

# **RARITAN VALLEY COMMUNITY COLLEGE ACADEMIC COURSE OUTLINE**

## **MLTC 120 Urinalysis & Body Fluids**

### **I. Basic Course Information**

- A. Course Number and Title: MLTC 120 Urinalysis & Body Fluids
- B. New or Modified Course: Modified
- C. Date of Proposal: Semester: Fall Year: 2024
- D. Effective Term: Fall 2025
- E. Sponsoring Department: Science & Engineering
- F. Semester Credit Hours: 3 credit
- G. Weekly Contact Hours: 4                      Lecture: 2  
   Laboratory: 2  
   Out of class student work per week: 5
- H. Prerequisites: MLTC 100 with a grade of C or higher and BIOL 125 with a grade of C or higher; or permission of the instructor
- I. Laboratory Fees: No

### **II. Catalog Description**

Prerequisites: MLTC 100 with a grade of C or higher and BIOL 125 with a grade of C or higher; or permission of the instructor. This course is the study of the structure of organs and functions of processes which result in urine and body fluid production. Emphasis will be on analysis and interpretation of test results and will include pathophysiological correlations to the test results. Topics will include urinalysis, cerebrospinal fluid analysis, serous fluid analysis, analysis of transudates, exudates and gastrointestinal contents and semen analysis.

### **III. Statement of Course Need**

- A. Urinalysis is a necessary skill needed for competent MLTs. This course is required for the Medical Laboratory Technology program.

- B. There is a lab component in this course so that the theory can be practiced.
- C. This course generally transfers as a Free Elective, but dependent on the transfer institution it may transfer as a Program Elective to schools that offer a B.S. degree in Clinical Laboratory Science.

#### **IV. Place of Course in College Curriculum**

- A. Free Elective
- B. This course meets a program requirement for the Associate of Applied Science degree program in Medical Laboratory Technology
- C. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, [www.njtransfer.org](http://www.njtransfer.org); b) for all other colleges and universities, go to the individual websites.

#### **V. Outline of Course Content**

- A. Introduction: Quality assurance, safety, and microscopy
- B. Urine Basics
- C. Urinary Tract structure and function
- D. Physical examination of urine
- E. Chemical examination of urine
- F. Microscopic examination of urine
- G. Renal and Metabolic disease
- H. Amniotic Fluid analysis
- I. Semen analysis
- J. Cerebrospinal fluid analysis
- K. Serous fluid analysis
- L. Fecal analysis

#### **VI. A. Course Learning Outcomes:**

**At the completion of the course, students will be able to:**

1. Describe the structure and primary functions of the components of the urinary system (NJ-GE 1).
2. Use appropriate mathematical applications to interpret data ( GE-2\*).
3. Perform proper laboratory techniques required in urinalysis and non-urine body fluids (GE 3).

4. Explain the clinical significance of urine or body fluid analysis and their results (GE 1\*).

(\*Embedded critical thinking)

5. Identify commonly observed urinary crystals, cells or casts, as well as typical pathogens, contaminants and artifacts.
6. Describe the color, clarity, specific gravity and osmolarity of normal urine.
7. Explain the principles of tests included in routine urinalysis.
8. Describe tests commonly performed on non-urine body fluids.
9. Describe pre- and post-examination procedures applicable to urine or body fluid analysis.
10. Develop professionalism, communication skills, and interpersonal relationships by working cooperatively with instructors, preceptors and fellow students.

### **C. Assessment Instruments**

1. Exams
2. Assignments
3. Quizzes
4. laboratory products
5. laboratory reports
6. research papers
7. demonstrations
8. essays
9. journals
10. portfolios

## **VII. Grade Determinants**

- A. Exams
- B. Assignments
- C. Quizzes
- D. laboratory reports
- E. research papers

The primary formats, modes, and methods for teaching and learning that may be used in the course:

- A. lecture/discussion
- B. small-group work
- C. computer-assisted instruction
- D. guest speakers
- E. laboratory

- F. student oral presentations
- G. simulation/role playing
- H. student collaboration
- I. independent study

## **VIII. Texts and Materials**

### **A. Textbooks**

Sample of specific text which may be used:

- Urinalysis and Body Fluids, Susan King Strasinger, Marjorie Schaub Di Lorenzo, 6<sup>th</sup> edition.

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

## **IX. Resources**

- A. Laboratory
- B. Computers with internet access.
- C. RVCC library databases.

## **X. Honors Options**

An Honors Option is not available for this course.