



MLT 100 CLINICAL CHEMISTRY I (UMPI)

3 credits. Prerequisites: Admission to the MLT Program or permission of the instructor. Topics include: laboratory math, quality control, theory of instrumentation, carbohydrates, electrolytes, mineral balance, renal function, lipids and arterial blood gases. Emphasis will be placed on the lab analysis of blood using spectrophotometers and correlation of laboratory test results with normal physiology and disease states. Fee.

MLT 103 PHLEBOTOMY (UMA)

2 credits. Prerequisites: Admission to the MLT Program or permission of the instructor. Orientation to the field of medical laboratory including professionalism and ethics, laboratory safety, and medical terminology. An introduction to blood collection: safety precautions, types of specimens, collection and handling techniques. Routine venipuncture and dermal puncture equipment and procedures as well as special situations and additional techniques used to accommodate them. Offered first summer of the Program.

MLT 104 PHLEBOTOMY CLINICAL PRACTICUM (UMA and UMPI)

1 credit. Prerequisites: MLT 103 and permission of the instructor. Practicum in phlebotomy utilizing the laboratory facilities and staff at the university of Maine at Presque Isle and clinical affiliated hospitals. The fundamentals of specimen collection, specimen processing and handling with a minimum performance of 100 successful unaided blood collections including venipuncture and skin punctures will be performed. Offered first summer of the Program.

MLT 105 URINALYSIS (UMPI)

3 credits: Prerequisites: Admission to the MLT Program. The course prepares students to perform a complete urinalysis, which includes physical, chemical and microscopic analysis. Topics explore anatomy and physiology of the urinary system and its functions, urine formation and the procedures used in analysis of urines and body fluids, and the correlation of abnormal findings with disease states. Offered first summer of the Program. Fee.

MLT 200 CLINICAL IMMUNOLOGY (UMA)

3 credits. Prerequisites: MLT100 or permission of the instructor. This course is an introduction to the basic principles of the immune system and its components. Topics include principles of a natural and acquired immunity, hypersensitivity, autoimmunity, immunodeficiency, transplant and tumor immunology, immunological techniques and flow cytometry. Emphasis will be placed on the correlation of abnormal findings and disease states. Fee

MLT 203 CLINICAL CHEMISTRY II (UMPI)

3 credits. Prerequisites: MLT100 or permission of the instructor. Topics include: the analysis of proteins, enzymes, laboratory markers of cardiac damage and function, liver function, hormones, therapeutic drug monitoring, toxicology and body fluids. Emphasis will be placed on the correlation of laboratory test results with normal physiology and disease states. Fee.

MLT 204 CLINICAL MICROBIOLOGY (UMA)

4 credits. Prerequisites: BIO 316, MLT 206. Consideration of pathological forms of microbes including their morphological, physiological, and nutritive characteristics, and the correlation of abnormal findings with disease states. Some emphasis will be given to mycology and parasitology. Multiple 2-day intensive labs and/or review sessions.

MLT 205 IMMUNOHEMATOLOGY (UMPI)

4 credits. Prerequisites: MLT 206. Fundamentals of immunohematology with emphasis on antigens and antibodies of ABO, Rh and other blood group systems, antibody identification, pre-transfusion practices, donor screening, preparation of components and adverse effects of transfusion. Routine serological tests and quality control are included. Multiple intensive labs and/or review sessions. Fee.

MLT 206 HEMATOLOGY/COAGULATION (UMA)

4 credits. Prerequisites: MLT 105, 203 or permission of the instructor. Identification of blood cell types and their enumeration of body fluids. Various red cell and white cell disorders are discussed. Coagulation including routine coagulation tests, coagulation disorders, and anticoagulant therapy is covered. Multiple intensive labs and/or review sessions. Offered second summer of the Program.

MLT 395 HOSPITAL PRACTICUM (UMA and UMPI)

12 credits. Prerequisites MLT 100-206. A supervised clinical practicum in hematology, coagulation, blood banking, serology, urinalysis, clinical chemistry, and microbiology utilizing the laboratory facilities and staff at various clinical affiliates around the state.