

MEDICAL LABORATORY SCIENCE (MLS)

MLS 1501 Introduction to the Medical Laboratory Profession 2 s.h.

Overview of the medical laboratory profession, ethics, responsibilities and clinical relevance of laboratory procedures.

Prereq.: MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.

Concurrent with: MLS 1501L.

MLS 1501L Introduction to the Medical Laboratory Profession Laboratory 1 s.h.

Phlebotomy, specimen collection and processing; basic medical laboratory exercises. Three hours lab per week.

Prereq.: MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.

Concurrent with: MLS 1501.

MLS 3700 Clinical Chemistry 2 4 s.h.

This course will explore the principles and procedures of routine clinical chemistry analysis, including correlation of test results with pathophysiology, testing criteria and variables that impact accuracy.

Prereq.: MLT 2601 or CHEM 1510/L.

MLS 3700L Clinical Chemistry 2 Laboratory 1 s.h.

Thyroid, digoxin, B12, folic acid, antinuclear antibodies and T and B cell receptor procedures utilized in a clinical laboratory. Three hours lab per week.

Prereq.: MLT 2601, MLT 2601L or CHEM 1515.

Concurrent with: MLS 3700.

MLS 3701 Clinical Hematology 1 2 s.h.

Hematopoiesis; theory and laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Two hours of lecture per week.

Prereq.: MLS 1501, MLS 1501L, BIOL 2601 with a minimal grade of "C".

MLS 3701L Clinical Hematology 1 Laboratory 1 s.h.

Laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Three hours of laboratory per week.

Prereq.: MLT 1501, MLT 1501L, BIOL 2601 with a minimal grade of "C".

MLS 3702 Clinical Hematology 2 2 s.h.

Advanced theory and laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Two hours of lecture per week.

Prereq.: MLS 3701, MLS 3701L with a minimal grade of "C".

MLS 3702L Clinical Hematology 2 Laboratory 1 s.h.

Laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Three hours of laboratory per week.

Prereq.: MLS 3701, MLS 3701L with a minimal grade of "C".

MLS 3703 Clinical Immunology 3 s.h.

Fundamentals of immunology, including both humoral and cellular immunological responses. Applications of immunological methods in medical research and patient treatment. Recommended BIOL 3702.

Prereq.: BIOL 2601.

MLS 3703L Clinical Immunology Laboratory 1 s.h.

VDRL, ASO, febrile, latex, pregnancy, and viral tests; flocculation, precipitation, complement fixation, and titration procedures for various diseases. Three hours lab per week. Identical with MLT 3703L and BIOL 3703L.

Prereq.: MLS 1501, MLS 1501L, BIOL 2602.

Concurrent with: MLS 3703.

MLS 3787 Diagnostic Microbiology 3 s.h.

Clinical applications of human pathogenic microorganisms; infections, frequency, isolation, identification, and treatment of bacteria, fungi, viruses, and parasites. Case studies, problem solving, and quality assurance in clinical microbiology. Three hours lecture per week.

Prereq.: BIOL 2602.

Concurrent with: MLS 3787L.

MLS 3787L Diagnostic Microbiology Laboratory 2 s.h.

A clinical approach to the study of bacteria, fungi, viruses, and parasites. Methods to isolate and identify clinically significant pathogens from clinical specimens; case studies in clinical microbiology. Six hours lab per week. Identical with MLT 3787L.

Prereq.: BIOL 2602.

Concurrent with: MLS 3787.

MLS 4800 Advanced Clinical Chemistry 4 s.h.

Didactics and critical analysis of clinical chemistry. Four hours of lecture. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4800L Advanced Clinical Chemistry Clinical Experience 2 s.h.

Clinical experience and critical analysis of clinical chemistry; Competency based clinical practice. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4801 Advanced Hematology 4 s.h.

Diacritics and clinical analysis of clinical hematology. Four hours of lecture. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4801L Advanced Hematology Clinical Practice 3 s.h.

Clinical practice of clinical hematology. Competency based clinical practice. Grading is Traditional PR.

Prereq.: Acceptance into a clinical internship.

MLS 4802 Advanced Immunohematology 4 s.h.

Didactics and critical analysis of blood banking, Immunohematology, and Transfusion Medicine. Four hours of lecture. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4802L Advanced Immunohematology Clinical Practice 3 s.h.

Clinical practice and critical analysis of blood banking, Immunohematology, and Transfusion Medicine. Competency based clinical practice. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4803 Advanced Microbiology 5 s.h.

Didactics and critical analysis of bacteriology, mycology, virology and Parasitology. Five hours of lecture. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4803L Advanced Microbiology Clinical Practice 3 s.h.

Clinical practice and critical analysis of bacteriology, mycology, virology, and parasitology. Competency based clinical practice. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4804 Miscellaneous Clinical Experience 4 s.h.

Didactic and clinical analysis of specimen collection and processing. Management, education, molecular diagnostics. hemostasis, clinical immunology, and urinalysis and body fluids. Four hours of lecture. Capstone course requiring laboratory research project. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.

MLS 4804L Miscellaneous Clinical Practice 2 s.h.

Clinical practice and critical analysis of specimen collection and processing, management, education, molecular diagnostics, hemostasis, clinical immunology, and urinalysis and body fluids. Competency based clinical practice. Capstone course requiring laboratory research project. Grading is Traditional or PR.

Prereq.: Acceptance into a clinical internship.