Associate of Science in Medical Laboratory Technology (MLT) Curriculum (71 credits)

General Education Requirements (37 credits)

Communications (6 credits)
ENGL 101 Comp I: Exposition 3cr
ENGL 102 Comp II: Analysis & Argument OR
CJ 221 Interpersonal Communication 3cr

Fine Arts/Humanities (3 credits)
For required courses, refer to the UNM Core Curriculum

Mathematics/Physical and Natural Sciences (11 credits)
Choose from STAT 145, MATH 150 or MATH 121 3cr
CHEM 121/123L or CHEM 111/111L or CHEM 122/124L 4cr
CHEM 212 4cr

Biology (8 credits)
BIOL 136/139L or BIOL 237/227L 4cr
BIOL 200 or BIOL 238/237L 4cr

Social and Behavioral Sciences (6 credits)
For required courses, refer to the UNM Core Curriculum

Health/Physical Education (2 credits)
For required courses, refer to the UNM Core Curriculum

Health Sciences (1 credit)
HCHS 101 Phlebotomy 1cr

Medical Laboratory Technology Core (34 Credits):
MLT 111 Intro to Basic Laboratory Skills, Urinalysis and Body Fluids 4cr
MLT 112 Clinical Practicum: Phlebotomy 1cr
MLT 211 Clinical Hematology & Coagulation 4cr
MLT 214 Clinical Microbiology 5cr
MLT 216 Clinical Chemistry 4cr
MLT 219 Immunohematology and Serology 4cr
MLT 271 Directed Clinical Practicum I 4cr
MLT 281 Directed Clinical Practicum II 6cr
MLT 291 Preparation for MLT Board Exam 2cr
Suggested Course Sequence

The following is the recommended course sequence for full-time students who met the prerequisites for the required courses. Part-time students should see the MLT program coordinator to customize their educational plan.

Term 1 (13cr)
ENGL 101 3cr
MATH 121 3cr
BIOL 136/139L or 237/227L 4cr
Behavioral/Social Sciences course 3cr

Term 2 (12cr)
ENGL 102 or CJ 221 3cr
CHEM 121/123L or 111/111L or 122/124L 4cr
BIOL 200 or BIOL 238/237L 4cr
HCHS 101 1cr

Term 3 (12cr)
CHEM 212 4cr
Behavioral/Social Sciences course 3cr
Fine Arts/Humanities course 3cr
Health/Physical Education 2cr

Term 4 (13cr)
MLT 111 Intro to Basic Laboratory Skills, Urinalysis and Body Fluids 4cr
MLT 214 Clinical Microbiology 5cr
MLT 216 Clinical Chemistry 4cr

Term 5 (8cr)
MLT 211 Clinical Hematology & Coagulation 4cr
MLT 219 Immunohematology and Serology 4cr

Term 6 Capstone Courses (13cr)
MLT 112 Clinical Practicum: Phlebotomy 1cr
MLT 271 Directed Clinical Practicum I 4cr
MLT 281 Directed Clinical Practicum II 6cr
MLT 291 Preparation for MLT Board Exam 2cr

Notes:

1. English, Math, Chemistry and Biology courses must be taken in sequence. Please note that there may be prerequisites to these courses that are not part of the MLT curriculum.
2. Interested students MUST apply to the MLT Program. General education prerequisite courses must be completed prior to admission. A grade of C or better is required in all courses. Deadline for submission of application to the MLT Program is June 1st for fall admissions and October 1st for spring admissions. Students are admitted each regular semester based on selection criteria. Class size is limited to twelve. Priority is given to continuing students who are in good academic standing. Students are required to complete all professional coursework within a five-year time period.
Course Descriptions (MLT Core Courses)

MLT 111 Introduction to Basic Laboratory Skills, Urinalysis, and Body Fluids (4)

An introduction to the profession of medical diagnostic testing and the clinical laboratory. Content areas consist of: general laboratory safety, laboratory mathematics, general instrumentation, use of the microscope, urinalysis, and body fluids. Pre/co-requisites: ENGL 101, MATH 121, CHEM 121/123L or 111/111L or 122/124L, CHEM 212, BIOL 136/139L or 237/227L, BIOL 200 or BIOL 238/237L or consent of the instructor. Prerequisite Validation: English and Mathematics competency are essential for the student to master the MLT core curriculum and progress toward the Associate of Science Degree.

MLT 112 Clinical Practicum: Phlebotomy (1)

Supervised clinical practice in the clinical pathology department of affiliated hospitals. Field laboratory experience in blood sample collection and processing that includes both venipuncture and capillary puncture techniques. Pre/co-requisites: HCHS 101 and MLT 111 or permission of instructor.

MLT 211 Clinical Hematology and Coagulation (4)

Introduction to the theory and practice of clinical hematology. The course includes: erythropoiesis, leukopoiesis, cell enumeration, the hemogram, white blood cell morphology, differentials, coagulation testing, platelets, routine manual and automated methods, and correlation with pathologies. Pre/co-requisites: BIOL 136/139L or 237/227L, BIOL 200 or BIOL 238/237L, CHEM 121/123L or 111/111L or 122/124L, CHEM 212, MLT 111 or consent of instructor.

MLT 214 Clinical Microbiology (5)

Comprehensive current clinical study of bacteriology, mycology, and parasitology; macroscopic and microscopic identification; biochemical identification profiles; bacterial antibiotic susceptibility patterns; parasitic life cycles; pathology and epidemiology; introduction to rickettsia and viruses. Pre/co-requisites: BIOL 136/139L or 237/227L, BIOL 200 or BIOL 238/237L, CHEM 121/123L or 111/111L or 122/124L, CHEM 212, MLT 111 or consent of instructor.

MLT 216 Clinical Chemistry (4)

Theory, principles and procedures applicable to clinical chemistry. Focus on chemical analysis of blood and other body fluids using manual and automated techniques. Application to tests in the diagnosis of disease with review of abnormal physiology. Pre/co-requisites: BIOL 136/139L or 237/227L, BIOL 200
or BIOL 238/237L, CHEM 121/123L or 111/111L or 122/124L, CHEM 212, MLT 111 or consent of instructor.

**MLT 219 Immunohematology and Serology (4)**

Principles, procedures, and pathology for serology. Routine and advanced test procedures to identify and enumerate antibodies. Principles and procedures in Blood Banking. Introduction to genetics. Processing blood components for compatibility testing. Regulation dictated by AABB and FDA. Pre-/co-requisites: BIOL 136/139L or 237/227L, BIOL 200 or BIOL 238/237L, CHEM 121/123L or 111/111L or 122/124L, CHEM 212, MLT 111 or consent of instructor.

**MLT 271 Directed Clinical Practicum I (4)**

Supervised clinical practice in the clinical pathology department of affiliated hospitals. Field laboratory experience includes rotations through urinalysis, hematology, and chemistry. Prerequisites: MLT 111, MLT 211, MLT 216.

**MLT 281 Directed Clinical Practicum II (6)**

Continuation of MLT 271. Supervised clinical practice in the clinical pathology department of affiliated hospitals. Field laboratory experience includes rotations through blood bank, microbiology, advanced hematology, and serology. Prerequisites: MLT 111, MLT 211, MLT 214, MLT 219.

**MLT 291 Preparation for MLT Board Examinations (2)**

Designed to integrate theory with MLT directed clinical practicum. A comprehensive and current review supplemented by reading assignments and questions on the following subjects: sample collection, hematology and coagulations, chemistry, microbiology, blood banking, serology, urinalysis, and calculations. Pre-/co- requisites: Students must have completed MLT 111, 112, 211, 214, 216, 219 and be concurrently enrolled in MLT 271 and MLT 281.