

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

## **MLTC 110 Specimen Collection & Processing**

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

- A. Course Number and Title: MLTC 110 Specimen Collection & Processing
- 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: 2 credit
- G. Weekly Contact Hours: 3                      Lecture: 1  
   Laboratory: 2  
   Out of class student work per week: 3
- 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 introduces proper technique for the collection and processing of patient specimens for clinical lab testing. It emphasizes venipuncture technique and its importance in sample quality. It also covers necessary communication skills, quality assurance, safety and infectious control procedures, medical terminology, capillary blood collection, collection of specimen other than blood, and specimen handling.

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

- A. Specimen collection and processing skills are necessary 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. Phlebotomy practice and quality assessment
- B. Communication, Computer essentials and documentation
- C. Professional ethics, legal and regulatory issues
- D. Infection control
- E. Safety and first aid
- F. Medical terminology
- G. Anatomy & Physiology of select organ systems
- H. Blood collection equipment
- I. Complications causing medical errors in collection
- J. Venipuncture procedures
- K. Capillary collection
- L. Specimen handling, transport and processing
- M. Point of care collection
- N. Blood cultures, arterial, intravenous and special collection procedures
- O. Urinalysis, body fluids and other specimens

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

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

1. Use appropriate terminology related to the clinical laboratory (GE 1).
2. Demonstrate the use of professional communication skills that ensure patient safety and comfort (GE 1).
3. Use appropriate mathematical applications to interpret data (GE 2\*).

4. Perform proper laboratory techniques required to collect and process specimen (GE 3).
5. Describe and demonstrate the use of lab information systems (GE 4).  
(\*Embedded critical thinking)

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

6. Demonstrate proper hygiene and safety in the clinical lab setting.
7. Demonstrate infection prevention practices related to specimen collection, transport and processing.
8. Describe safety practices for chemical, fire and biohazardous material.
9. Identify common blood collection sites on the body.
10. Describe pre-examination factors that affect specimen integrity.
11. Describe common clinical laboratory quality assurance practices.
12. Develop professionalism, communication skills, and interpersonal relationships by working cooperatively with instructors 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**

LIST which of the following types of course materials will be used. Specify title and publication information about textbooks and any other major text sources or other materials.

#### **A. Textbooks**

Sample of specific text which may be featured:

- Phlebotomy Handbook: Blood Specimen Collection from Basic to Advanced, 8th Edition. Diana Garza EdD MLS (ASCP) CM (Author), Kathleen Becan-McBride EdD MLS (ASCP) CM

(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.