



### **Course Description**

#### **MLT1210C | Clinical Urinalysis with Lab | 2.00 credits**

Theoretical concepts and practice in the collection and analysis of urine and other body fluids by combination didactic and laboratory instruction. Performance of routine urinalysis procedures including microscopy with identification of related disease states.

### **Course Competencies:**

**Competency 1:** The student will demonstrate knowledge of different urine sample collection by:

1. Describing the different types of urine specimens and proper collection of samples
2. Comprehending the handling of the different types of urine specimens
3. Comprehending the principles of preservation and its effects on urinalysis results

**Competency 2:** The student will demonstrate knowledge and application of routine urinalysis and the clinical significance of the analysis of urine by:

1. Explaining the structure and function of the different parts of the urinary system
2. Comprehending the formation of urine in the nephron
3. Explaining the importance of physical properties of urine
4. Explaining the importance of biochemical properties of urine
5. Analyzing the microscopic sediment of the urine specimen utilizing the microscope to identify formed elements
6. Identifying different formed elements of the urine sediment
7. Evaluating the clinical significance of finding abnormal results and the relationship to different diseases of the urinary tract

**Competency 3:** The student will demonstrate knowledge of maintaining quality assurance in the analysis of urine by:

1. Performing quality control procedures
2. Learning proper documentation of quality control procedures in the urinalysis laboratory
3. Listing the variables that must be controlled to achieve accurate and reproducible results in urinalysis

**Competency 4:** The student will demonstrate knowledge of the analysis of other body fluids by:

1. Describing the clinical significance of different body fluids
2. Explaining CSF specimen collection, processing and analysis
3. Listing the proper techniques for laboratory handling of the CSF specimen
4. Describing the collection, processing and analysis of seminal fluid

### **Learning Outcomes:**

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Demonstrate knowledge of ethical thinking and its application to issues in society
- Use computer and emerging technologies effectively
- Describe how natural systems function and recognize the impact of humans on the environment