MEDICAL LABORATORY TECHNOLOGY (MLT)

MLT1022C INTRODUCTION TO MEDICAL TECHNOLOGY (2.00 Credits)
An introduction to the basic principles, techniques, and vocabulary applicable to medical laboratory technology. Emphasizes specimen collection and preservation; urinalysis and clinical microscopy; phlebotomy; introduction to serology; and lab information systems.
Total Contact Hrs: 48.00
Lecture Hrs: 32.00
Lab Hrs: 16.00

MLT1022L INTRODUCTION TO MEDICAL TECHNOLOGY LAB (1.00 Credits)
The laboratory develops laboratory skills related to the basic techniques in medical laboratory technology. Emphasizes specimen collection and preservation; urinalysis and clinical microscopy; phlebotomy; introduction to serology; and lab information systems.
Total Contact Hrs: 16.00
Lab Hrs: 16.00

MLT1040C SPECIMEN PROCESSING AND LAB OPERATIONS (1.00 Credits)
This course is a study of methods of obtaining blood specimens for laboratory analysis. Topics include phlebotomy equipment; venipuncture and skin puncture techniques; infection control; quality assurance; and professional, ethical, and legal considerations related to blood drawing.
Total Contact Hrs: 48.00
Lecture Hrs: 32.00
Lab Hrs: 16.00

MLT1044L PHLEBOTOMY CLINICAL (1.00 Credits)
This course consists of supervised activities in obtaining blood specimens for laboratory analysis. Tocpis include appropriate use of phlebotomy equipment; venipuncture and skin puncture techniques; infection control; and quality assurance.
Total Contact Hrs: 16.00
Clinical Hrs: 16.00

MLT1199 INTRODUCTION TO MOLECULAR DIAGNOSTICS (1.00 Credits)
An introduction to the molecular techniques used to diagnose human diseases. The course will emphasize the technology and methodology of specific molecular protocols utilized in the clinical lab to aid in diagnosis of disease states.
Total Contact Hrs: 16.00
Lecture Hrs: 16.00

MLT1221C CLINICAL URINALYSIS WITH LAB (2.00 Credits)
A study of the collection and analysis of urine and other body fluids, as well as clinical correlation of findings with disease states.
Total Contact Hrs: 48.00
Lecture Hrs: 32.00
Lab Hrs: 16.00

MLT1300C CLINICAL HEMATOLOGY (3.00 Credits)
In-depth study of hematopoiesis, hemoglobinopathies, and other abnormal hematology, and immunohematology.
Total Contact Hrs: 64.00
Lecture Hrs: 48.00
Lab Hrs: 16.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: BSC2085 (minimum grade: C) and BSC2086 (minimum grade: C)

MLT1330C CLINICAL COAGULATION (2.00 Credits)
A study of common hematologic disorders and related disease states with emphasis on the laboratory diagnosis of these disorders.
Total Contact Hrs: 48.00
Lecture Hrs: 32.00
Lab Hrs: 16.00

MLT1525 IMMUNOHEMATOLOGY (2.00 Credits)
This is a study of immunology, serology, blood banking and transfusion medicine principles and procedures. Antigens, antibodies, and the functions of the immune response are examined in detail.
Total Contact Hrs: 32.00
Lecture Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: BSC2085 (minimum grade: C) and BSC2086 (minimum grade: C), Corequisite: MLT1525L (minimum grade: C)

MLT1525L IMMUNOHEMATOLOGY LAB (2.00 Credits)
This laboratory develops laboratory skills related to immunology, precipitation reactions, agglutination, labeled immunoassays, serology, blood banking and transfusion medicine principles and procedures. Antigens, antibodies, and the functions of the immune response are demonstrated in detail.
Total Contact Hrs: 32.00
Lab Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: BSC2085 (minimum grade: C) and BSC2086 (minimum grade: C), Corequisite: MLT1525 (minimum grade: C)

MLT1610 CLINICAL CHEMISTRY I (2.00 Credits)
This course is the first of a two-semester sequence introducing students to laboratory medicine that focuses on the analysis of bodily fluids to detect and diagnose diseases. The course explores theoretical concepts and principles of carbohydrate, non-protein nitrogen, and electrolyte chemistry analyses with emphasis on their relationships to various disease states. Analytical procedures to asses liver function and acid-base balance are also included. This course should be taken as a co-requisite with Clinical Chemistry 1 Lab Microbiology.
Total Contact Hrs: 32.00
Lecture Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: CHM1032 (minimum grade: C) and CHM1032L (minimum grade: C), Corequisite: MLT1610L (minimum grade: C)

MLT1610L CLINICAL CHEMISTRY I LABORATORY (2.00 Credits)
This laboratory course is the first of a two-semester sequence introducing students TO focus on performing chemistry procedures on bodily fluids with an emphasis on manual and automated instrumentation. This course should be taken with Clinical Chemistry lecture as a co-requisite.
Total Contact Hrs: 48.00
Lab Hrs: 48.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: CHM1032 (minimum grade: C) and CHM1032L (minimum grade: C), Corequisite: MLT1610 (minimum grade: C)

MLT2362 HEMATOLOGY AND BODY FLUID ANALYSIS (4.00 Credits)
This course is an introductory study of the classification and function of blood cells and clotting proteins in health and disease. Major topics include cell identification, anemias, leukemias, hemostasis and thrombosis, and urine and body fluid analysis.
Total Contact Hrs: 64.00
Lecture Hrs: 64.00

MLT2362L HEMATOLOGY AND BODY FLUID ANALYSIS LAB (2.00 Credits)
This laboratory develops laboratory skills related to the classification, maturation, morphology and function of blood cells and clotting proteins in health and disease. Major skills include review of CBC slides, cell identification, anemias, leukemias, hemostasis and thrombosis, and urine and body fluid anaylsis.
Total Contact Hrs: 32.00
Lab Hrs: 32.00

MLT2400 MEDICAL MICROBIOLOGY (4.00 Credits)
Principles and methods used in clinical micro- biology including isolation, identification, and antibiotic susceptibility testing of pathogenic bacteria. Introduction to medical parasitology, mycology, and virology.
Total Contact Hrs: 64.00
Lecture Hrs: 64.00

MLT2402 CLINICAL MICROBIOLOGY 1 (2.00 Credits)
The course provides knowledge of clinical bacteriology, including taxonomy, functions, and control, and complements the Clinical Microbiology Lab 1 and should be taken as a co-requisite. The student will be exposed to clinically significant indigenous flora and the pathogenicity of microorganisms as they affect various body sites. Specimen transport, collection, laboratory identification techniques, and antimicrobial therapy also provide the knowledge base necessary for working in a clinical setting.
Total Contact Hrs: 32.00
Lecture Hrs: 32.00
Complete all the courses in the following option:
- Corequisite: MLT2402L (minimum grade: C)

MLT2402L CLINICAL MICROBIOLOGY LABORATORY 1 (1.00 Credits)
The laboratory develops laboratory skills related to clinical microbiology, including isolation, identification, and antibiotic susceptibility testing of pathogenic bacteria. The course enhances the technical and critical thinking skills used to evaluate clinical microbiology specimens and should be taken concurrently with Clinical Microbiology 1.
Total Contact Hrs: 32.00
Lab Hrs: 32.00
Complete all the courses in the following option:
- Corequisite: MLT2402 (minimum grade: C)

MLT2403 CLINICAL MICROBIOLOGY 2 (2.00 Credits)
This course is the second of a two-semester sequence that provides knowledge of advanced microbiological principles and procedures and hould be taken with Clinical Microbiology Lab 2 as a co-requisite. There is a practical overview of mycology, virology, and parasitology. Students will obtain the knowledge necessary to identify the most commonly encountered yeasts and fungi using microscopic and macroscopic techniques.
Total Contact Hrs: 32.00
Lecture Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: MLT2402 (minimum grade: C) and MLT2402L (minimum grade: C), Corequisite: MLT2403 (minimum grade: C)

MLT2403L CLINICAL MICROBIOLOGY LABORATORY 2 (1.00 Credits)
This laboratory course is the second of a two-semester sequence that provides knowledge of advanced microbiological principles and procedures and should be taken with Clinical Microbiology 2 Lecture as a co-requisite. There is a practical overview of anaerobic bacteriology, mycology, virology, and parasitology using microscopic and macroscopic techniques.
Total Contact Hrs: 32.00
Lab Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: MLT2402 (minimum grade: C) and MLT2402L (minimum grade: C), Corequisite: MLT2403 (minimum grade: C)

MLT2620 CLINICAL CHEMISTRY II (2.00 Credits)
This course is the second of a two-semester sequence, providing an advanced examination of laboratory medicine that focuses on the analysis of bodily fluids to detect and diagnose diseases. The course explores theoretical concepts and principles of proteins, enzymes, and lipids with an emphasis on their relationship to various disease states. This course should be taken with Clinical Chemistry 2 Lab as a co-requisite.
Total Contact Hrs: 32.00
Lecture Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: MLT1610 (minimum grade: C) and MLT1610L (minimum grade: C), Pre or Corequisite: MLT2620L (minimum grade: C)

MLT2620L CLINICAL CHEMISTRY II LABORATORY (1.00 Credits)
This laboratory course is the second of a two-semester sequence that focuses on performing the analyses identified in Clinical Chemistry 2, including electrophoresis and quality control. This course should be taken with the Clinical Chemistry 2 lecture as a co-requisite.
Total Contact Hrs: 32.00
Lab Hrs: 32.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: MLT1610 (minimum grade: C) and MLT1610L (minimum grade: C), Pre or Corequisite: MLT2620 (minimum grade: C)

MLT2807L IMMUNOHEMATOLOGY CLINICAL PRACTICUM (3.00 Credits)
This course consists of an internship at a sponsoring serology and blood bank laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.
Total Contact Hrs: 48.00
Clinical Hrs: 48.00

MLT2809L HEMATOLOGY CLINICAL PRACTICUM (3.00 Credits)
This course consists of an internship at a sponsoring hematology laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.
Total Contact Hrs: 48.00
Clinical Hrs: 48.00

MLT2810L CLINICAL CHEMISTRY PRACTICUM (3.00 Credits)
This course consists of an internship at a sponsoring chemistry laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.
Total Contact Hrs: 48.00
Clinical Hrs: 48.00

MLT2811 MICROBIOLOGY CLINICAL PRACTICUM (3.00 Credits)
This course consists of an internship at a sponsoring microbiology laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.
Total Contact Hrs: 48.00
Lecture Hrs: 48.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: MLT2403 (minimum grade: C) and MLT2403L (minimum grade: C)