibilities and tasks required of the medical lab profession. Essential functions (or technical performance standards) represent the essential non-academic requirements of the AS-MLT program that students must master to successfully participate in the program. Requirements include:

1. A sound intellect

COGNITIVE AND INTELLECTUAL STANDARDS

- **THINK CRITICALLY:** To identify and solve problems; identify cause/effect relationships; to apply reading, lecture and laboratory information to case study preparation; to employ effective teaching, learning and test taking strategies.
- **COMPREHEND:** Relevant information regarding patient diagnoses, laboratory testing, indications and contraindications, human pathology and impairments from textbooks, medical records and professional literature.
- **PRIORITIZE:** Events to provide for safety; multiple tasks; integrate information and make decisions about sequence and progression.
- **MAKE CLINICAL DECISIONS:** To respond quickly and appropriately to changes in patient status; to analyze written, observed or verbal data about patients and make decisions to terminate, modify, progress or cancel laboratory tests; act safely and ethically in the lab and clinic.
- **SHORT-TERM AND LONG-TERM MEMORY:** To accurately and quickly remember data from the chart and information relayed in verbal exchanges with the healthcare staff; to access learned knowledge to include but not limited to diagnoses, safety precautions, emergency procedures; to participate successfully in the learning and evaluation of knowledge within the MLT curriculum.
- **THINK QUICKLY AND CLEARLY:** To execute all duties unimpaired by any condition or substance that alters mental processing, speed or quality of thought processes or judgment.

2. Good motor skills, eye-hand coordination and dexterity, and visual acuity to perform macroscopic and microscopic analyses or to read procedures, graphs, etc.

PHYSICAL STANDARDS

- **PHYSICAL, MENTAL, AND EMOTIONAL HEALTH:** Possess the physical, mental, and emotional health to maintain alertness and concentration during an 8-hour day under the stressful conditions of technical malfunctions, time constraints, and a distracting environment; move freely and safely around the laboratory and hospital.
- **HEARING:** Possess normal, or correctable hearing.
- **PHYSICAL:** Possess the ability to: bend, stoop, stand, lift and move objects of at least 20 pounds, grasp with one or both hands, reach laboratory bench tops, shelves, patients lying in bed or seated in a specimen collection chair, **perform moderately taxing repetitive tasks, often requiring prolonged sitting or standing over several hours.**
- **MANUAL DEXTERITY:** Possess sufficient hand-eye motor coordination to allow delicate manipulations of specimens, instruments and tools, grasp and release small objects (specimen tubes, pipette tips, pipettes, reagent vials,

inoculating loops), twist and turn dials/knobs, utilize a computer keyboard and mouse to operate laboratory instruments and verify and transmit data.

- **VISION: Characterize the color, clarity, and viscosity of biological specimens, reagents, or chemical reaction end products. Discriminate color, shading, and fine structural differences of microscopic specimens using a clinical grade binocular microscope, identify and distinguish objects macroscopically, read text, numbers, and graphs both in print and on a video monitor, judge distance and depth accurately.**

3. Effective communication skills

COMMUNICATION STANDARDS

- **SPEAK AND EXPRESS:** Clearly and understandably in the English language; information to peers, faculty, patients, their families and other health care providers; to explain conditions and procedures and teach home programs.
- **READ:** Typed, handwritten, chart data and computer-generated documents in the English language; at a level of competency that allows safe and timely execution of essential tasks or assignments.
- **UNDERSTAND/INTERPRET:** Medical terminology and information given; to follow simple and complex instructions (oral or written) regarding patient care and testing; and respond to non-verbal communication/behaviors of self and others.
- **FOLLOW DIRECTIONS:** Accurately and efficiently, seeking clarification where necessary.
- **WRITE:** To produce legible handwritten or computer word processed documents; use correct medical terminology, spelling, grammar and punctuation; organize and express thoughts in written form in the English language; to prepare accurate, thorough, legally defensible patient documentation.
- **INTERPERSONAL SKILLS:** To work collaboratively; interact professionally; to establish rapport with patients, colleagues and classmates; to resolve conflicts; with individuals from a variety of social, emotional, cultural, and intellectual backgrounds; maintain confidentiality in all interactions.

4. Professional skills such as the ability to work independently, to manage time efficiently, to comprehend, analyze, and synthesize various materials, as well as to hold sound psychological health and stability

BEHAVIORAL/PROFESSIONAL STANDARDS

- **FLEXIBILITY:** To adjust to a constantly changing and very demanding full-time schedule.
- **COOPERATION:** To work as a member of a team; develop positive and effective relationships with faculty, clinicians, peers and patients.
- **RECOGNIZE LIMITATIONS:** To request assistance when needed; accept correction and constructive suggestions; assume responsibility for personal development; utilize resources effectively.
- **WILLINGNESS:** To wear required lab attire; **to participate in lab activities that require phlebotomy and other types of sample collection.**
- **POSITIVE ATTITUDE:** To demonstrate initiative, enthusiasm and appropriate peer and patient interactions.
- **WORK ETHIC:** To attend class and clinic promptly and regularly; to stay focused and on task in lecture and laboratory instructional time; to submit work products promptly when due; to submit to all classroom and clinical rules/policies; to comply with all legal and ethical standards of practice.
- **STRESS MANAGEMENT:** Coping skills for fast-paced clinical situations; to manage multiple academic deadlines; respond appropriately in a stressful environment; manage personal matters outside of class/workday.
- **PLANNING AHEAD:** To arrange transportation and living accommodations for/during off campus clinical assignments to foster timely reporting to the classroom and clinical center.

- **SELF CARE:** To maintain general good health and hygiene in order not to jeopardize the health and safety of self and individuals with whom one interacts in the academic and clinical settings.

Reasonable Accommodation for Disabilities

The Accommodation Resource Center (ARC) at Northwest Florida State College is committed to providing equal access and opportunities for educational success to all students with disabilities as guided by the American Disabilities Act and other disability-related laws. Northwest Florida State College does not discriminate against qualified individuals with disabilities in any of our programs, services, or activities based on Title II of the Americans with Disabilities Act. Students who wish to request reasonable accommodations are encouraged to contact the ARC to start the process for documenting their disability and determining eligibility for services prior to the start of the program.

MLT Program Selective Registration Process

Students may apply to the technical phase of the MLT program once they have **completed all of the required prerequisites with a grade of “C” or better in each, and a total prerequisite GPA of 2.8 or higher**. Students applying must complete all of the required paperwork by the deadline on the MLT website to be considered for acceptance.

Selection Point System: Once all applications have been reviewed, students with completed applications to the MLT program on file and prerequisite coursework completed or in progress will be evaluated for acceptance to continue in the MLT program. **In the event that more students meet the criteria established above for continuation than there are spaces available, a selection process will be used, ranking students by the following factors:**

Item	Points
a. Successfully completed general education courses (grade of C or higher) taken at Northwest Florida State College (points based on number of credits completed for maximum of 5 points) <ol style="list-style-type: none"> 1. 20 or more credits: 5 points 2. 15-19 credits: 4 points 3. 10-14 credits: 3 points 4. 5-9 credits: 2 points 5. 1-4 credits: 1 point 	/5
b. Current Okaloosa or Walton County Residency by application deadline (subject to additional documentation upon request)	/5
c. Current college GPA of 3.0 or above in MLT program pre-MLT coursework	/5
d. Successful completion of A&P I, A&P II or Principles of Bio I, Chemistry I, and Microbiology with a grade of "C" or higher. For each: <ol style="list-style-type: none"> 1. "A": 5 points 2. "B": 3 points (Note: "D" or "F"; ineligible)	/20
e. A current Health Certificate/Licensure: CNA, CMA, EMT, Firefighter EMT, Pharmacy Tech., Paramedic, Phlebotomist, Physical Therapy Assistant, LPN, Radiographer, Respiratory Therapist, RN, or Veterinary Assistant (a copy of the national or state certification must be provided). Points are not given for continuing education courses.	/5
f. Attended NWFSC MLT program information session	/5
g. Military service with honorable discharge: proof of military service via DD Form 22, 22a, 256, 214, or 215	/5
Total Score	/50