RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE

MLTC 296 Clinical Experience: Hematology

I. Basic Course Information

A. Course Number and Title: MLTC 296 Clinical Experience: Hematology

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

G. Weekly Contact Hours: Clinical: 96 hours total
Out of class student work per week: 0

H. Prerequisites: MLTC 230 with a grade C or higher or with instructor's permission

I. Laboratory Fees: None

II. Catalog Description

Prerequisite – MLTC 230 with a grade C or higher or with instructor's permission
This course provides entry-level clinical laboratory experience in the area of Hematology. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

III. Statement of Course Need

A. Hematology testing and analysis are necessary skills needed for competent MLTs. This course is required for the Medical Laboratory Technology program.

B. This course is completed at the clinical site.

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; b) for all other colleges and universities, go to the individual websites.

V. Outline of Course Content

1. Quality control calibration, maintenance, and basic troubleshooting, according to lab protocol in hematology lab
2. Hematology analyzer(s) operation including controls and samples
3. RBC, WBC, and platelet counts with the hemocytometer in a time period established in lab.
4. Blood smears and Wright's staining method.
5. WBC differentials and reporting
6. Reticulocyte counts, ESRs, and sickle screening tests with accuracy in a given time
7. Differentials from newborns, leukemias, and other conditions
8. Identification of immature cells in different cell lines.
9. Prothrombin, PTTs, bleeding times, and other coagulation tests
10. Factors deficiency assays
11. Bone marrow slide preparation, staining, and examination
12. Effects of hemolysis, and lipemia on samples results of all of the assays performed

VI. A. Course Learning Outcomes:

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

1. Explain the principles and significance of hematology tests and results (GE-1).
2. Use appropriate mathematical applications to interpret data (GE-2*).
3. Explain the principles of and demonstrate correct use of hematology instrumentation and technology (GE-1, 3, 4).

(*Embedded critical thinking)

4. Perform the appropriate manual and automated analyses in hematology lab with accuracy and precision
5. Evaluate and apply quality control measurements in all phases of analysis in hematology labs.
6. Handle specimens for assay procedures following standard precautions and safety.

7. Identify the abnormal patient results and correlate those results with the patient's condition, and accurately report them.
8. Develop professionalism, communication skills, and interpersonal relationships by working cooperatively with instructors, preceptors and fellow students

A. Assessment Instruments

Students in this course are evaluated by the following methods.

1- Observation by clinical site instructors
2- Weekly Journal
3- Presentation

VII. Grade Determinants

1- Observation by Clinical Instructors

2- Weekly Journal

Students are expected to maintain a weekly journal and are graded based on completion.

3- Presentation

Students are graded based on the rubric provided to them.

VIII. Texts and Materials

Students must maintain the weekly lab journal during their clinical rotation.

Keohane, Elaine M., Catherine N. Otto, and Jeanine M. Walenga. *Rodak's Hematology: Clinical Principles and Applications*. St. Louis, MO: Elsevier, 2020. Print.
ISBN: 9780323530453

Rodak's Clinical Hematology Atlas
ISBN: 9780323322492

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. Clinical site laboratory
B. RVCC library database

X. Honors Options

An Honors Option is not available for this course.