**CLINICAL LABORATORY SCIENCES (CLS)**

**CLS 49010 CLINICAL MICROBIOLOGY: THEORY**  4 Credit Hours
Theoretical consideration of laboratory isolation, cultivation, identification and characterization of pathogenic microorganisms.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 8 other
Grade Mode: Standard Letter-IP

**CLS 49011 CLINICAL MICROBIOLOGY: APPLICATIONS**  4 Credit Hours
Applied and practical considerations of theoretical aspects of laboratory isolation, cultivation, identification and characterization of pathogenic microorganisms.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 8 other
Grade Mode: Standard Letter-IP

**CLS 49012 CLINICAL IMMUNOLOGY: THEORY**  1 Credit Hour
Theoretical considerations of laboratory practices involving quantitation and detection of antigens and antibodies and the significance of these findings in pathological states.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

**CLS 49013 CLINICAL IMMUNOLOGY: APPLICATIONS**  1 Credit Hour
Applied and practical consideration of laboratory practices in immunology and serology relating to diagnosis of disease states.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

**CLS 49014 CLINICAL MYCOLOGY: THEORY AND APPLICATIONS**  1 Credit Hour
Theoretical, applied and practical consideration of the isolation, identification and characterization of pathogenic fungi and their relation to human disease states.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

**CLS 49015 CLINICAL PARASITOLOGY: THEORY AND APPLICATIONS**  1 Credit Hour
Theoretical, applied and practical considerations of the isolation identification and characterization of human parasites and their relations to pathologic conditions.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

**CLS 49020 CLINICAL CHEMISTRY: THEORY**  4 Credit Hours
Theoretical considerations of the principles of clinical chemistry relating to the identification and quantitation of biologically important substances in blood and other body fluids.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 8 other
Grade Mode: Standard Letter-IP

**CLS 49021 CLINICAL CHEMISTRY: APPLICATIONS**  3 Credit Hours
Applied and practical considerations of clinical chemistry principles relating to significant changes in body fluids as the result of pathologic conditions.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 6 other
Grade Mode: Standard Letter-IP

**CLS 49022 URINALYSIS: THEORY**  1 Credit Hour
Theoretical considerations of the physiological activities of the renal system together with laboratory principles of analysis of urine and other body fluids.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

**CLS 49023 URINALYSIS: APPLICATIONS**  1 Credit Hour
Applied and practical considerations of laboratory practices in urine and other body fluid analysis as aids in diagnosis of disease.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

**CLS 49030 IMMUNOHEMATOLOGY: THEORY**  2 Credit Hours
Theoretical consideration of laboratory procedures involved in blood grouping and typing; identification of blood group antigens and antibodies collection and preparation of blood for transfusion.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

**CLS 49031 IMMUNOHEMATOLOGY: APPLICATIONS**  2 Credit Hours
Applied and practical consideration of laboratory methods for the administration of blood and its components.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

**CLS 49032 COAGULATION: THEORY AND APPLICATIONS**  1 Credit Hour
Theoretical consideration of the coagulation mechanism and its relation to pathological states; identification of abnormalities and deficiencies.

Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP
CLS 49033  CLINICAL HEMATOLOGY: THEORY  2 Credit Hours
Theoretical considerations of the development of formed elements; identification of marrow and blood cells; study of normal and abnormal cellular blood components.
Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

CLS 49034  CLINICAL HEMATOLOGY: APPLICATIONS  2 Credit Hours
Applied and practical consideration of laboratory methods and procedures in identification and enumeration of normal and abnormal formed elements of blood.
Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

CLS 49040  TOPICS IN LABORATORY MANAGEMENT  1 Credit Hour
Consideration of topics relating to safety, education, personnel, budgeting, scheduling and medical legal problems. Repeatable for a total of 4 hours.
Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49095  SPECIAL TOPICS IN MEDICAL TECHNOLOGY  1-4 Credit Hours
(Repeatable for a maximum of 4 credit hours) Topical consideration of special techniques encountered in nuclear medicine, cytology, cytogenetics, virology, toxicology and special instrumentation.
Prerequisite: Medical Laboratory Science major.
Schedule Type: Clinical Laboratory
Contact Hours: 2-8 other
Grade Mode: Standard Letter-IP