

# MEDICAL LABORATORY TECHNOLOGY, CAREER ASSOCIATE OF SCIENCE

## Health Science Division

### Recommended Courses for Career Associate of Science Degree Programs

The Medical Laboratory Technology (MLT) program prepares graduates to practice as a laboratory technician in hospitals, clinics, physician offices, and other health care facilities. Graduates are eligible to sit for national certifying exams. The program is accredited by

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)  
5600 North River Road  
Suite 720  
Rosemont, IL 60018-5119

(847) 939-3597, (773) 714-8880, FAX (773) 714-8886, [www.naacls.org](http://www.naacls.org).  
(<http://www.naacls.org/>)

## Additional Requirements

- A minimum grade of "C" is required in each MLT professional course.
- A physical examination, including proof of MMR x 2, HBV x 3, Varicella x 2 immunizations (or titers to prove immunity) are required. A current flu vaccine, PPD, and other immunizations may be required prior to entry into clinical practicum courses.
- Students must satisfy admission requirements to Albany State University.
- Liability insurance is required upon enrollment in **any** MLT technical course.
- To satisfactorily complete the curriculum and to develop the skills required of an entry level medical laboratory technician, the student must have:
  - Visual acuity** (with or without corrective lenses) sufficient to differentiate colors used as reaction indicators; to observe the patient during phlebotomy procedure; to differentiate and identify specimens utilizing microscopic examination; to read laboratory manuals, procedure, policies, specimen labels, test requisitions and other materials pertinent to professional practice;
  - Physical ability** to manipulate clinical laboratory instruments and equipment in a manner consistent with operational procedures;
  - Manual dexterity** to perform venipuncture procedures and to operate hand held medical laboratory equipment and tools in a manner consistent with operational guidelines.

## MLT Re-Admission Criteria

Students who do not progress in MLT Program courses as outlined by the curriculum guide may continue in the program under the following conditions:

- They meet Albany State University admission criteria.
- They meet MLT Program admission criteria.
- They do not have more than one "D" or "F" in MLT program courses.

- Course enrollment will be permitted on a space-available basis and only if prerequisites are met.
- Students absent from the program for a period exceeding one semester will be required to demonstrate prior course competency by exam or repeat course for credit.
- Students with two unsuccessful attempts in program courses are ineligible for program readmission. Withdrawing from an MLTS course is considered an unsuccessful attempt. A course grade of "D" or "F" is considered an unsuccessful attempt.

## Additional Costs

Students in the Medical Laboratory Technology Program are responsible for the following **approximated** expenses in addition to books, tuition and fees:

Item	Cost
Liability Insurance	\$18.00
Uniforms/lab coat/ID badges	\$115.00
Laboratory Supplies (Gloves, masks, face shields, scissors, pens, and markers)	\$50.00
Specified immunizations	\$200.00
MLT Certification (ASCP)	\$215.00
Background Check	\$50.00
	\$648.00

NOTE: In addition to the above fees, students may be required to have a drug screen prior to clinical placement in externships. Fees may vary by affiliate and are generally less than \$100. Affiliates that require ACEMAPP membership will also be an additional \$50 fee for the student.

## Clinical Assignments

The ASU MLT Program has clinical affiliations with many hospitals and clinics in Southwest Georgia, as well as other states. Clinical assignments are made by the program faculty with approved affiliates only. Students must be prepared to travel to their clinical training facility.

### Program Application Required

Semester	Application Deadline
Fall*	June 1st

\* Based on space availability

## Administrative Withdrawals

Students may be withdrawn from the program and/or from a clinical affiliate for lack of competence; if determined to pose a threat to the health or safety of others; for failure to comply with the ASU Code of Conduct or for failure to comply with the policies of a clinical affiliate.

## Drug Screen and Criminal Background Checks

Students may be subject to drug screens and criminal background checks as a requirement for participating in program activities. Students

are also subject to drug screens requested at random or for probable cause.

Students may be prevented from participating in program activities until results are provided and they are approved for return to program activities.

Background checks, drug screens, and immunizations are the student's responsibility for expenses.

## MLT Admissions Criteria

- Applicants must have completed required Learning Support courses.
- Applicants must successfully complete the required prerequisite courses as published in the Program of Study curriculum guide.
- Applicants must have a minimum overall college GPA of 2.5. Preference in program participation may be given to students with the highest GPA.
- Students with two unsuccessful attempts in MLT program courses at ASU or any other institution are not eligible for admission to ASU MLT Program.

Note: Unsuccessful attempts include D's, F's, and course withdrawals.

## Course requirements prior to program admission

Code	Title	Semester Hours
ENGL 1101	English Composition I	3
BIOL 2411K	Human Anatomy and Physiology I	4
POLS 1101	American Government	3
COMM 1110	Public Speaking	3
MATH 1111	College Algebra	3
BIOL 2211K	Introduction to Microbiology <sup>1</sup>	4

## Program requirements after admission to program

Course	Title	Semester Hours
<b>Freshman Year</b>		
<b>Fall</b>		
<b>Courses required for entry into the program (listed above)</b>		<b>20</b>
MLTS 1160W	Medical Laboratory Technology I (Hematology)	3
MLTS 1160L	Medical Laboratory Technology I Lab (Hematology)	1
BIOL 2412K	Human Anatomy and Physiology II	4
CHEM 1211K	Principles of Chemistry I <sup>2</sup>	4
<b>Semester Hours</b>		<b>32</b>
<b>Spring</b>		
MLTS 1161W	Medical Laboratory Technology II (Blood Bank)	3
MLTS 1161L	Medical Laboratory Technology II Lab (Blood Bank)	1
MLTS 2010W	Medical Laboratory Technology III (Microbiology)	2
MLTS 2010L	Medical Laboratory Technology III Lab (Microbiology)	2

CHEM 1212K	Principles of Chemistry II <sup>2</sup>	4
<b>Semester Hours</b>		<b>12</b>
<b>Summer</b>		
MLTS 2020W	Medical Laboratory Technology IV (Chemistry)	3
MLTS 2020L	Medical Lab Technology IV Lab (Chemistry)	1
MLTS 1182	Parasitology, Mycology, and Virology	3
Humanities requirement may be met by taking any Area C: Humanities/Fine Arts courses listed on the Core Curriculum page (see below for footnote) <sup>3</sup>		3
<b>Semester Hours</b>		<b>10</b>
<b>Sophomore Year</b>		
<b>Fall</b>		
MLTS 2630	Medical Laboratory Technology Externship	15
MLTS 2670	Seminars in Medical Laboratory Science	1
<b>Semester Hours</b>		<b>16</b>
<b>Total Semester Hours</b>		<b>70</b>

Online participants must provide their own clinical support and be approved by the Program Director prior to MLT program entry.

NOTE: MLT lab courses (MLTS 1160L, MLTS 1161L, MLTS 2010L and MLTS 2020L) are scheduled at Albany State University. Other approved clinical affiliate locations will be considered.

**Depending on your enrollment status, you may be required to take ASU 1101, "First Year Experience."**

- <sup>1</sup> BIOL 2211K must be completed by fall semester to meet prerequisites for MLTS 2010W and MLTS 2010L.
- <sup>2</sup> CHEM 1211K and CHEM 1212K must be completed by the end of spring semester to meet summer prerequisites for MLTS 2020W and MLTS 2020L.
- <sup>3</sup> Humanities requirement may be met by taking any Area C: Humanities/ Fine Arts courses listed on the Core Curriculum page (<http://catalog.asurams.edu/undergraduate/core-curriculum/#healthtext>).

### MLTS 1160L. Medical Laboratory Technology I Lab (Hematology). (1 Credit)

The laboratory component of the course is utilized to develop skills and competencies required to perform laboratory analysis of blood and body fluids. Corequisite: MLTS 1160W. Offered: Fall, online and traditional options.

### MLTS 1160W. Medical Laboratory Technology I (Hematology). (3 Credits)

An in-depth study of the sciences of hematology and body fluids analysis. It deals with the morphology of blood and blood-forming tissues, the principles of blood sample collections, and the composition and function of multiple body fluids. Physiology and pathology are emphasized. Corequisite: MLTS 1160L. Offered: Fall, online only.

### MLTS 1161L. Medical Laboratory Technology II Lab (Blood Bank). (1 Credit)

The laboratory component of the course is utilized to develop skills and competencies required to perform blood banking procedures and to maintain procedures for the efficient operation of a blood bank. Corequisite: MLTS 1161W. Offered: Spring, online only.

**MLTS 1161W. Medical Laboratory Technology II (Blood Bank). (3 Credits)**

This course provides an introduction to the principles of immunology and provides the student with a concise and thorough guide to transfusion practices and immunohematology. Corequisite: MLTS 1161L. Offered: Spring or Fall if approved by program director, online only.

**MLTS 1182. Parasitology, Mycology, and Virology. (3 Credits)**

A course in clinical parasitology, mycology, and virology covers human fungal, parasitic and viral infections. The course presents mechanisms of infection, life cycles, and infectious states of the organisms as well as disease progression within the host and the practical application of laboratory procedures for detection and identification. Also included is safety, specimen collection, preservation, transport, methods of identification and therapy. Prerequisites: BIOL 2211K. Offered: Summer, online only.

**MLTS 1300. Introduction to Histology. (3 Credits)**

This course emphasizes the introductory study of basic histology. Structure and identification of tissue systems and organs is emphasized at the cellular level. The laboratory component is structured to enhance the student's knowledge of certain histological preparations of human and veterinary tissue. Identification of images is achieved through virtual microscopy. Offered: Fall, Spring.

**MLTS 1310L. Histology I Lab. (1 Credit)**

The course is a laboratory component complementary to MLTS 1310W. It is utilized to develop entry level skills required to perform non-staining histological procedures. Corequisite: MLTS 1310W. Offered: Fall, Spring.

**MLTS 1310W. Histology I. (3 Credits)**

This course emphasizes some of the competencies required to perform routine histological procedures. These would include tissue fixation, principles and application of microtomy, embedding techniques, laboratory operations, decalcification, solution preparation, and processing. Corequisite: MLTS 1310L. Offered: Fall, Spring.

**MLTS 1320L. Histology II Lab. (1 Credit)**

The laboratory component of the course is utilized to develop skills required to perform routine and special stains. Students will identify and provide clinical correlation of routine and special stains. Corequisite: MLTS 1320W. Offered: Fall, Spring.

**MLTS 1320W. Histology II. (2 Credits)**

This course emphasizes the fundamentals and clinical significance of routine and special histological staining procedures. The student will differentiate between different classes of special stains performed in a histology laboratory. Corequisite: MLTS 1320L. Offered: Fall and Spring.

**MLTS 1330. Histology III. (1 Credit)**

Students practice histotechnology procedures in a supervised histology lab setting. The laboratory component of the course is utilized to develop skills and competencies required to perform routine and special histology procedures. Offered: Fall, Spring.

**MLTS 1340. Clinical Histology Externship. (5 Credits)**

This course is the practicum designed to enhance and refine techniques taught in the first semester. Students are required to complete at least 300 clinical hours in an approved affiliate histology laboratory. Orientation to department and institutional policies and procedures is required. Prerequisites: MLTS 1300, MLTS 1310L, MLTS 1310W, MLTS 1320L, MLTS 1320W, MLTS 1330. Offered: Spring, Fall.

**MLTS 1350. Histology V. (2 Credits)**

A study of immunohistochemistry procedures and interpretations. Prerequisites: MLTS 1300, MLTS 1310L, MLTS 1310W, MLTS 1320L, MLTS 1320W, MLTS 1330. Offered: Spring, Summer.

**MLTS 1360. Histology VI. (1 Credit)**

Various professional topics are presented for discussion including board exam reviews, professionalism, laboratory information systems, and management principles. Prerequisites: MLTS 1300, MLTS 1310L, MLTS 1310W, MLTS 1320L, MLTS 1320W, MLTS 1330. Offered: Spring, Summer.

**MLTS 2010L. Medical Laboratory Technology III Lab (Microbiology). (2 Credits)**

The laboratory component of the course develops the skills and competencies required to perform the diagnostic procedures in clinical microbiology. Prerequisite: BIOL 2211K. Corequisite: MLTS 2010W. Offered: Spring; online and traditional options.

**MLTS 2010W. Medical Laboratory Technology III (Microbiology). (2 Credits)**

This course presents a study of human clinical bacteriology including general bacteriology, aerobic gram-positive cocci, gram-negative bacilli, gram-negative cocci, gram-positive bacilli and anaerobes. Discussion is centered on the cultivation, methods of identification, antimicrobial susceptibility testing, serological diagnosis and correlation to disease states. Prerequisites: BIOL 2211K. Corequisite: MLTS 2010L. Offered: Spring or Fall if approved by program director; online only.

**MLTS 2020L. Medical Lab Technology IV Lab (Chemistry). (1 Credit)**

The laboratory component is used to develop the skills and competencies required to operate and standardize the instruments utilized in the performance of chemical tests. The use of quality control is emphasized. Corequisite: MLTS 2020W. Offered: Summer; online and traditional options.

**MLTS 2020W. Medical Laboratory Technology IV (Chemistry). (3 Credits)**

An in-depth study of analytical techniques utilized to measure the biochemical entities of blood and various body fluids. The correlation of test results to human physiology and pathology is emphasized. Prerequisite: CHEM 1212K. Corequisite: MLTS 2020L. Offered: Summer or Fall if approved by program director, online only.

**MLTS 2630. Medical Laboratory Technology Externship. (15 Credits)**

Students are introduced to the clinical laboratory in an affiliate clinical laboratory setting. The students receive an orientation to each department and an introduction to hospital policies and procedures. Each student rotates through appropriate departments and is allowed to demonstrate and develop their skills and competencies in blood bank, hematology, microbiology, chemistry, phlebotomy and body fluid analysis under the supervision of the laboratory staff instructor. Prerequisites: MLTS 1160W, MLTS 1160L, MLTS 1161W, MLTS 1161L, MLTS 1182, MLTS 2010W, MLTS 2010L, MLTS 2020W, MLTS 2020L. Corequisite: MLTS 2670. Offered: Fall.

**MLTS 2670. Seminars in Medical Laboratory Science. (1 Credit)**

Seminar presentations on various topics related to medical laboratory science (topic reviews for board exams, professionalism, laboratory information systems, case presentations and/or other). Prerequisites: : MLTS 1160W, MLTS 1160L, MLTS 1161W, MLTS 1161L, MLTS 1182, MLTS 2010W, MLTS 2010L, MLTS 2020W, MLTS 2020L. Offered: Fall; online option only.