

## Student Learning Outcomes for HTEC 80

*Clinical Hematology Laboratory*

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### Team Members:

**Team Leader:**

Debbie Wagner (8790) in HTEC

**Other members:**

1. Doris Spanggord (x8341) BIOL

**Additional team members/notes about team:**

Cynthia Press, Thuy Vo Pinheiro,  
Nayana Lowery

**Additional Notes:**

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### Outcomes:

**Outcome 1 Phase I: Statement**

Practice proper application of OSHA standards.

**Outcome 1 Phase II: Assessment Strategy Used:**

Assessment Quarter: Fall 2010

Assessors: Debbie Wagner Cynthia Press

Assessment Tools:

Sections being assessed: 61

**Outcome 1 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 2

**Changes:**

**Methods:**

Using a rubric, observe and document students practicing universal precautions in the laboratory

**Findings and Conclusions:**

Exam II: Students were observed for their use of universal precautions during the practical exam. Documentation of 5 parameters demonstrating compliance were recorded. The mean score of the class on this question = 96% 9 of 10 students scored 100%; 1 student scored 60% (This student had difficulty in multiple areas, and dropped the course following the exam.) Students completing the course scored 100% on this assessment. This is a mandatory requirement for anyone participating in our MLT laboratory courses, but also for anyone preparing for a career in this field.

### **Enhancement (Planned Actions)**

#### **Part I:**

Safety and adherence to OSHA regulations is a top priority for anyone entering the clinical laboratory profession. We will continue to teach and evaluate laboratory safety in various exercises throughout each laboratory and expect 100% student compliance.

#### **Part II:**

At this time, there are no enhancements planned for this SLO.

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### **Outcome 2 Phase I: Statement**

Use proper technique and follow written laboratory procedures to perform Complete Blood Count (CBC) with differential and platelet estimate on a minimum of 2 normal blood samples.

### **Outcome 2 Phase II: Assessment Strategy Used:**

Assessment Quarter: Fall 2010

Assessors: Debbie Wagner Cynthia Press

Assessment Tools: •

Sections being assessed: 61

### **Outcome 2 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 2

**Changes:**

#### **Methods:**

Students were required to perform the following: Exam II: automated CBC and a manual differential with platelet estimate on 1 normal blood sample. Final exam: automated CBC on 1 sample and manual differentials with platelet estimates on 2 normal samples.

#### **Findings and Conclusions:**

Mean scores: Exam II Automated CBC = 78% Manual differential with platelet estimate = 81% Final exam Automated CBC = 91% Manual differential with platelet estimate = 89% Students preparing for a career in the area of clinical laboratory medicine need to score higher than 75% on performing this task. Students scored above 75% on the initial assessment. After being given more time to practice following Exam II, they were required to perform these tasks again on the final exam. The class improved scores on both tasks. Mean scores were well above the minimum required, demonstrating competency for this

SLO and adequate technical ability for performing CBCs, manual differentials, and platelet estimates on normal blood samples.

### **Enhancement (Planned Actions)**

#### **Part I:**

Based on the student scores on this SLO, it is evident that given more opportunity and time to practice this skill will enhance student learning outcomes.

#### **Part II:**

In order to give students more time to practice these laboratory skills, it would be necessary to offer a "skills" laboratory much like those available for Biology and Nursing students. Instrumentation, blood samples and a technician would be necessary.

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### **Outcome 3 Phase I: Statement**

Identify abnormal CBC results and correlate to possible causes.

### **Outcome 3 Phase II: Assessment Strategy Used:**

Assessment Quarter: Fall 2010

Assessors: Debbie Wagner Cynthia Press

Assessment Tools: *No tools assigned.*

Sections being assessed: 61

### **Outcome 3 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 2

**Changes:**

#### **Methods:**

Questions related to the identification of abnormal CBC results were included on Exam II (7 questions) and the final exam (9 questions).

#### **Findings and Conclusions:**

The mean score of the class for these questions was 79% on Exam II and 90% on the final exam. The students showed improvement in responses to questions relating to recognition of abnormal CBC results between the first and second assessment. During the interval between these assessments, more practice was given on recognizing abnormal results and correlating them to causal factors. The mean score of 90% on the final exam demonstrates competency for this SLO.

### **Enhancement (Planned Actions)**

#### **Part I:**

The conclusions from the student learning outcome results of this SLO further reiterates to the evaluation team the value of continued practice opportunities for students. Discussions on this topic include added homework case studies addressing correlation of abnormal CBC test results with possible causes using Catalyst. Turning Point software is being implemented in the laboratory sessions to give students additional practice situations to

successfully accomplish this SLO.

**Part II:**

This enhancement can be accomplished with the use of existing technology available in the MLT department and Catalyst.

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