

2018-2019 TTC Catalog - Medical Laboratory Technology (MLT)

MLT 102 - Medical Lab Fundamentals

Lec: 2.0 **Lab:** 3.0 **Credit:** 3.0

This course introduces basic concepts and procedures in medical laboratory technology.

Prerequisite

AHS 142

and

BIO 112

and

CHM 110

and

ENG 101

and

MAT 110

Health examination, major medical insurance, Hepatitis B vaccine series, current CPR certification, SLED check

Grade Type: Letter Grade

Restrictions: Restricted to MLT majors

Division: Health Sciences

MLT 103 - Introductory Topics in Medical Microbiology

Lec: 4.0 **Lab:** 0 **Credit:** 4.0

This course introduces the medical microbiology lab including basic anatomy and physiology of microorganisms, specimen collection, quality assurance, infection control, bioterrorism/pandemics, and a survey of key microorganisms including bacteria, parasites, mycotic agents, viruses, and prions.

Prerequisite

MLT 102

Grade Type: Letter Grade

Division: Health Sciences

MLT 106 - Urinalysis and Body Fluids

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course is an introduction to the theoretical components of the analysis of urine and body fluids.

Prerequisite

MLT 102

Grade Type: Letter Grade

Division: Health Sciences

MLT 107 - Clinical Experience in Urinalysis and Body Fluids

Lec: 0 **Lab:** 3.0 **Credit:** 1.0

This course provides a clinically-based rotation which correlates cognitive and technical skills in urinalysis and body fluid analysis for the MLT student.

Prerequisite

MLT 102

and

MLT 106

Grade Type: Letter Grade

Division: Health Sciences

MLT 109 - Hematology I

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course provides a study of the basic principles of hematology including terminology; cell basics and hematopoiesis. Additional topics include automated, manual, and molecular techniques used in diagnosis and treatment.

Corequisite

MLT 102

Grade Type: Letter Grade

Division: Health Sciences

MLT 111 - Hematology II

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course provides a study of the basic principles of hematology including terminology; red blood cell (RBC) function; RBC morphology and inclusions; hemoglobinopathies and other RBC defects, plus automated, manual, and molecular techniques used in diagnosis and treatment of erythropoietic problems.

Prerequisite

MLT 109

Grade Type: Letter Grade

Division: Health Sciences

MLT 115 - Immunology

Lec: 2.0 **Lab:** 3.0 **Credit:** 3.0

This course provides a study of the immune system, disease states and the basic principles of immunological testing.

Prerequisite

MLT 102

and

MLT 111

Grade Type: Letter Grade

Division: Health Sciences

MLT 120 - Immunohematology

Lec: 3.0 **Lab:** 3.0 **Credit:** 4.0

This course introduces the theory and practice of blood banking, including the ABO, Rh and other blood group systems; compatibility testing; and hemolytic disease of the newborn.

Prerequisite

MLT 102

and

MLT 115

and

MLT 111

Grade Type: Letter Grade

Division: Health Sciences

MLT 131 - Clinical Chemistry

Lec: 3.0 **Lab:** 0 **Credit:** 3.0

This course provides a study of the chemical elements in human blood and body fluids and their relationship to organ system function. Testing methods, interferences, quality control and clinical correlations will be emphasized.

Prerequisite

MLT 102

and

MLT 219

Grade Type: Letter Grade

Division: Health Sciences

MLT 151 - Clinical Experience in Phlebotomy

Lec: 0.5 **Lab:** 1.5 **Credit:** 1.0

This course provides a clinically based rotation which correlates cognitive and technical skills in phlebotomy for the MLT student.

Prerequisite

AHS 142

and

MLT 102

and

MLT 107

and

MLT 109

and

MLT 111

Grade Type: Letter Grade

Division: Health Sciences

MLT 206 - Advanced Microbiology I

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course provides a study of gram positive cocci, gram negative cocci, gram positive bacilli, fastidious gram negative bacilli, spirochetes and mycoplasma, including currently accepted procedures for identification and susceptibility testing of these microorganisms in the clinical laboratory.

Prerequisite

MLT 103

Grade Type: Letter Grade

Division: Health Sciences

MLT 207 - Advanced Microbiology II

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course is a study of gram negative bacilli, obligate anaerobes, viruses, mycobacteria and fungi, including currently accepted procedures for identification of these microorganisms in the clinical laboratory, and an overview of specific disease processes associated with microorganisms.

Prerequisite

MLT 206

Grade Type: Letter Grade

Division: Health Sciences

MLT 211 - Advanced Hematology I

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course provides a study of the basic principles of hemostasis including terminology; automated, manual and molecular techniques used in diagnosis and treatment of hemostatic problems; and discussions of normal and abnormal hemostatic function. Discussions of normal leukopoietic function, benign leukopoietic diseases, and the techniques used in diagnosis and treatment of benign leukopoietic diseases will be included.

Prerequisite

MLT 111

Grade Type: Letter Grade

Division: Health Sciences

MLT 212 - Advanced Hematology II

Lec: 1.5 **Lab:** 1.5 **Credit:** 2.0

This course provides a study of the basic principles of hematology including terminology; automated, manual and molecular techniques used in diagnosis and treatment of leukopoietic problems; leukocyte function; leukocyte morphology and inclusions, and other leukocyte defects.

Prerequisite

MLT 211

Grade Type: Letter Grade

Division: Health Sciences

MLT 219 - Clinical Instrumentation

Lec: 2.0 **Lab:** 3.0 **Credit:** 3.0

This course provides the theory and application of clinical laboratory instrumentation, including calibration, operation and maintenance.

Prerequisite

MLT 102

Grade Type: Letter Grade

Division: Health Sciences

MLT 270 - Clinical Applications

Lec: 2.0 **Lab:** 30.0 **Credit:** 12.0

This course provides sequential practical experience in selected areas of a supervised clinical setting.

Prerequisite

MLT 107

and

MLT 103

and

MLT 120

and

MLT 131

and

MLT 207

and

MLT 212

Grade Type: Letter Grade

Division: Health Sciences
