

MEDICAL LABORATORY TECHNOLOGY (MLT)

MLT 1040 Laboratory Specimens and Microscopy

Credit Hours: 3

This course is designed to explore basic procedures for obtaining laboratory specimens. Laboratory safety, quality control, laboratory math and basic lab testing, and microscopy of urine and body fluid specimens will be emphasized.

MLT 1300 Hematology

Credit Hours: 3

Prerequisites: Admission into the MLT Program

This course introduces the student to blood components and laboratory tests for normal and pathological hematology. Emphasis is placed on evaluations of anemias, leukemias, and abnormal hemoglobin levels. Bone marrow and body fluid analysis will also be discussed.

MLT 1500 Immunology/Serology

Credit Hours: 3

Corequisites: MLTL 1500

This course is designed to instruct in theory on principles of immunology and serological procedures including the action of antigens, formation of antibodies, types of immunity, and the methods of immunization involved in the prevention of disease.

MLT 1525 Immunoematology

Credit Hours: 3

Prerequisites: Admission into the MLT Program

Corequisites: MLTL 1525

This course explores the body's immune response as it relates to the area of immunoematology. The student will develop an understanding of the relationship between serology and the immune response. Blood banking principles, including the genetics of blood group inheritance, transfusion, antibody identification, cord and emergency blood use, and hemolytic diseases of the newborn will be discussed. Quality control in blood banking and immunoematology will be emphasized.

MLT 1610 Clinical Chemistry

Credit Hours: 4

Prerequisites: CHM 1045, CHML 1045, CHM 1046, CHML 1046 with grade of "C" or higher

This course explores principles of biochemical reactions used for diagnostic evaluation of human physiology and organ systems. Procedures for quantification of electrolytes, blood gases, proteins, carbohydrates, hormones, lipids, enzymes and drugs and their medical implications in health and disease will be explored. Case-based instructional activities will be incorporated into the lecture sessions.

MLT 2401 Medical Microbiology

Credit Hours: 3

Corequisites: MLTL 2401

A course designed to introduce the procedures for cultivating pathogenic microorganisms from human specimens and to introduce the methods of bacterial identification that are used in a clinical setting. The relation of microorganisms to disease will be studied.

MLT 2760 Clinical Instrumentation

Credit Hours: 3

This course is designed to explore principles of operation and maintenance of the instruments used in the clinical laboratory. Safety, Occupational Safety and Health Administration (OSHA) regulations, and quality control will be emphasized.

MLT 2930 Pathology Seminar

Credit Hours: 2

Prerequisites: MLT 2401 and MLTL 2401 both with a grade of "C" or higher

This capstone course is designed to guide MLT students in preparing for national certification examinations. Course consists of case-based learning, which students are required to complete prior to coming to class, and review of pertinent areas of content, both of which are intended to prepare students in each of the five major disciplines, along with general laboratory practice of the clinical laboratory. Students will participate in field trips and symposiums as available in order to transition into the professional world.