

MED 150

LABORATORY PROCEDURES I

COURSE DESCRIPTION:

Prerequisites: None

Corequisites: MED 140

This course provides instruction in entry-level lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics. Course Hours per Week: Class, 3; Lab, 4; Semester Hours Credit, 5.

LEARNING OUTCOMES:

Upon successful completion of this course, the student should be able to demonstrate the following competencies and knowledge by written and/or competency evaluations:

- a. Demonstrate lab safety.
- b. Define quality assurance and quality control and explain its purpose.
- c. Discuss legal and ethical considerations for the laboratory.
- d. Discuss and demonstrate specimen collection and transport.
- e. Differentiate between microbiology and immunology.
- f. Demonstrate specific lab tests.

OUTLINE OF INSTRUCTION:

- I. Fundamentals of Laboratory Practice
 - A. Safety and infection control
 - B. Legal and ethical considerations
 - C. Quality assurance and quality control
 - D. Instrumentation
- II. Specimen Collection
 - A. Collecting and transporting
 - B. Urine
 - C. Blood
 - D. Microbial specimens
- III. Urinalysis
 - A. Procedures
 - B. Assessment

- C. Chemical analysis
- D. Microscopic examination

IV. Hematology and Chemistry

- A. Introduction to hematology
- B. Hemoglobin
- C. Microhematocrit
- D. Blood cell counts
- E. Blood smears and differentials
- F. Erythrocyte sedimentation rate (ESR)
- G. Clinical chemistry
- H. Blood glucose testing

V. Microbiology and Immunology

- A. Bacterial Smear
- B. Gram Stain
- C. Streptococci testing
- D. HCG testing