

# CLINICAL LAB SCIENCE (CLSC)

## CLSC 3102 Essentials Laboratory for Clinical Laboratory Science 1 Semester Credit Hour (1 Lab Hour)

Application of essential practices for clinical laboratory science. Offered fall semester every year.

**Co-requisite:** SMTE 0092.

## CLSC 3200 Essentials for Applied Laboratory Sciences 2 Semester Credit Hours (1 Lecture Hour)

Introduction to general laboratory procedures, laboratory safety and regulations, quality assurance, professional ethics, specimen acquisition, sample maintenance and microscopy. Includes an introduction to the health care, public health and criminal investigation system. Offered fall, spring and summer semesters every year.

**Prerequisite:** BIOL 1407 and CHEM 1412.

## CLSC 3300 Clinical Immunology and Serology 3 Semester Credit Hours (3 Lecture Hours)

This course provides an overview of immunology with emphasis on immune system physiology and detailed examination of the specific cells, cytokines, antibodies, and molecules that comprise the immune system. The course will discuss the diseases of the immune system, transplantation, and serological procedures for diagnosing a variety of immune diseases and infectious diseases. Requires Instructor Approval. **Prerequisite:** (BIOL 2416\*).

\* May be taken concurrently.

## CLSC 4182 Seminar – Clinical Correlations 1 Semester Credit Hour (1 Lecture Hour)

Informal lectures covering the newest developments in laboratory medicine. Includes discussion of the patient's clinical laboratory results, selection and interpretation of laboratory tests, and presentation of research. Requires permission of instructor and application. Offered summer semester (summer II only) every year.

## CLSC 4200 Professional Skills for Clinical Laboratory Scientists 2 Semester Credit Hours (2 Lecture Hours)

Study of the role of the medical laboratory professional in the health care system. Includes professional ethics, legal responsibility, medical laboratory management, instructional methods, evaluation of clinical laboratory methods, medical laboratory instrument selection, clinical research and current professional topics. Requires permission of instructor and application. Offered summer semester (summer I only) every year.

## CLSC 4220 Hematology II 2 Semester Credit Hours (2 Lecture Hours)

Emphasis on blood coagulation and the interaction of blood vessels, platelets, and certain plasma proteins. Disorders of hemostasis will be discussed along with diagnostic testing.

## CLSC 4280 Introduction to the Clinical Laboratory Profession 2 Semester Credit Hours (2 Lecture Hours)

Studies of the latest instrumentation, instrument selection, basic research, quality assurance and statistics used in the clinical laboratory. **Prerequisite:** (CLSC 3200, CHEM 4401 and MATH 1442).

## CLSC 4297 Professional Practicum I 2 Semester Credit Hours (2 Lecture Hours)

Supervised learning experience in selected departments of the clinical laboratories.

## CLSC 4325 Clinical Chemistry I 3 Semester Credit Hours (3 Lecture Hours)

Principles and practice of procedures found in general clinical chemistry. Includes the methodology of diagnostic tests and normal and abnormal human physiology as applied to diagnosis of pathological conditions.

**Prerequisite:** CHEM 4401.

**Co-requisite:** SMTE 0092.

## CLSC 4326 Clinical Chemistry II 3 Semester Credit Hours (3 Lecture Hours)

Continuation of CLSC 4325 - Clinical Chemistry I. Emphasis on advanced clinical chemistry topics and procedures.

**Prerequisite:** CLSC 4325.

## CLSC 4370 Clinical Microbiology I 3 Semester Credit Hours (3 Lecture Hours)

Lecture and laboratory studies of common pathogenic bacteria. Emphasis is on staining, cultural, and differential biochemical characteristics, methods of isolation from body fluids and susceptibility to therapeutic agents.

**Prerequisite:** BIOL 2421.

**Co-requisite:** SMTE 0092.

## CLSC 4371 Clinical Microbiology II 3 Semester Credit Hours (2 Lecture Hours, 3 Lab Hours)

Lecture and laboratory studies of parasitic, viral, mycological and unusual bacterial human pathogens. Emphasis on methods of isolation from body fluids, identification methods and correlation with pathology.

**Prerequisite:** CLSC 4370.

**Co-requisite:** SMTE 0092.

## CLSC 4382 Advanced Medical Laboratory Procedures 3 Semester Credit Hours (3 Lecture Hours)

Lecture and laboratory studies of the newest development in laboratory diagnostic medicine. Includes advanced clinical chemistry, immunology and molecular diagnostic procedures.

**Prerequisite:** CLSC 4325 and BIMS 4406 or BIOL 4406 and CHEM 4401.

**Co-requisite:** SMTE 0092.

## CLSC 4420 Hematology 4 Semester Credit Hours (4 Lecture Hours)

Studies of the formation, function and identifying characteristics of the cellular elements of human blood and other body fluids in health and diseased states and laboratory studies on blood coagulation. Lecture and laboratory emphasize the enumeration, morphology and staining characteristics of normal and abnormal cells and hemostasis.

**Prerequisite:** BIOL 2416 and CHEM 4401.

**Co-requisite:** SMTE 0092.

## CLSC 4430 Immunohematology 4 Semester Credit Hours (4 Lecture Hours)

Theoretical aspects of the immune response and its relationship to the diagnosis of disease and clinical immunohematology. Lecture and laboratory stress the detection, identification and characterization of antibodies, blood grouping and typing, compatibility testing, blood component therapy, HLA testing and diagnosis of pathological conditions.

**Prerequisite:** BIMS 4406 or BIOL 4406.

**Co-requisite:** SMTE 0092.

## CLSC 4598 Professional Practicum II 5 Semester Credit Hours (5 Lecture Hours)

Continuation of CLSC 4297 - Professional Practicum I. Supervised learning experience in selected departments of the clinical laboratories.

**Prerequisite:** CLSC 4297.

**CLSC 4599 Professional Practicum III**

**5 Semester Credit Hours (5 Lecture Hours)**

Continuation of CLSC 4598 - Professional Practicum II. Supervised learning experience in selected departments of the clinical laboratories.

**Prerequisite:** CLSC 4598.