Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. Medical Laboratory Technician COURSE NUMBER: MDLT 1130

NUMBER OF CREDITS: 3 Lecture: 2 Lab: 1

Course Title:
Hematology I

Catalog Description:
This course is the first part of a two-part course in Hematology, the study of diseases in the blood. Students will begin with a basic study of the blood cells called hematopoiesis. Students will study the disease processes that occur in the white blood cells of the blood with emphasis on benign white blood cell disorders, leukemia, and lymphoma.

FULFILLS MN TRANSFER CURRICULUM AREA(S)
Goal 1: Communication: by meeting the following competencies:

Goal 2: Critical Thinking: by meeting the following competencies:

Goal 3: Natural Sciences: by meeting the following competencies:

Goal 4: Mathematics/Logical Reasoning: by meeting the following competencies:

Goal 5: History and the Social and Behavioral Sciences: by meeting the following competencies:

Goal 6: The Humanities and Fine Arts: by meeting the following competencies:

Goal 7: Human Diversity: by meeting the following competencies:

Goal 8: Global Perspective: by meeting the following competencies:

Goal 9: Ethical and Civic Responsibility: by meeting the following competencies:

Goal 10: People and the Environment: by meeting the following competencies:
### Prerequisites or Necessary Entry Skills/Knowledge:

MDLT 1100 Introduction to Laboratory Science

### Topics to be Covered

<table>
<thead>
<tr>
<th>Safety and infection control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen collection</td>
</tr>
<tr>
<td>Microscopy</td>
</tr>
<tr>
<td>Hematopoiesis with emphasis on leucopoiesis</td>
</tr>
<tr>
<td>Routine testing in Hematology</td>
</tr>
<tr>
<td>Examination of peripheral blood smears</td>
</tr>
<tr>
<td>Bone marrow overview</td>
</tr>
<tr>
<td>Nonmalignant Alterations of Leukocytes</td>
</tr>
<tr>
<td>Leukemia</td>
</tr>
<tr>
<td>Lymphomas</td>
</tr>
<tr>
<td>Myelodysplastic syndromes</td>
</tr>
</tbody>
</table>

### Student Learning Outcomes

1. Improve phlebotomy skills, including enhancement of communication skills and teamwork
2. Describe, define, and evaluate basic principle of hematology as it relates to hematopoiesis; focusing on white blood cells
3. Apply principles of safety, quality assurance, and quality control in Hematology
4. Define benign leukocyte disorders and lymphomas
5. Evaluate normal and abnormal white blood cell morphology with associated diseases
6. Demonstrate proficiency in the skills necessary to perform blood cell counts, and evaluation of blood elements within stated limits of accuracy.

### Is this course part of a transfer pathway:

- Yes
- No

Revised 01/2020