

**Berkshire Medical Center  
School of Medical Technology**

Course Syllabus

Course No. MEDT 402

Course Title: Clinical Hematology

Credits: 8

**Description:**

Introduces students to the study of the hematopoietic system including the relationship of hematologic diseases to diagnostic characteristics. Discusses erythrocyte and leukocyte development and disorders; cellular morphology; mechanisms and disorders of hemostasis and fibrinolysis; and principles of test methodology. Describes the controllable and non-controllable pre-analytical, analytical, and post-analytical variables that can affect testing. The student applies this theory in the clinical lab using current diagnostic techniques and instrumentation to correlate lab results to disease processes.

Primary Didactic Instructor: Brenda Alibozek  
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Additional Instructors: Dr. Suzanne Homan  
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Clinical Instructor: Brenda Alibozek, MT(ASCP)  
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Nicole Hathaway MT(ASCP)  
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**Required text:** Hematology: Principles and Applications, 5<sup>th</sup> ed.  
2016, Bernadette Rodak  
Hematology/Coagulation Procedure Manual.

Reference text:

Anderson's Atlas of Hematology, 2<sup>nd</sup> edition, S. Young, K. Poulsen, 2014

Lecture: 1 hour lecture every week

Additional lectures scheduled as needed

Laboratory: 8 week clinical rotation in the Hematology Department.

\*\*See individual student schedule for dates

## **Course Goals and Objectives**

Based on the didactic material and clinical instruction students will score an average of 75% or better on evaluation tools (i.e. exams, unknowns, evaluations, etc) to demonstrate competency of the following objectives.

Upon completion of the Hematology/Coagulation clinical and didactic course the student will:

1. Develop an entry-level knowledge of hematologic/coagulation tests used in the clinical laboratory and their importance in diagnosis and treatment of disease.
2. Explain the importance of cellular/morphologic characteristics in identifying certain hematologic disorders.
3. Discuss physiological mechanisms that lead to specific hematologic/coagulation disorders and disease states.
4. Discuss the current prevention and treatment for hematologic/coagulation disorders.
5. Explain the principles and methods of each test performed in the hematology/coagulation laboratory and the clinical significance.
6. Explain the importance of quality control and apply it in the laboratory setting.
7. Determine appropriate specimen collection, processing, and analysis of patient specimens by following established procedures and resolve issues as they arise.
8. Perform manual and automated testing on patient blood or body fluids that result in valid laboratory results in the Hematology/Coagulation department.
9. Differentiate and enumerate cells on a peripheral blood smear.
10. Assess RBC and platelet morphology on a peripheral blood smear.
11. Perform routine maintenance, trouble shooting, quality control, and calibrations on instrumentation in the Hematology/Coagulation department following established procedures.
12. Evaluate quality control data and determine course of action when quality control falls outside of range.
13. Interpret laboratory data generated from the Hematology/Coagulation laboratory regarding test accuracy and abnormal values.
14. Evaluate laboratory data and give possible cause of diagnosis for patient results.
15. Organize workflow for efficiency in lab testing turn-around-times.
16. Practice established confidentiality guidelines.
17. Demonstrate professional and ethical conduct with all healthcare professionals, consumers, patients, and other laboratory students.

## **Basis for Student Evaluation**

Lecture evaluation will consist of exams and assigned exercises. The laboratory evaluation will consist of practicals, written exams, study questions and identification of hematologic disorders on peripheral blood smears. The final grade will be composed of 60% lecture and 40% laboratory. See Hematology grade sheet for specific breakdown.

## **Affective behaviors**

### Didactic

Following appropriate training, during didactic instruction the student will:

1. Exhibit professional behavior during didactic instruction.
2. Attend lectures in a timely manner.
3. Respect other students and members of the laboratory.
4. Contribute to a positive learning environment.
5. Demonstrate an interest in the subject matter.
6. Comply with hospital and laboratory dress code and personal appearance policies.
7. Comply with institutional policies concerning safety.
8. Cooperate when situations arise and there is a necessary change in lecture schedule.

### Clinical

Following appropriate training, during clinical instruction the student will:

1. Comply with all hospital, laboratory, and school policies.
2. Demonstrate phone etiquette using BMC customer service standards.
3. Maintain a neat, clean, and orderly work area in the Hematology department.
4. Value the advice and opinion of others.
5. Accept responsibility for his/her own actions.
6. Be dependable and punctual for the clinical experience.
7. Organize his/her time to complete assignments and daily training.
8. Accept constructive criticism and use it as a tool for improved performance.
9. Establish a good rapport with co-workers and uphold the concept of teamwork.