

MEDICAL TECHNOLOGY (MEDT)

MEDT 244 Introduction to Healthcare Lab (1)

Prerequisite: BIOL 124 or BIOL 160

An introduction into laboratory tests and procedures used in diagnostic screening and analysis in clinical laboratories. Students will learn about procedures used within microbiology, hematology, clinical chemistry, and cytology laboratories. In addition, students will learn about histotechnology, and the procedures carried out in histotechnology labs such as tissue preparation, staining and analysis. The course will also include career exploration via invited lab professionals and/or trips to local labs and an introduction to the legal and ethical considerations in the acquisition and use of patient information.

MEDT 345 Introduction To Medical Laboratory Science (3)

Prerequisite: BIOL 211

Is designed to orient the student to the various laboratory departments in preparation for the Medical Laboratory Science internship. Clinical laboratory automation, registration exams, professional societies, postgraduate training, and job opportunities are also discussed.

MEDT 410 Clinical Chemistry I (3-5)

Addresses the theory and practice of analytical biochemistry as applied to pathologic states, methodology, and instrumentation. Statistics as applied to reagent preparation, results determination, and quality control are also addressed.

MEDT 412 Clinical Chemistry II (4-5)

Addresses the theory and practice of analytical biochemistry as applied to specialized tests for drugs, endocrine function, urine, and body fluids.

MEDT 420 Clinical Hematology (5)

Is the study of the origin, development, morphology, physiology and pathophysiology of the formed elements of the blood and bone marrow. Manual and automated methods of cell counting, differentiation and other special hematological procedures on blood and body fluids used in disease diagnosis are included.

MEDT 430 Clinical Hemostasis (1-2)

Is the study of the platelet, vascular and coagulation and fibrinolytic systems. Testing procedures and the application of the principles of hemostasis as relates to disease states and therapeutic monitoring are also included.

MEDT 440 Clinical Immunohematology (4)

Is the study of the red cell antigen-antibody systems, antibody screening and identification, compatibility testing and immunopathologic conditions. Also included are donor requirements and blood component preparation and therapy.

MEDT 450 Clinical Immunology (3)

Is the study of the principles of the protective and adverse aspects of the cellular and humoral immune responses. Theory and performance of test procedures based on antigen-antibody reactions and clinical significance of test results are included.

MEDT 460 Clinical Microbiology I (2-5)

Addresses the theory and practice of the isolation and identification of pathogenic bacteria and mycobacteria in clinical specimens through cultures, morphology, biochemical and/or serological reactions to their drug susceptibility. The relation of clinical testing to disease states also included.

MEDT 462 Clinical Microbiology II (3-4)

Addresses the theory and practice of the isolation and identification of fungi, parasites, rickettsia and viruses utilizing morphological, cultural, biochemical and serologic methods. The relation of clinical testing to disease states and epidemiology as it applies to microbiology is included.

MEDT 470 Topics: Clinical Laboratory Science (1)

Is an overview of medical ethics, patient approach, the theory and practice of phlebotomy techniques, laboratory safety, applications of laboratory computer systems and independent clinical research and development.

MEDT 480 Clinical Management and Education (1)

Is a basic introduction to the principles and theory of management and education as relates to the clinical laboratory. The special job responsibilities of the clinical laboratory scientist in management and education are addressed.

MEDT 482 Clinical Microscopy (2)

Addresses the theory of renal function in health and disease, renal function tests including chemical and microscopic examination of urine and other body fluids.

MEDT 484 Clinical Parasitology/Mycology (1)

Addresses general specimen considerations, safety, terminology, epidemiology, classification, morphological characteristics, laboratory protocol and clinical manifestations of the common and rarer yeasts, molds and parasites.