

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY

MDL 101 - INTRODUCTION TO MEDICAL LABORATORY TECHNIQUES (3 CR.)

Course Description

Introduces the basic techniques including design of the health care system, ethics, terminology, calculations, venipuncture, and routine urine analysis. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

Course Purpose

The purpose of this course is to introduce the student to basic concepts and techniques used in medical laboratory science. The course emphasizes the importance of integrity, accuracy, precision, tact, and good common sense. A basic foundation is provided on to which the student will be able to build practical laboratory experience and specific technical content provided in other MDL courses in the program.

Course Prerequisites/Corequisites

Students should be enrolled in the first year of the Medical Laboratory Technology AAS degree program or receive program director approval.

Prerequisites: ENG 111, BIO 141, CHM 111, SDV 101 or SDV elective all with a grade of "C" or better.; successful placement in MTH 161.

Course Objectives

Upon completing the course, the student will be able to:

- Outline the organization, function, and staff of the clinical laboratory.
- List common members of the hospital staff.
- Discuss the regulatory agencies that govern clinical laboratory practice.
- Describe and apply basic concepts of biomedical ethics, healthcare law, and professionalism.
- Discuss and apply standards for laboratory safety and patient safety.
- Discuss how performance measurements are used in a Quality Assessment Plan.
- Define common terms and abbreviations used in the medical laboratory.
- Apply basic math and metrics to laboratory procedures.
- Describe the collection and labeling of specimens.
- Perform collection of blood specimens by venipuncture and dermal puncture.
- Discuss the basic anatomy of the renal system, and describe how urine is produced.
- Describe the principles of and perform routine urinalysis.
- Describe the principles of and terms associated with all major body fluids.
- Demonstrate the correct use of the microscope, centrifuge, electronic balance, manual and semi-automated pipets.
- Effectively Communicate processes, procedures and results in a multicultural environment

Major Topics to be Included

Professional and ethical characteristics of the lab professions

Laboratory hazards safety, standard precautions, and patient safety

Metric system and basic dilutions

Labware, microscopes, centrifuges, balances

Venipuncture and dermal puncture

Basic urinalysis

Other major body fluids