

# MEDICAL LABORATORY TECHNOLOGY (MLT)

## MLT 1501 Introduction to the Medical Laboratory Profession 2 s.h.

Overview of the medical laboratory profession, ethics, responsibilities and clinical relevance of laboratory procedures.

**Prereq.:** Level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505. h.

**Coreq.:** h.

## MLT 1501L Introduction to the Medical Laboratory Profession Laboratory 1 s.h.

Phlebotomy, specimen collection and processing; basic medical laboratory exercises. Three hours lab per week. Concurrent with: MLT 1501.

**Prereq.:** MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.

## MLT 1502 Urinalysis and Body Fluids 2 s.h.

Theory and techniques in the analysis of urine and body fluids. Concurrent with: MLT 1502L.

**Prereq.:** MLT 1501, MLT 1501L, BIOL 2601.

## MLT 1502L Urinalysis and Body Fluids Laboratory 1 s.h.

Chemical and microscopic analysis of urine. Concurrent with: MLT 1502. Three hours lab per week.

**Prereq.:** MLT 1501, MLT 1501L, BIOL 2601.

## MLT 1503 Immunohematology 3 s.h.

Fundamental theories and techniques of immunohematology and blood banking; genetic theories, problem solving, and case studies. Three hours of lecture per week.

**Prereq.:** MLT 1501.

**Prereq. or Coreq.:** BIOL 2601.

**Coreq.:** MLT 1503L.

**Cross-Listed:** MLS 1503.

## MLT 1503L Immunohematology Laboratory 1 s.h.

ABO and RH typing, direct and indirect antiglobulin testing, compatibility testing. Three hours lab per week. **Coreq.:** MLT 1503.1 s.h.

**Prereq.:** MLT 1501, MLT 1501L, BIOL 2601.

**Cross-Listed:** MLS 1503L.

## MLT 2601 Clinical Chemistry 1 2 s.h.

This course provides an introduction to the principles, procedures, and significance of tests performed in the clinical chemistry laboratory. Theory and principles of test methodologies are discussed and data are correlated to physiological processes.

**Prereq.:** MLT 1501, MLT 1501L, CHEM 1510/L.

**Coreq.:** MLT 2601L.

**Cross-Listed:** MLS 2601.

## MLT 2601L Clinical Chemistry 1 Laboratory 1 s.h.

Application of the procedures and techniques utilized in the clinical chemistry laboratory. 3 hours of lab per week.

**Prereq.:** MLT 1501, MLT 1501L, CHEM 1510/L.

**Coreq.:** MLT 2601.

## MLT 2603 Immunohematology Laboratory 2 1 s.h.

Clinical Laboratory theory and application of Immunohematology procedures. Three hours laboratory per week.

**Prereq.:** MLT 1502/L and MLT 1503/L with a minimal grade of "C".

## MLT 2603L Advanced Immunohematology Laboratory 1 s.h.

Application of advanced theories in Immunohematology. Three hours of laboratory per week.

**Prereq.:** MLT 1502 and 1502L with a "C" or better.

**Cross-Listed:** MLS 2603L.

## MLT 2605 Molecular Diagnostics 2 s.h.

This course focuses on the newest medical laboratory discipline known as molecular diagnostics. The content will include principles of molecular biology (nucleic acid) tools and their application to aid in identification, diagnosis, and prognosis of conditions and disease states.

**Prereq.:** BIOL 2601/L.

**Cross-Listed:** MLS 2605.

## MLT 3700 Clinical Chemistry 2 4 s.h.

This course will explore the principles and procedures of routine clinical chemistry analysis, including correlation of test results with pathophysiology, testing criteria and variables that impact accuracy. **Cross-Listed:** MLS 3700.

## MLT 3701 Clinical Hematology 1 2 s.h.

Hematopoiesis; theory and laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Two hours of lecture per week.

**Prereq.:** MLT 1501, MLT 1501L, BIOL 2601 with a minimal grade of "C".

## MLT 3701L Clinical Hematology 1 Laboratory 1 s.h.

Laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Three hours of laboratory per week.

**Prereq.:** MLT 1501, MLT 1501L, BIOL 2601 with a minimal grade of "C".

**Coreq.:** MLT 3701.

## MLT 3702 Clinical Hematology 2 2 s.h.

Advanced theory and laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Two hours of lecture week.

**Prereq.:** MLT 3701, MLT 3701L with a minimal grade of "C".

## MLT 3702L Clinical Hematology 2 Laboratory 1 s.h.

Laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Three hours of laboratory per week.

**Prereq.:** MLT 3701, MLT 3701L with a minimal grade of "C".

**Coreq.:** MLT 3702.

## MLT 3704 Clinical Immunology and Serology 3 s.h.

A study of the diagnostic applications of immunology and methods of serological testing. The immunology and diagnosis of infectious disease, autoimmunity, immunodeficiency, and immunoproliferative disease will be discussed.

**Coreq.:** MLT 3704L.

**Cross-Listed:** MLS 3704.

## MLT 3704L Clinical Immunology/Serology Laboratory 1 s.h.

The immunology and diagnosis of infectious disease, autoimmunity, immunodeficiency, and immunoproliferative disease will be discussed. 2 hours of lab per week.

**Coreq.:** MLT 3704.

**Cross-Listed:** MLS 3704L.

## MLT 3706 Medical Laboratory Seminar 3 s.h.

Internship evaluation, special topics in the clinical laboratory. Case studies and interpretation of laboratory results.

**Prereq.:** Acceptance into 3716 or instructor permission.

**Coreq.:** MLT 3716.

## MLT 3716 Clinical Internship 6 s.h.

Students will be placed at clinical sites for 40 hours per week for 7 weeks during the semester.

**Prereq.:** Permission of instructor.

**Coreq.:** MLT 3706 and MLT 3717.

## MLT 3717 Clinical Microbiology Interpretation 1 s.h.

A study of the diagnostic procedures and interpretation of microbiological cultures relevant to the clinical laboratory.

**Prereq.:** Instructor Permission.

**Coreq.:** 3716 and 3706.

**MLT 3787 Diagnostic Microbiology 3 s.h.**

Clinical applications of human pathogenic microorganisms; infections, frequency, isolation, identification, and treatment of bacteria, fungi, viruses, and parasites. Case studies, problem solving, and quality assurance in clinical microbiology. Three hours lecture per week.

**Prereq.:** MLT 1501/L.

**Coreq.:** MLT 3787L.

**MLT 3787L Diagnostic Microbiology Laboratory 2 s.h.**

A clinical approach to the study of bacteria, fungi, viruses, and parasites. Methods to isolate and identify clinically significant pathogens from clinical specimens; case studies in clinical microbiology. Six hours lab per week. Identical with BIOL 3787L, MLS 3787L.

**Prereq.:** MLT 1501/L.

**Coreq.:** MLT 3787.