



**PENNSYLVANIA HOSPITAL
SCHOOL OF MEDICAL TECHNOLOGY
COURSE DESCRIPTIONS**

Note: Affiliated colleges and universities assign credit according to individual requirements

Course Number: MT490

Course Title: Clinical Hematology/Coagulation

Total Lecture Hours: 34

Total Lab Rotation: 8 Week Rotation

Credit: 7 hours

Description: Composition and function of blood; diseases related to blood disorders; and role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

Course Number: MT491

Course Title: Clinical Immunohematology

Total Lecture Hours: 26

Total Lab Rotation: 6 Week Rotation

Credit: 6 hours

Description: Review of immunologic and genetic principles that relate to Immunohematology. Procedures/topics cover blood collection, donor testing, storage and labeling of blood products, pre-transfusion testing, adverse reactions to transfusion, histocompatibility and regulatory requirements of FDA, CAP and AABB.

Course Number: MT492

Course Title: Clinical Chemistry

Total Lecture Hours: 32

Total Lab Rotation: 8 Week Rotation

Credit: 7 hours

Description: Enzymology, endocrinology, biochemistry of lipids, carbohydrates and proteins; metabolism of nitrogenous end products; physiology and metabolism of fluids and electrolytes; and toxicology as related to the body and diseases. Technical procedures include colorimetry, spectrophotometry, electrophoresis, chromatography, automation and quality control.

Course Number: MT493

Course Title: Clinical Microbiology

Total Lecture Hours: 35

Total Lab Rotation: 8 Week Rotation

Credit: 7 hours

Description: Review of all aspects of Bacteriology, Mycobacteriology, Mycology, and Parasitology including specimen processing, culture identification, clinical features of infectious disease, and the role of the clinical microbiology laboratory.

Course Number: MT 494

Course Title: Clinical Immunology, Serology, Virology

Total Lecture Hours: 11

Total Lab Rotation: 3 Week Rotation

Credit: 3 hours

Description: Immune response, immunoglobulins, autoimmunity, complement, disorders of immunity, and related tests. Survey and demonstration of serological diagnostic tests. Basic principles of Virology and Spirochetology. Basic principles of flow cytometry / immunophenotyping.

Course Number: MT495

Course Title: Clinical Seminar I

Total Lecture Hours: 23

Total Lab Rotation: 4 Weeks Rotation

Credit: 4 hours

Description: Includes courses in Phlebotomy, Specimen Collection and Processing, Laboratory Management, Education, and Molecular Pathology.

Course Number: MT496

Course Title: Clinical Urinalysis

Total Lecture Hours: 7

Total Lab Rotation: 2 Week Rotation

Credit: 2 hours

Description: Renal anatomy and physiology, normal and abnormal urinary constituents, basic laboratory urinalysis, including processing, analysis, and reporting results of urine specimens. Formation, function and testing of body fluids.

Course Number: MT497

Course Title: Clinical Seminar II

Total Lecture Hours: 14

Total Lab Rotation: 1 Week Rotation

Credit: 1 hours

Description: Includes lectures in Orientation, Introduction to Clinical Laboratory Science, Laboratory Safety, HIPAA, Library Services, Research Design, Laboratory Information System, Laboratory Procedure Writing, Anatomical Pathology/Cytology Overview, and Instrument Comparison.

Course Number: MT498

Course Title: Technical Training

Total Lab Hours: <20 hours per week

Offered: As needed by individual laboratory

Credit: 1 hour

Description: A training level position designed to offer additional training outside of academic hours in a particular area of the laboratory. After completing the required laboratory rotation, the trainee may perform tests directly under the supervision of a technologist or supervisor. The training is non- compulsory, but is an integral part of the established curriculum as it builds on skills learned during the required rotation and immerses the student in a real-time laboratory experience. Students are paid an hourly training level wage.