

## MLT Hematology/Coagulation

### Course Information

**Developers:** Medical Laboratory Technology State Curriculum Committee

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**KBOR Facilitators:** Seth Carter, Shirley Antes, Rita Johnson, April Henry

**Credit Hours:** 6

**Prerequisite:** Admission to the MLT program or instructor approval.

### Description:

This course presents the theory behind hematologic principles including the formation of blood cells, identification of normal and abnormal blood cells as they correlate to disease. Also included is the study of coagulation, the clotting and fibrinolytic mechanisms of the blood. Students will learn the theory and skills required to perform medical laboratory testing in Hematology and Coagulation.

### Outcomes:

1. Relate the proper specimen collection and handling, type of quality control used, reference ranges, principle of analysis currently available, and sources of analytical errors for each of the analytes discussed or approached in the course.
2. Perform all procedures with regard to prescribed safety protocol and confidentiality.
3. Correlate abnormal results with the most likely disease process by determining the clinical significance of the findings.
4. Discuss the hematopoiesis and hemostasis processes.
5. Perform routine (automated or manual) hematological procedures, including the manual differential and morphology, and paraphrase the principles for each, as well as selected "special" hematology analyses.
6. Perform and evaluate routine coagulation analyses by automated or semi-automated methods, with competency (as judged with the use of control materials).
7. Interpret and evaluate results for each analysis discussed in lecture, applying theory to predict possible disease states.
8. Explain the major hemostatic characteristics and causes of the following coagulation disorders: Fibrinogen deficiency, Hemophilias A and B, von Willebrand's Disease, disseminated intravascular coagulation/fibrinolysis, and hypercoagulable states.
9. Assess the major hematological characteristics and causes of erythrocytic disorders, myeloproliferative disorders, leukemias and platelet disorders.