

MEDICAL LABORATORY SCIENCE (MLS)

MLS 201. Introduction to Medical Laboratory. (3 Credits)

II. Open to all students. Techniques common to clinical laboratories. Stresses basic physical and chemical principles of disease process. 3 Lec.

MLS 209. Microbiology for Health Sciences. (3 Credits)

(3) A. Prerequisite: BIO 171 or 307 or BIO 111. Study of the bacteria, fungi, viruses, and parasites as agents of human disease with emphasis on the pathogenesis, epidemiology, and diagnosis of infectious diseases. Credit will not be awarded to students who have credit for BIO 273 or BIO 320. 3 Lec.

MLS 211. Medical Microbiology Laboratory. (1 Credit)

I,II. Laboratory methods in the diagnosis and management of infectious diseases. 2 Lab.

MLS 290. Medical Biochemistry. (3 Credits)

I. Formerly CLS 290 Prerequisite: CHE 112, 112L, and BIO 121 or BIO 111. The study of biochemical systems of the body with emphasis on medical consequences when these systems are disrupted. Topics: proteins, carbohydrates, lipids, DNA/RNA and liver function. Credit will not be awarded for both CLS290 and MLS290.

MLS 300. Clinical Laboratory Administration. (2 Credits)

I. Formerly CLS 300 Prerequisite: enrollment in upper division MLS program or departmental approval. Lab calculations, instrumentation, and quality assurance. 2 Lec. Credit will not be awarded for both CLS300 and MLS300.

MLS 303. Clinical Laboratory Skills. (1 Credit)

I, II. Formerly CLS 303 Prerequisite: enrollment in upper division MLS program or departmental permission. Skills for clinical laboratory practitioners, including laboratory safety, phlebotomy, microscopy, pipetting, universal precautions, and principles of quality assurance. Credit will not be awarded for CLS303 and MLS303.

MLS 305. Analysis of Body Fluids. (3 Credits)

(3)I Prerequisite: enrollment in upper division MLS program or departmental approval. Principles, procedures, and significance of analysis of urine, spinal fluid, and other fluids commonly examined in the clinical laboratory. 3 Lec/Lab.

MLS 308. Serology and Molecular Techniques. (2 Credits)

I. Prerequisite: Enrollment in upper division MLS program or departmental approval. Principles, procedures, sources of error, clinical application of serological tests, molecular techniques and specimen collection; 4 Lec/ Lab.

MLS 309. Clinical Immunology. (1 Credit)

I, II. Formerly CLS 309 Prerequisite: Enrollment in upper division MLS program or departmental approval. Principles and techniques of antigen-antibody reactions of the human immune system and their relationship to the clinical laboratory. Credit will not be awarded for both CLS309 and MLS309.

MLS 310. Hematology and Coagulation. (5 Credits)

I. Formerly CLS 310 Prerequisite: enrollment in upper division MLS program or departmental approval. Morphology of blood cells, determination of blood parameters and disorders/diseases associated with blood cells; biochemistry, procedures and disorders/diseases in coagulation. 3 Lec/4 Lab. Credit will not be awarded for both CLS310 and MLS310.

MLS 320. Immunohematology. (3 Credits)

II. Formerly CLS 320 Prerequisite: enrollment in upper division MLS program or departmental approval. Blood banking, blood grouping, phenotyping, cell panels, compatibility testing, and transfusion practices. 2 Lec/2 Lab. Credit will not be awarded for both CLS320 and MLS320.

MLS 346. Clinical Chemistry. (5 Credits)

II. Formerly CLS 346 Prerequisite: enrollment in upper division MLS program or departmental approval. Introduction to theory and lab procedures, measurement of constituents of body fluids, instrumentation, and clinical interpretation of results in relation to biochemistry of human systems. 3 Lec/3 Lab. Credit will not be awarded for both CLS346 and MLS346.

MLS 350. Bacteriology. (5 Credits)

I. Formerly CLS 350 Prerequisite: Enrollment in the upper division MLS program or departmental approval. Study of medically important bacteria with emphasis on the clinical laboratory methods of microscopy, cultivation, identification, antimicrobial susceptibility testing, and quality control. 3 Lec/4 Lab. Credit will not be awarded for both CLS350 and MLS350.

MLS 355. Mycology, Parasitology, and Virology. (4 Credits)

II. Formerly CLS 355 Prerequisites: Enrollment in the upper division MLS program or departmental approval. Study of fungi, parasites, and viruses as agents of human disease, with emphasis on the clinical laboratory methods of microscopy, in vitro cultivation, identification, and quality control. 3 Lec/1 Lab. Credit will not be awarded for both CLS355 and MLS355.

MLS 431. Clinical Correlations. (3 Credits)

I, A. Formerly CLS 431 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Correlates the sub-disciplines of clinical laboratory science. Reviews all areas and stresses laboratory medicine in the health professions. 3 Lec. Credit will not be awarded for both CLS431 and MLS431.

MLS 432. Clinical Chemistry Practicum. (5 Credits)

II, A. Formerly CLS 432 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Diagnostic chemical procedures in an affiliated laboratory. Credit will not be awarded for both CLS432 and MLS432.

MLS 434. Clinical Microbiology Practicum. (4 Credits)

I, II. Formerly CLS 434 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Clinical bacteriology, parasitology, and mycology in an affiliated laboratory. Credit will not be awarded for both CLS434 and MLS434.

MLS 436. Lab Management and Education. (1 Credit)

I, II. Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Study of specific problems, topics, or issues in Medical Laboratory Science. Additional course topics include leadership, management and professionalism.

MLS 437. Clinical Laboratory Seminar. (3 Credits)

I, II. Formerly CLS 437 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Case studies, advanced procedures, and problem solving in the clinical laboratory. Credit will not be awarded for both CLS437 and MLS437.

MLS 438. Hematology Practicum. (4 Credits)

I, A. Formerly CLS 438 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Diagnostic blood parameters and morphology studies in an affiliated laboratory. Credit will not be awarded for both CLS438 and MLS438.

MLS 439. Urinalysis Practicum. (1 Credit)

I, A. Formerly CLS 439 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Diagnostic urine and body fluid procedures in an affiliated laboratory. Credit will not be awarded for both CLS439 and MLS439.

MLS 440. Blood Bank Practicum. (2 Credits)

II, A. Formerly CLS 440 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Practical blood banking in an affiliated laboratory. Credit will not be awarded for both CLS440 and MLS440.

MLS 441. Immunology Practicum. (1 Credit)

I, II, A. formerly CLS 441 Prerequisites: enrollment in upper division MLS program and completion of all 300-level MLS courses. Practical immunology in an affiliated laboratory. Credit will not be awarded for both CLS441 and MLS441.